

Who Owns the Truth?

Wem gehört die Wahrheit?



ARS ELECTRONICA 2023

Festival for Art, Technology & Society

**HATJE
CANTZ**

Who Owns the Truth?

Wem gehört die Wahrheit?

Edited by Gerfried Stocker / Markus Jandl

Ars Electronica 2023
Festival for Art, Technology, and Society

September 6 – 10, 2023
Ars Electronica, Linz

Editors: Gerfried Stocker, Markus Jandl

Editing: Mihaela Kavdanska, Maria Koller, Johanna Lenhart, Veronika Liebl, Philip Wolfsohn

Copyediting: Andrew Horsfield, Charlotte Eckler, Lisa Rosenblatt, Ingrid Fischer-Schreiber

Graphic design and production:

Main layout: Cornelia Prokop, Lunart Werbeagentur
Cover: Gerhard Kirchschräger

Typeface: IBM Plex Sans

Printed by: Gutenberg-Werbering Gesellschaft m.b.H., Linz

Paper: Arctic Volume white 1,12 vol., cover – 300g/m², book core – 115g/m²

© 2023 Ars Electronica
© 2023 for the reproduced works by the artists,
or their legal successors
© 2023 images without credit are courtesy of the artists
© 2023 Hatje Cantz Verlag

Distribution worldwide by
Hatje Cantz Verlag GmbH
Mommsenstr. 27
10629 Berlin
Germany
www.hatjecantz.com
A Ganske Publishing Group Company

ISBN 978-3-7757-5602-0

Printed in Austria

Cover:
Created with the AI-System DALL·E2.

 **ARS ELECTRONICA**
Festival for Art, Technology & Society

 **Climate neutral**
Print product
[ClimatePartner.com / 53401-2307-1022](https://ClimatePartner.com/53401-2307-1022)

Organization

Ars Electronica Linz GmbH & Co KG

Co-CEOs

Markus Jandl, Gerfried Stocker

Ars-Electronica-Straße 1, 4040 Linz, Austria

Tel: +4373272720

Fax: +4373272722

info@ars.electronica.art

Artistic Director: Gerfried Stocker

Chief Curatorial Officer: Martin Honzik

Managing Director: Veronika Liebl

Technical Director: Karl Julian Schmidinger

Head of Festival: Christl Baur

Head of create your world: Hans Christian Merten

Head of EU Projects: Vanessa Hannessschläger

Head of Operations: Xenia Kentz

Production Team:

Markus Artelsmair, Dario Bajric, Christl Baur, Pablo Bes Alonso, Fabiana Braunstorfer, Bernd Breitenauer, Leo Breneis, Anna Bruderhofer, Sophia Calo, Ana Maria Carabelea, Alexandra Corodan, Alexandra Crasnar, Chiara Croci, Eleni Danesi, Yusra Dellali, Daniela Duca, Elwin Ebmer, Jaka Erjavec, Miha Erjavec, Julian Erk, Ebrahim Eskandari, Katrin Fenninger, Malinda File, Hannes Franks, Marion Friedl, Jessica Galirow, Magdalena Giegler, Violeta Gil Martinez, Moritz Grabner, Bartosz Grabski, Roland Grilberger, David Grohe, Maximilian Haarich, Florian Habel, Sebastian Häger, Rita Hainzl, Vanessa Hannessschläger, Karam Harwash, Manuel Hauer, Nico Hartl, Randolph Helmstetter, Alexander Hens, Barbara Heinzl, Manuela Hillmann, Jens Höffken, Alina Holzinger, Peter Holzkorn, Martin Honzik, Holger Hörtnagl, Magdalena Hrnicek, Jovana Jankov, Christophe Jezierski, Mihaela Kavdanska, Xenia Kentz, Michaela Keplinger, Nina Kneidinger, Maria Koller, Patrik Köppl, Patrik Kozjak-Lesicki, Veronika Krenn, Suhun Lee, Johanna Lenhart, Tiziano Leonardi, Veronika Liebl, Johanna Liska, Paulina Maitz, Kristina Maurer, Hans Christian Merten, Elisabeth Mürzl, Pamela Neuwirth, Andrew Newman, Monika Niederl, Anna Oelsch, Emiko Ogawa, Maria-Nefeli Panetsos, Philipp Nelweg, Maria Pfeifer, Benjamin Pittertschatscher, Meli Posch, Gabriele Purdue, Christina Radner, Marco Rainer, Annika Rohde, Kati Romics, Andrea Scheinecker, Karl Julian Schmidinger, Marie-Louise Schmidinger, Daniel Schöngruber, Hannah Scott, Armin Seidl, Karl Seiringer, Miguel Senra-Hermana, Sumreen Shahzad,

Lisa Shchegolkova, Lera Shynkarova, Regina Sipos, Adaeze Skerrett, Martina Sochor, Florian Steidl, Helmut Steinecker, Philip Steiner, Jaia Davis Thomas, Laura Torres, Lukas Traxler, Josipa Trupina, Iris Tschank, Edin Turalic, Alisa Verbina, Helena Viteka, Joschi Viteka, Leon Wagner, Matthias Weghofer, Martin Weidinger, Jan Weiler, Laura Welzenbach, Michaela Wimplinger, Philip Wolfsohn, Alexander Wöran, Peggy Yin, Masha Zolotova

Press

Hannah Bachl, Joan Bairam, Nina Ebner, Mario Romera Gómez, Marlene Grinner, Martin Hieslmair, Katia Kreuzhuber, Mario Schmidhuber, Lars Schulz, Lindita Shabani, Christopher Sonnleitner, Amelie Steininger, Yazdan Zand, Sarah Zelt, Omid Zolfaghari

Marketing

Meli Posch, Christina Holzmeier

Co-Curatorial Team

Director Ars Electronica Animation Festival:

Jürgen Hagler

Expanded Animation: Juergen Hagler,

Alexander Wilhelm

IDSA x Ars Electronica FOUNDING LAB:

Katja Schechtner, Christopher Lindinger

University of Arts Linz: Manuela Naveau

Anton Bruckner Private University: Volkmar Klien

Johannes Kepler University & EUMETA Program

Co-Curation: Meinhard Lukas

Big Concert Night: Norbert Trawöger

More-than-Planet Lab: Miha Turšič and consortium

More-than-Planet & EUDigitalDeal Conference Days:

THE CATALYSTS

Prix Ars Electronica 2023

Idea: Hannes Leopoldseder

Conception: Christine Schöpf, Gerfried Stocker

Chief Curatorial Officer: Martin Honzik

Managing Director: Veronika Liebl

Technical Director: Karl Julian Schmidinger

Head of Prix Ars Electronica: Emiko Ogawa

Production Team: Christl Baur, Pablo Bes Alonso, Daniela Duca De Tey, Hannes Franks, Marion Friedl, Vanessa Hannessschläger, Katharina Hof, Xenia Kentz, Michaela Keplinger, Veronika Krenn, Hans Christian Merten, Andrew Newman, Annika Rohde, Jutta Schmiederer, Lisa Shchegolkova, Helmut Steinecker, Joschi Viteka, Laura Welzenbach, Masha Zolotova

Ars Electronica Linz GmbH & Co KG

Co-CEOs

Markus Jandl, Gerfried Stocker

Ars Electronica Center

Andreas Bauer, Christoph Kremer

Viktoria Aistleitner, Bettina Anderl, Alexandra Babisová, Sonja Bailer, Joan Bairam, Bauer, Reinhard Bengesser, Anastasia Bragina, Sarah Brait, Lisa-Maria Brandstötter, Manuela Bruckner, Niklas Buchrucker, Birgit Cakir, Jingjing Cao, Alžběta Čiperova, Julia Croton, Stefan Czerny, Moritz Danner, Blanka Denkmaier, Teodor Dumitrache, Johannes Egler, Vanessa Ennser, Julia Fabris, Katrin Fenninger, Muriel Flavia Fernandes, Melinda File, Philipp Gartlehner, Mitra Gazvini-Zateh, Elisabeth Gerhard, Firas Ghilan, Dominic Gottinger, Melanie Gruber, Nicole Grüneis, Harald Haas, Ylvi Sophie Haring, Birgit Hartinger, Haitham Harwash, Simon Hehl, Alexandra Heiligenbrunner, Barbara Heinzl, Katherine Heller-Pichler, Thomas Hillinger, Lucie Hindy, Florian Hofer, Sri Rahayu Hofstadler, Jacqueline Hofstadler, Gerold Hofstadler, Eva Hofstädter, Blanka Horáková, Anca Ignat, Armin Isa Imamovic, David Jentgens, Sabrina Kaselitz, Sandra Kiendler, Thomas Kollmann, Gizem Kus, Sabine Leidlmair, Johanna Leitner, Anna Katharina Link, Jakob Luckeneder, Katja Lux, Ulrike Mair, Clemens Mock, Erika Mondria, Sara Montoya, Claudia Moser, Marco Mrcela, Silvia Mukherjee, Daniel Murina, Elijahs Neuwirth, Andrea Oberfichtner, Michaela Obermayer, Petra Papanekova, Dietmar Peter, Svetlana Petrovic, Armin Pils, Maximilian Richter, Ulrike Rieseneder, Petra Saubolle-Hofmann, Alina Sauter, Birgitt Schäffer, Sarah Schmidt, Lydia Schneeberger, Thomas Schwarz, Fabian Schwarz, Manfred Seifriedsberger, Lindita Shabani, Majd Shukair, Magdalena Sick-Leitner, Elias Silber, Daniel Sonnleitner, Minoosh Sorkhkamal Zadeh-Steininger, Martin Spanka, Danny Stika, Michael Strehling, Johannes Stürzlinger, Ni Putu Sulasmini, Bhoomesh Tak, Ceyda Temiz, Thomas Viehböck, Laurenz Vojka, Raffaella Vornicu, Manuel Walch, Florian Wanninger, Gregor Woschitz

Ars Electronica Futurelab

Horst Hörtnert, Roland Haring, Hideaki Ogawa

Friedrich Bachinger, Florian Berger, Patrick Berger, Alexandre Bezri, Kerstin Blätterbinder, Chiara Croci, Arno Deutschbauer, Manuel Dobusch, Marianne Eisl, Peter Freudling, Matthew Gardiner, Bernadette Geißler, Mathieu Godineau, Barbara Habringer,

Peter Haider, Denise Hirtenfelder, Peter Holzkorn, Susanne Kiesenhofer, Anna Kuthan, Maria Mayr, Stefan Mittlböck-Jungwirth-Fohringer, Otto Naderer, Nicolas Naveau, Ali Nikrang, Anna Oelsch, Maria Anna Pfeifer, Johannes Pöll, Daniel Rammer, Erwin Reitböck, Raphael Elias Schaumburg-Lippe, Simon Schmid, Yoko Shimizu, Cynthia Wieringa

Ars Electronica Festival / Prix / Exhibitions

Martin Honzik, Veronika Liebl, Karl Julian Schmidinger, Christl Baur, Pablo Bes Alonso, Fabiana Braunstorfer, Alexandra Octavia Corodan, Eleni Danesi, Marion Friedl, Jessica Galirow, Magdalena Giegler, Sebastian Häger, Vanessa Hannessschläger, Miguel Senra Hermana, Manuela Hillmann, Katharina Hof, Jovana Jankov, Mihaela Kavdanska, Xenia Kentz, Michaela Keplinger, Veronika Sanna Krenn, Suhun Lee, Johanna Lenhart, Paulina Maitz, Violeta Gil Martínez, Kristina Maurer, Hans Christian Merten, Elisabeth Mürzl, Andrew Newman, Emiko Ogawa, Maria-Nefeli Panetsos, Alisa Pashkova, Christina Radner, Marco Rainer, Annika Rohde, Andrea Scheinecker, Hannah Scott, Armin Seidl, Lisa Shchegolkova, Lera Shynkarova, Adaeze Skerrett, Karla Spiluttini, Helmut Steinecker, Josipa Trupina, Iris Tschank, Laura Welzenbach, Philip Wolfsohn, Peggy Yin, Masha Zolotova

Ars Electronica Management Services

Elisabeth Kapeller, Stephan Kobler

Isabella Albel-Feicht, Robert Anderle, Hannah Bachl, Patrick Buchinger, Barbara Diesenreither, Nina Ebner, Stephan Feichter, Michaela Frech, Christian Fuchs, Marlene Grinner, Karin Gruber, Martin Hieslmair, Christina Holzmeier, Sabine Hummelbrunner, Markus Jandl, Thomas Jannke, Daniela Krassnitzer, Katia Kreuzhuber, Dominic Lengauer, Corinna Löcker, Florian Miesenberger, Horst Morocutti, Edith Noska-Neubauer, Melanie Posch, Michelle Ramm, Mario Romera Gómez, Monika Ruhmer, Mario Schmidhumer, Lars Schulz, Gerald Schurl, Christopher Sonnleitner, David Starzengruber, Amelie Steininger, Michaela Wimplinger, Yazdan Zand

Ars Electronica Solutions

Michael Mondria, Andreas Pramböck

Ina Badics, Chris Bruckmayr, Stefan Dorn, Michaela Fragner, Manuela Gruber, David Holzweber, Stefanie Katara, Fadil Kujundzic, Kornelia Maier, Harald Moser, Patrick Müller, My Trinh Müller-Gardiner, Gabriele Purdue, Katalin Romics, Isabel Schölmbauer, Roland Stampfer, Dominik Trichlin, Markus Wipplinger

ORGANIZER



Ars Electronica Linz GmbH & Co KG is a company of the city of Linz.



EVENT PARTNERS



Kunstuniversität Linz
University of Arts Linz



IN COOPERATION WITH



Weil wir OÖ lieben

FOUNDING LAB PARTNERSHIP



GARDEN PARTNERS

AOTEAROA Human-Computer Interaction Lab, University of Otago	ARAD kinema ikon	BANGALORE BeFantastic	BARCELONA ESPRONCEDA – Institute of Art & Culture	BLACKSBURG SCHOOL OF VISUAL ARTS VIRGINIA TECH - Virginia Tech
BOLOGNA Sinerglossa	CAMBRIDGE MIT Center for Constructive Communication	CHICAGO CHICAGO GAMESPACE	DUBAI CIFRA	ENSCHDE tetem
FANO Umanesimo Artificiale	HAMBURG Climate Service Center Germany (GERICS)	JAKARTA Media Art Globale (MAG)	MILAN CONNECTED PLATFORM	MILAN MEET Digital Culture Center
MONTRÉAL Hexagram	MUTEK MUTEK	QUÉBEC Xn Québec	NEW YORK HYPHEN-HUB	NEW YORK XRE (XR Ensemble)
ROTTERDAM Formosa	TAIPEI The Ministry of Culture of Taiwan	TAIPEI Department of Cultural Affairs Taipei City Government	TAIPEI Virtual and Physical Media Integration Association of Taiwan	TAIPEI Metaverse Alliance
TEMPE Meta	TEMPE Meteor Studio, Arizona State University (US)	TOKYO Leonardo-ASU Initiative (US)	TOKYO Civic Creative Base Tokyo (CCBT)	TOKYO Yasuaki Kakehi Lab, The University of Tokyo
UTRECHT IMPAKT [Centre for Media Culture]	VIENNA ACOnet	WINDSOR INCUBATOR Art Lab	WINDSOR IOTA Institute	WROCLAW Audiovisual Technology Center (CeTA)
Deutsche Telekom	gtec	Polycular	CREATIVE ROBOTICS Robots in Architecture	

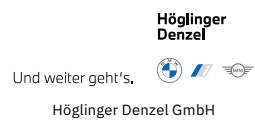
CAMPUS GARDEN PARTNERS

ABU DHABI New York University Abu Dhabi	ABU DHABI/ DUBAI/SHARJAH Festival X	BERLIN University of Applied Science Berlin	BERLIN Universität der Künste Berlin	BERLIN Technical University Berlin
BREMEN University of Arts Bremen	BUCHAREST National University of Theatre and Film "I. L. Caragiale"	BUENOS AIRES National University of Tres de Febrero	CHICAGO School of the Art Institute of Chicago	CHICAGO University of Chicago - AxLab
CLUJ Babeş-Bolyai University	DETROIT College For Creative Studies	DOHA vcuarts QATAR	DUBAI The Dubai Institute of Design and Innovation	DUBAI DIDI
GUANGZHOU Hong Kong University of Science and Technology (Guangzhou)	HAGENBERG University of Applied Sciences Upper Austria	HSINCHU National Tsing Hua University	JERUSALEM Musrara, the Naggar School of Art and Society	JERUSALEM MUSRARA
OSAKA Osaka University of Arts	KREMS University of Continuing Education Krems	LAUSANNE ÉCAL/University of Art and Design Lausanne	LINZ JYU	LINZ Johannes Kepler Universität
LONDON University of the Arts London - London College of Communication	LONDON Royal College of Art	LONDON The Bartlett School of Architecture, University College London	LUCERNE HSLU - Lucerne School of Art and Design	LUCERNE HSLU - Lucerne University of Applied Sciences and Arts
NOVA GORICA University of Nova Gorica School of Arts	PRAHA UMPRUM Academy of Arts Prague	SAINT-DENIS University Research School ArTeC (FR), Paris 8 University Vincennes - Saint-Denis, Teamed Lab	SALZBURG Paris Lodron University Salzburg	SALZBURG PARIS LODRON UNIVERSITÄT SALZBURG
SANTIAGO Mozarteum University	SANTIAGO UC Chile	SANTIAGO University of Chile	SEOUL PRISMA	SEOUL K-ARTS at
SANTIAGO Sungkyunkwan University South Korea	SEVILLA University of Seville	SHANGHAI ShanghaiTech University	SHARJAH American University of Sharjah	SHARJAH AUS الجامعة الأمريكية في الشارقة American University of Sharjah
SINGAPORE Nanyang Technological University	TAIPEI TAIPEI NATIONAL UNIVERSITY OF THE ARTS	TOKYO Institute of Industrial Science, The University of Tokyo	TOKYO The University of Tokyo	TOKYO Research Center for Advanced Science and Technology The University of Tokyo
VALDIVIA Universidad Austral de Chile	VIENNA University of Applied Arts Vienna	VIENNA mdw University of Music and Performing Arts Vienna	VILNIUS Institutas Media	WEIMAR Bauhaus-Universität Weimar Faculty of Art and Design

ARS ELECTRONICA RECEIVES SUPPORT FROM



MOBILITY PARTNER



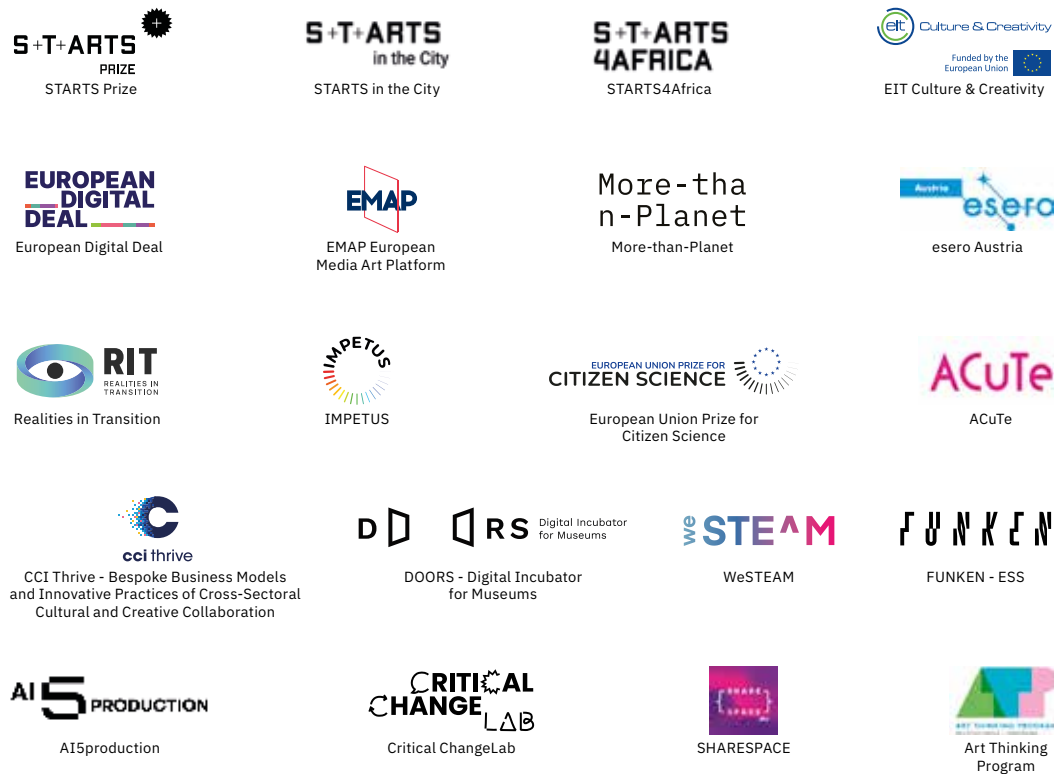
SPONSORS



SUSTAINABILITY PARTNERS



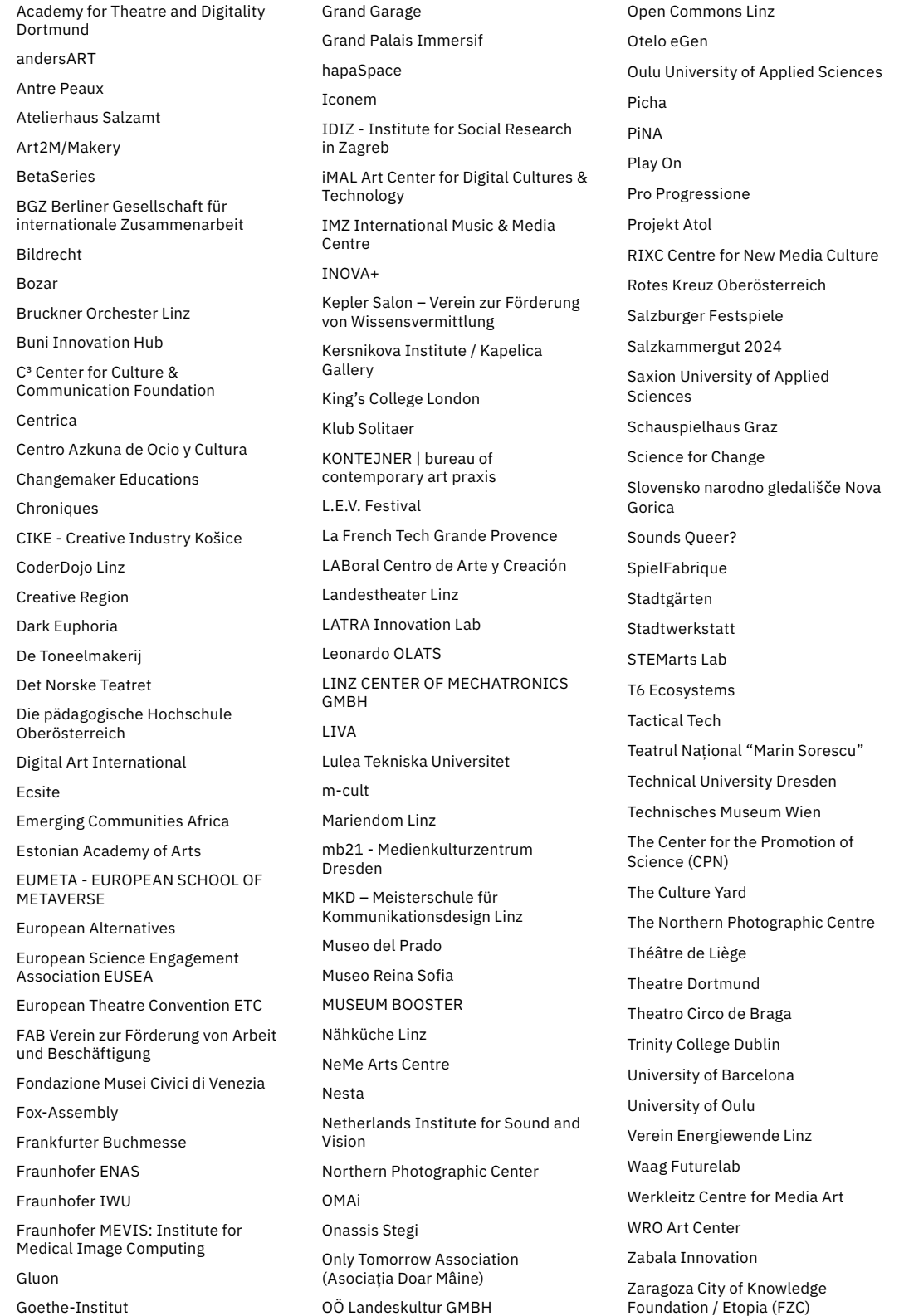
PROJECTS



MEDIA PARTNERS



COOPERATION PARTNERS



Contents

Gerfried Stocker, Who Owns the Truth? Wem gehört die Wahrheit?	18
---	----

Ars Electronica Festival 2023 – Highlights	20
--	----

CONFERENCES, LECTURES, WORKSHOPS

Conferences	28
--------------------	-----------

Symposium Perspectives on Political Education Glue. Irresolvable conflicts or social cohesion	28
---	----

FOUNDING LAB Day: A new university starts	29
---	----

Prix Forum	29
------------	----

Ars Electronica Theme Symposium	30
---------------------------------	----

The Next Renaissance: A S+T+ARTS Day Conference	30
---	----

(Un)Earthing the Truth: Ownership and Narratives about the Planet – A More-than-Planet Conference	31
---	----

End of Truth? A EUDigitalDeal Conference	31
--	----

Workshops	32
------------------	-----------

FOUNDING LAB

Katja Schechtner, IDSa x Ars Electronica / Founding Lab	36
--	----

FOUNDING LAB 2023: Student Global Distribution Map	37
--	----

FOUNDING LAB: The Formats	38
---------------------------	----

TRANSFORMATION LOUNGE	40
------------------------------	-----------

Ars Electronica (AT) x Hakuodo Inc. (JP), Future Compass	41
---	----

Yuima Nakazato (JP), Biosmocking	42
---	----

Yuima Nakazato (JP), DFT Textile	42
---	----

FASHION FRONTIER PROGRAM (JP), FASHION FRONTIER PROGRAM	43
--	----

City Intelligence Lab, Creating a smarter and more sustainable city	43
--	----

SIMULATE – Interactive pedestrian flow simulation	44
---	----

Thinking in Circles – Ars Electronica Festival's Sustainability Strategy	44
--	----

EXHIBITIONS

PRIX Ars Electronica Exhibition	48
--	-----------

S+T+ARTS Prize Exhibition	52
----------------------------------	-----------

European Union Prize for Citizen Science Exhibition	54
--	-----------

State of the ART(ist)	56
------------------------------	-----------

Mahsa Aleph, Jowhar	58
----------------------------	----

Taiye Ojo, AND IF WE OBSERVE THE PRESENT	59
---	----

Kira Xonorika, Cosmic Land	60
-----------------------------------	----

Ma Ei, Where is a place for me to sleep in peace?	60
--	----

Kholod Hawash, Long Nights	61
-----------------------------------	----

Mac Andre Arboleda, Rollyna Domingo, Pictures of Nothing	61
---	----

Ümit Güç, Footprints of Ants	62
-------------------------------------	----

Alevtina Kakhidze, Invasions 1.2.3	63
---	----

Indigene Corefio Huuke Harris, /Xam Sam Fortuin, Xopher Wallace, Diana Ferrus, Sthando Masuku, Elder Nkosenathi Koela, !Habesi	63
---	----

Alisa Verbina, Queer Crucession	64
--	----

Art Group Yav – Anastasya Vladychkina, Alexander Voronin, AR Hunter, The Seven Deadly Sins of Russia	65
---	----

Art Group Yav – Anastasya Vladychkina, Alexander Voronin, AR Hunter, The Seven Deadly Sins of Russia	65
---	----

Theme Exhibition – (Co)Owning More-than-Truth	66
--	-----------

Agnes Meyer-Brandis, Microfluidic Oracle Chip & Autopoiesis Answering Machine (MOC&AAM)	68
--	----

Gregor Krpič, Simon Gmajner, Jan Babič, Marko Jamšek, Gal Sajko (Jožef Stefan Institute), StellaVerde	69
--	----

Adriana Knouf, TX-2: MOONSHADOW	70
--	----

Alizée Armet, Ghostly Plants of Damaged Worlds	70
---	----

Cecilia Vilca, La Verdad (The Truth)	71
---	----

Cristo Riffo, Sistema Cinco: Non-Human Determinations	71
--	----

Charlotte Jarvis, Patricia Saragüeta, ORGAN OF RADICAL CARE: UNA MATRIZ COLABORATIVA	72
---	----

Daniel Haas, dBlech	72
----------------------------	----

Dorota Gawęda, Eglé Kulbokaitė, BROOD	73
--	----

Vladan Joler, Felix Stalder, Gordan Savičić, Infrastructure of a Migratory Bird	73
--	----

David Shongo, CEUX SANS QUI LA TERRE NE SERAIT PAS LA TERRE	74
--	----

Klaus Spiess, Emanuel Gollob, Paul Gründorfer, in cooperation with Jens Hauser, CHRONOLALIA	74
--	----

Felipe Castelblanco, Lydia Zimmermann, Cartographies of the Unseen	75
---	----

Iodine Dynamics – Arnaud Guillon, Chun Lee, Dustin Long, Aymeric Mansoux and Marloes de Valk, What Remains	75
---	----

Karen Palmer, Consensus Gentium	76
--	----

Pamela Neuwirth, Harald Purrer, Simone Boria, MEMESIS – Oracle Of The Anthropocene	76
---	----

Marco Barotti, APES	77
----------------------------	----

Michel Winterberg, Melting – the show must go on!	77
--	----

PROTO-ALIEI PROJECT, FORMATA	78
-------------------------------------	----

RYBN.ORG, The Great Offshore	78
-------------------------------------	----

Jonas Staal, Jan Fermon, Collectivize Facebook	79
---	----

Juliane Jaschnow, Stefanie Schroeder, HC SVNT DRACONES	79
---	----

Špela Petrič, Studio Teratope, AIxNOSOGRAPHS	80
---	----

Waag Futurelab, Northern Photographic Centre, ART2M/Makery, Leonardo/Olats, Zavod Projekt Atol, Ars Electronica, More-than-Planet Lab	80
--	----

Anne Duk Hee Jordan, Pauline Doutreluingne, Brakfesten / La Grande Bouffe	81
--	----

Barnaby Francis, Robert '3D' Del Naja, Dale Vince, Eco-Bot.Net	81
---	----

Roos Groothuizen, I want to delete it all, but not now	82
---	----

Juliane Jaschnow, Stefanie Schroeder, The Effect of Cannonry on Thunderclouds	82
--	----

Spektr Z (Sensor Polygon for Electromagnetism, Communication, Technology, Research & Sensing), Oculus Super Ignes Vigilantes Volavimus	83
---	----

Sebastian Schmiegl, Prompt Battle Training Station	83
---	----

Werner Jauk, Laura Sophie Meyer, Every BODY knows/owns the TRUTH	84
---	----

Sasha Litvintseva, Beny Wagner, Total Conversion	84
---	----

Dorotea Dolinšek, Biosymbiotic Exoskeleton	85
---	----

Noor Stenfert Kroese, Amir Bastan, ZOE	85
---	----

Andy Gracie, Massive Binaries	86
--------------------------------------	----

ARS ELECTRONICA GARDENS	88
--------------------------------	-----------

ANCONA / BOLOGNA Sineglossa, Valerie Tameu, Michele Cremaschi, Metabolo / Isotta	89
--	----

AOTEAROA Human-Computer Interaction Lab, University of Otago, Communicating through Space, Time and Culture	90
---	----

ARAD kinema ikon, kimæra	91
--	----

BANGALORE BeFantastic, FutureFantastic	92
--	----

BARCELONA ESPRONCEDA – Institute of Art and Culture, Daniel González Franco, Cathline Smoos, Love Vibes	94
---	----

BLACKSBURG Virginia Tech, Thomas Tucker, Tohm Judson, Swirling Senses	95
---	----

CHICAGO Chicago Gamespace, Thorne Brandt, Reality.beta	96
--	----

DUBAI CIFRA PLUS PORTAL L.L.C., Mise en Abyme – Reflection on Interconnectivity	97
---	----

ENSCHEDÉ Tetem, Abner Preis, Underneath the Wings of a Butterfly	98
--	----

FANO Umanesimo Artificiale, meat, metal and code	99
--	----

FORMOSA Virtual and Physical Media Integration Association of Taiwan, Sensory Voyage	100
--	-----

HALLEIN Escape Fake 2.0, Museum of Fake	104
---	-----

HAMBURG Climate Service Center Germany (GERICS), Hen/i, Do Mayer, Disco Planet: Letheia	105
---	-----

LINZ Creative Robotics, University of Arts Linz, Fashion and Robotics, Exploring the future of individualized apparel (re)manufacturing	106
---	-----

JAKARTA Media Art Globale (MAG) organized by Connected Art Platform, TEMPEH UNIVERSE	107
--	-----

MILAN MEET Digital Culture Center, AI-generated storytelling meets Mauro Martino	108
--	-----

MONTREAL Hexagram, imprints	109
---	-----

MONTREAL MUTEK, Immersive Collection	112
--	-----

MONTREAL Xn Québec, Unleash the creative power of Quebec – A selection of art performance and XR/immersive works	114
--	-----

NEW YORK XRE (Extended Reality Ensemble), Anne Wichmann aka She's Excited!, Clara Francesca, Brittany Kurtinecz, Whitt Sellers, You Are BUTIFL	115
--	-----

NEW YORK Hyphen Hub, Hyphen Hub Video Space	116
---	-----

ROTTERDAM V2_ Lab for the Unstable Media, Summer Sessions	117
---	-----

SCHIEDLBERG g.tec medical engineering GmbH, Brain-Computer Interface & Neurotechnology in Games	119
---	-----

TEMPE Meteor Studio, Arizona State University, William T. Ayton, ConstellationXR	121
--	-----

TOKYO Civic Creative Base Tokyo, CCBT	122
---	-----

TOKYO Yasuaki Takehi Lab, The University of Tokyo, Becoming Different	123
---	-----

UTRECHT IMPAKT [Centre for Media Culture], CODE 2023	125
--	-----

VIENNA ACOnet net:art coordination center, aaron's law – A Tribute to Aaron Swartz	127
--	-----

WINDSOR INCUBATOR Art Lab, IOTA Institute, Jennifer Willet, Gentleman Scientist: Microecologies	128
---	-----

WROCLAW Audiovisual Technology Center (CeTA), digital rites	129
---	-----

CIFO x Ars Electronica Exhibition	130
Adrian Melis, Tales from the Mountaintop	131
Alba Triana, Vibrant Self	131
Ana María Gómez, Inoculate	132
Jhafis Quintero Gonzalez, Reflections	132
Andrés Ramírez Gaviria, O.O.	133
Joaquín Aras, Añoranzas (Yira Yira)	133
Rosemberg Sandoval, El cuarto del artista en Bahareque	134
Natalia Espinosa, The Ark	134
Jonathan Torres Rodríguez, Wild Machines	135

EUMETA	136
MIT Center for Constructive Communication, Cortico, Maggie Hughes, Naana Obeng-Marnu, Cassie Lee, Spencer Russell, Deb Roy, Collective Echos	137
Stefan Kaegi, Rimini Protokoll, Uncanny Valley	138

CREATE YOUR WORLD 2023

Truth or Dare: The Party Game with our Future	142
Prix Ars Electronica: u19—create your world	143
Dynatrace, Magic AI Workshop	144
“Explainers” of the Technical Museum Vienna, roadLAB	145
Open Commons Linz, IKT Linz GmbH, Stadtbibliothek Linz, Open Commons Linz	145
Agnes Chavez, STEMArts Lab, OMAI, Space Messengers Collective	146
Maria Reitter-Kollmann, Andrea Hinterberger, Individual Art Space	147
Miriam Kandra, Ida Kieslinger, Helena Vancura, Body as a Medium	147
u19—create your world, mb21, c3, Only Tomorrow Association, What if ... everything turns out well? Youth Exchange project 2023	148
Sounds Queer? Collective, Sounds Queer Synth Lab	148
Verein Energiewende Linz, Helwin Prohaska, Johannes Ambrosch, Kristina Strauß, Martin Siedler, Sandro Russi, Powerplayground	149
De Toneelmakerij, Simon Duckham, Paulien Geerlings, Lot Houtepen, Martien Langman, Fake it till you make it	149
PlayOn! — New Storytelling with Immersive Technologies, FUTURE ECHOES	150

Oberösterreich Tourismus, Fiona Klima, Antonia Langer, Laura Reither, Lena Atzinger, Emely Mair, Lorenz Uhl, Max Wolschlagler, Mara Bulajic, Luis Sefcsik, Sophie Dögl, Samuel Klancnik, The future of tourism	150
Martina Sochor, Elke Hackl, Josef Buchner, Hans-Christian Merten, Alicia Bankhofer, Ian Banerjee, Artist of Meditações, Martin Bauer, Sonja Hinteregger-Euller, Jan G. Grünwald, Landesschüler*innenvertretung Niederösterreich, Conny Lee, Forum: Digital Education	151
Arbeiterkammer OÖ, Pädagogische Hochschule OÖ, Ars Electronica, Symposium Perspectives on Political Education	152
The education prize of OeAD, BMBWF, Ars Electronica, Klasse! Lernen	152
Virtual Office FAB Linz, Bettina Gangl, Helmut Doblhofer, Birgit Pölz, Reinhard Zach, Fortuna One — the Happy AI	153
Otelo eGen, Verein Otelo, Martin Hollinetz, Hannelore Hollinetz, Katharina Hollinetz, Flora Nimue Hollinetz, Eva Hübler, Karim Hegazy, Susanne Hörschläger, Tobias Hollinetz, Art-Creagravity	153
Tabea Tremmel, Simon Hehl, Michael Wittmann, Ricarda Dorfmeister, Willi Gold, Alexander Mahla, CECI N'EST PAS UN TOURNESOL	154
MKD — Meisterschule für Kommunikationsdesign, Meet me Meta	154
Mary Mayrhofer, Patrick Litzlfellner, The Hissing Booth	154
KLASSE! LERNEN	156
Musikmittelschule (Music Middle School) Eggenburg, He[a]rophone	156
Bischöfliches Gymnasium Paulinum, Schwaz, Film project Reading Night	157
Lower Austrian Middle School Lunz am See, With water for the environment	158
Ursulinen High School Innsbruck, 4CD — Fablab Ursulinen Innsbruck	158
High School BG/BRG Pichelmayergasse, Vienna, Elective subject Game Design	159
Middle School Kematen, Gamification — Motivation to Learn	159
Elementary school Stattegg, Digital Scavenger Hunt — Path of Sustainability	160
GRG13 Wenzgasse, Vienna, Soap Workshop 4.0	160
Phönixschule — digiTN-Middle School Attnang-Puchheim, PODix — Phönixschule ON AIR	161
August Thielmann, Telfs, We are under pressure!	161

CAMPUS EXHIBITION

UNIVERSITY OF ARTS LINZ Manuela Naveau, Marlies Hajnal, Simon Hochleitner, radical collectives	164
Anton Bruckner Private University Linz, Manufacturing Audible Truth	202
Festival X , The Dubai Institute of Design and Innovation, New York University Abu Dhabi, American University of Sharjah, Festival X Next Gen	213
University of Applied Science Berlin, School of Culture and Design, Department of Communication Design, Artificialism	217
University of the Arts Berlin and Technical University Berlin, MA Design & Computation, New Practice in Art and Technology	219
University of Arts Bremen, Digital Media Program, Matter Matters	221
National University of Theatre and Film "I. L. Caragiale", Master of Interactive Technologies for Performing and Media Arts, Digital Orbululum	223
School of the Art Institute of Chicago, Funnel & Switch	225
University of Chicago, Actuated Experience Lab—AxLab, Actuated Experience	227
Babeş-Bolyai University, Faculty of Theater and Film, Reverse Manipulation	228
College For Creative Studies, Graduate User Experience Design Program, DETRO TUNE	230
Virginia Commonwealth University, School of the Arts in Qatar, Meta-Functions of Cultural Production	231
The Hong Kong University of Science and Technology (Guangzhou), Back to the Roots and Up to Space	234
National Tsing Hua University, A Face Drawn in Sand	236
Musrara, the Naggar School of Art and Society, Dual Space	238
Osaka University of Arts, Possible Fiction	239
University of Continuing Education Krems, University of Arts Linz, University of Applied Arts Vienna, Expanding the Archive of Digital Art	241
ECAL/University of Art and Design Lausanne, Bachelor Media & Interaction Design, Fantastic Smartphones	242
London College of Communication, University of the Arts London, Body Machine Ritual	245
Royal College of Art, School of Communication, Digital Undercommons	248
Design for Performance and Interaction, The Bartlett School of Architecture, University College London, Agents of disruption and transformation	251
HSLU—Lucerne School of Art and Design, The Anatomy Lessons	254
University of Nova Gorica School of Arts, me ∞ us	255
UMPRUM Academy of Arts, Architecture and Design in Prague, Revising the digital	257
University Research School ArTeC, Paris 8 University Vincennes—Saint-Denis, TEAMeD Research Lab, The Looting Bag Theory of Fiction	258

Mozarteum University, Spot On MozART	260
University of Salzburg (Paris Lodron Universität Salzburg), DEGENET	261
UC Chile, University of Chile, National University of Tres de Febrero, FUTURE ANCESTORS	262
Korea National University of Art K-ARTS (KR), Pohang University of Science and Technology, FRAMELESS	264
Sungkyunkwan University SKKU, Beyond the Sight	266
University of Seville, ASTER> Art ^ Science	267
ShanghaiTech University, Ethereal Dreams in Augmented Realms	270
Nanyang Technological University, Singapore, Butterfly's Dreams: The New Aesthetic of AI in Artistic Practice	272
Taipei National University of the Arts, Epicentrum	276
JIZAI ARMS project team, The University of Tokyo, JIZAI ARMS	282
Universidad Austral de Chile in collaboration with Universidad de Chile, Universidad de Santiago de Chile, Diagramming History	283
mdw University of Music and Performing Arts Vienna, Beyond the surface	284
Institutio Media, Alt Lab Tutorial Series	286
Bauhaus-Universität Weimar, Non-machines: Playground of Perspectives	289

EVENTS, CONCERTS, PERFORMANCES

Opening of Ars Electronica and IDSA FOUNDING LAB	296
OPENING	296
Luc Gut, Rolf Hellat, OSZILOT	297
Riccardo Giovinetto, FE:MI:NA	297
Kyoka, Ali Mahmut Demirel, Syntax-2	297
Robin Fox, TRIPTYCH	297
The Big Concert Night of Ars Electronica — Sounding out the Origins	298
Present's moment of force	299
Bára Gísladóttir, SILVA	299
Def Ill aka Ruffian Rugged, Free Purgatory Tickets	299
NIGHTLINE	301
Jessiquoi, Jessiquoi	301
Noemi Büchi, ECLIPSE	301
Soraya Lutangu, Bonaventure	301
Myriam Bleau, Unsculpt	301
Kenji Araki	301
Mika Bankomat	301
Pianographique — Piano music x digital images: Maki Namekawa — The Köln Concert	302
Cod.Act, André Décosterd, Michel Décosterd, Uperqt	303

EUROPEAN PLATFORM FOR DIGITAL HUMANISM

EPDH-Projects	306
Ars Electronica: a European Platform for Digital Humanism	308
The Next Renaissance	309
S+T+ARTS Initiative	309
EIT Culture & Creativity	312
Culture & Creative Industry Futures	312
ACuTe	313
CCI Thrive	314
DOORS	315
Transdisciplinary Cultures	316
More-than-Planet	317
IMPETUS	318
Critical ChangeLab	319
WeSTEAM	320
Critical Technologies	321
European Digital Deal	322
EMAP	323
Realities in Transition	324
FUNKEN Academy	325

ARS ELECTRONICA ANIMATION FESTIVAL

Juergen Hagler, NEW ANIMATION ART—TECTONIC SHIFT: Evolution and history	328
University of Applied Sciences Upper Austria, Ars Electronica, ARS ELECTRONICA ANIMATION FESTIVAL 2023	330
Electronic theatre	331
AI & Human	331
Data, bodies, space	332
Austrian panorama	332
Young animations	333
Transmediale guest program	334
Special screening Golden Nica winner 2023	334
Meet the artist series	335
Juergen Hagler, Jeremiah Diephuis, Expanded Animation 2023—The Art of Performance	336
Birgitta Hosea, Juergen Hagler, Synaesthetic Syntax IV: The Ghost vs the Machine	337

DEEP SPACE 8K	338
Yuma Yanagisawa, AI Flowers	339
Razieh Kooshki, Vahid Qaderi, Striate Cortex	339
Olga Sevillano Pintado, Raúl Martínez Arranz, A Portrait of the Artist as a Young Man (and as a Young Woman Too)	340
Gerald Peter, Visionary Music	341
Project Humanity, Project Humanity	341
Grand Palais Immersif, Iconem, Fondazione Musei Civici di Venezia, Venice Revealed	342
Erick Aguirre, Kevin Blackistone, Jiayi Cheng, Danica Golić, Kathrine Hardman, Eunji Ji, Polina Kliuchnikova, Kateryna Pomeichuk, Homodyne	343
Jörg Menche, Sebastian Pirch, Norbert Unfug, Felix Müller, Christiane V. R. Hütter, Connected	344
Dietmar Hager — Near or far? Do we see what we see?	344
Alejandro Vergara, Javier Pantoja Ferrari, Goya's Truth	345
Patrick Dykstra, Wolfgang Knöpfler, Patrick and the Whale	346
Franz Fischnaller, LAST SUPPER INTERACTIVE (LSI)	346
Mauro Martino, Mapping the NFTs Revolution and the preview of Milan, Factory of the Future	347
David Szauder, Tango in Wonderland	347
Michael Najjar, cool earth	348
Rebecca Merlic, Tulpenmania / Domum	348
Dan Tell, The Quest for Cosmic Truth	349
(Hexagram Network) ALMA / Marc-André Cossette, Alexandre Saunier, The Shape of Things	349
Michel Lemieux, Victor Pilon, Cité Mémoire Montréal (Xn Québec)	350
France Jobin, Markus Heckmann, Entanglement (MUTEK Immersive Collection)	351
Line Katcho, Immortelle (MUTEK Immersive Collection)	351
VH Award, 5th VH AWARD	352
Subash Thebe Limbu, Ladhamba Tayem; Future Continuous	352
Riar Rizaldi, Fossilis	353
zzyw (Yang Wang, Zhenzhen Qi), Other Spring	353
Su Hui-Yu, The Space Warriors and The Digigrave	354
Zike He, Random Access	354
University of Arts Linz, Time-Based and Interactive Media Arts Department, INTERPLAYFUL SENSORIC ENVIRONMENTS	355
Ars Electronica Animation Festival	358
Further project and programs shown in the Deep Space 8K	359

GUEST PROJECTS

Tina Kult, TINA KULT hosted by Ars Electronica	362
monochrom, monochrom's ARSE ELEKTRONIKA 2023: Sexponential	362
Kulturhauptstadt Bad Ischl Salzkammergut 2024 GmbH, Bad Ischl Salzkammergut 2024 European Capital of Culture Jour Fixe	363
Jung von Matt DONAU GmbH, No room for us	363
SUSTAINABLE FOOD BIO AUSTRIA	363
Simon Kopfberger, Rita Newman, Interactive Resonance Sphere	364
Yen-Tzu Chang, The Mirage Replicas 2.0	364
Yoichiro Kawaguchi, Sofia Talanti, Markus Riebe, Cytolon's whisper (Satelite Events)	365
HyungJun Park, Artificial Consciousness	365
Stadtwerkstatt, STWST48X9 COLD HEAVEN	366
Infolab / FRANZ XAVER, Endless Approach to Zero	366
Shu Lea Cheang, UKI	367
Michael Aschauer, Petro Sculpture #1.20.23	367
Tanja Brandmayr, Minus werden (Become Minus)	368
Stadtwerkstatt (AT) + Associated Collectives, BLOODPROOF OF LIFE	369

ARS ELECTRONICA

ARS ELECTRONICA CENTER	372
Education in the Era of AI and Social Media	374
Digital Basic Education Packages	375
New Exhibition: <i>Compass reloaded!</i>	384
Program Highlights 2022/23	390
Deep Space Highlights 2022/23	393
Event Service	396
Festival Program @ Ars Electronica Center	397

ARS ELECTRONICA FUTURELAB

Hideaki Ogawa, What are the futures?	400
Matthew Gardiner, Framing Futures Research	402
Ideas Expedition	403
Denise Hirtenfelder, Peter Haider, Nicolas Naveau, Maria Pfeifer, Bridge 2040	403
Susanne Kiesenhofer, Anna Oelsch, Daniel Rammer, Deep Sync	404

Faust VR	404
missimo: Deine Mission Morgen	406
SHARESPACE	407
Oribotic Instruments	408
Ori Shelter	408
Future Team Project	409
Data Art & Science Project	410
Collective Transformation Lab	410
Glockner.Luft.Raum	411
AT&S New Working World	412
Objection	412
Ars Electronica Japan	413
Art Thinking Japan Initiative	414
Open Futurelab & Futurelab Night Performances	415

ARS ELECTRONICA SOLUTIONS

Ars Electronica Solutions @ Festival 2023	418
Deep Space as a customized solution for international customers	420
PROJECTS	422
DAS MORGEN	422
SIAE 2023 — ESA	423
NAWAREUM	423
Brauereimuseum Wieselburg	424
Lagermax — Roadshow	424
Kometor Peuerbach	424
ESA Space Expo: Earth from Space	425
FHOOE Steyr — Digi Space	425
Preview	425

ARS ELECTRONICA EXPORT 2023

Esch2022—European Capital of Culture, IN TRANSFER—A NEW CONDITION	428
“Del cielo al agua y lo que está en el centro”	428
ArtScience Residency enabled by Art Collection Deutsche Telekom 2020—2023	429
Kosice 2.0 X Ars Electronica X Art & Tech Days	429
Forehead Vulva Channeling Research by Artist: S()fia Braga	430
Matsudo International Science and Art Festival — Circular Creativity	430
Ars Electronica Animation Festival on Tour 2022	430

Gerfried Stocker (AT)

Co-CEO / Artistic Director Ars Electronica

Who Owns the Truth?

Wem gehört die Wahrheit?

The theme of Ars Electronica in 2023, this year formulated as a question, aims directly at key disputed topics of our time: truth and ownership, interpretive authority and sovereignty. Can truth be owned? Is there a right to truth and if it does belong to someone or some institution, what control and responsibility are associated with it? How do we ask ourselves such questions in this age of global interconnectedness and the rapidly developing performance of so-called Artificial Intelligence?

In an age, moreover, in which a small number of people, in neo-feudalistic fashion, have usurped the management of collective knowledge, and in which we also have good reason to doubt whether the vision of technology represents the solution to our problems.

Behind this lies the central question as to how we can make the fantastic achievements of science and technology accessible for ALL people – and usable. It is not enough just to think about how we can prevent AI systems from harming someone (even though that is vitally important). A tool that is so much based on the globally collective “raw material” of knowledge, creativity etc., must be harnessed to the benefit of all, too.

In recent years, we have thought a great deal about “Digital Humanism”; it is time now to think about a form of “Digital Socialism”, meaning a “commonwealth”, a “social contract” with which we can overcome the profound, wide-ranging changes of the digital age, and even more, the globally collective consequences of climate change.

Admittedly, this is a nearly insurmountable challenge. Yet, surely, it is just for such a vision that a festival like Ars Electronica should and can stand. A festival that is extraordinary in every respect, at which for more than 40 years under the heading “art, technology and society” thought has been given not only to how technology alters our society, but also to revealing how art and society can themselves shape technology.

Ars Electronica 2023 – what’s it about?

It’s about truth as a manifesto of interpretive authority and sovereignty, about dealing with the loss of the claim to “the” truth and thus, about accustoming ourselves to thinking of truth as a concept in the plural.

It’s about truthfulness as the basis of the values of the “authentic” and “original” as we perceive them, and how these terms have already been transformed in the digital realm.

It’s about the collective synchronization of perception as a strategy for fake information and conspiracies in the social media and the machinations of lobbies and large-scale industry, from influencing the scientific bases of man-made climate change to the deceptions of the diesel scandal.

It’s about freedom of speech and opinion, about how we deal with obvious liars, right up the very highest offices of state, and how we deal with people who publish unpalatable truths, such as Edward Snowden and Julian Assange, for example. It’s about whether the truth is acceptable to people and about the significance of scientific insight and evidence.

It’s about the concept of ownership and the right to profits from intellectual work and performance in the transition from the automation of machines to the autonomization of knowledge and content generation – from digital copy and paste to cultural appropriation in a globally networked world.

Intellectual Property and Copyright, as the central pillars to date of the content and creative industry, are already no longer able to reflect adequately the changes in digital networking, nor provide any meaningful degree of protection – never mind all that is coming our way with the systems of OpenAI, etc. But it’s also about the concept of ownership as it relates to nature, going beyond the centuries-old philosophical and legal debate; it’s about the factual reality of the exploitation and destruction of nature as an unremitting burden being transferred to following generations. And, of course, it’s about all that we believe, fear or hope will change in the wake of so-called Artificial Intelligence.

But in its essence, it’s about demonstrating how artists from all over the world, through collaboration as well as confrontation with technology and society, are working on this topic and that’s what we are going to do – in association with the prize-winners of the Prix Ars Electronica, the projects arising from the many local, European and international cooperations and networks, the curated theme-based exhibition and newly commissioned works, concerts and performances, symposia and workshops.

Ars Electronica Festival 2023 – Highlights

The Pre-Opening Walk

Tuesday, September 5th, 2023

The first day of this year's Ars Electronica Festival is filled with exciting openings and immersive experiences. We begin at the awe-inspiring Cathedral of the Conception of the Virgin Mary, known as Mariendom, a neo-Gothic marvel that transforms into a stunning stage for media art during the festival. Here, artist Yen-Tzu Chang (TW) will present an enchanting dance performance exploring generational differences within a family and culture.

Next, we move to the baroque Ursulinenhof on Linzer Landstraße, the home of the OÖ Kunstverein, where a group exhibition by talented artists Markus Riebe (AT), Yoichiro Kawaguchi (JP), and Sofia Talanti (IT) awaits as part of Ars Electronica. At the LENTOS Kunstmuseum, Director Hemma Schmutz (AT) welcomes visitors and acts as a juror for the **CIFO x Ars Electronica Awards**, celebrating Latin American media art. These awards have been announced by the Miami-based Cisneros Fontanals Art Foundation (CIFO) and Ars Electronica since 2022, aiming to bring Latin American media art to the forefront. The best works of 2023 can be experienced at the LENTOS Kunstmuseum as part of Ars Electronica. Following this, we arrive at the University of Arts

on Linz's Hauptplatz, a beautiful and centrally located campus inviting visitors since 2004. Rector Brigitte Hütter (AT) and her team celebrate the 50th anniversary of the University of Arts Linz, offering a glimpse of the students' creative prowess.

The Atelierhaus Salzamt awaits, serving as a meeting place for young visual artists from around the world, showcasing the exhibition **Butterfly's Dreams: The New Aesthetic of AI in Artistic Practice** presented by Nanyang Technological University (SG).

The Ars Electronica Center opens its doors to the Deep Space 8K, an unparalleled immersive experience developed by the Ars Electronica Futurelab. Witness enthralling works, such as **THE LAST SUPPER INTERACTIVE – Art and Mathematics in the Renaissance** by Franz Fischnaller (IT), transforming Leonardo da Vinci's iconic painting into a three-dimensional, walk-in space where you can stroll around the panel and view Jesus and his apostles from all possible perspectives. Finally, we gather at the creative and rebellious nucleus of Linz's urban fabric, the Stadtwerkstatt, for the last act of the pre-opening walk on the eve of Ars Electronica and let magic unfold before our eyes.

Education Day

Wednesday, September 6th, 2023

What is true, what is false? Since Hannah Arendt at the latest, we know no one absolute truth can exist for all of us. So although truth is what we think it is at any given time, this does not at all mean that everything is true and nothing is true at the same time. If a community can no longer agree on recognizing basic facts as such (and then arguing about how to interpret them), it breaks apart. The proof is Donald Trump, who accepts only his facts and dismisses all others as fake news.

Education is indispensable for a broad and critical, yet constructive debate about what is true and what is false, what is real and what is fake. It is therefore both a statement and a demand that this year's Ars Electronica is declaring Day 1 to be **Education Day**.

The fact that education, curiosity and openness should be instilled as early as possible has once again prompted the Upper Austrian University of Education to join forces with experts, creative minds and, above all, students at a conference to consider what the future of our society might look like in terms of sustainability and diversity of perspectives.

It is undisputed that knowledge of mathematics, information technology, natural sciences and technology (STEM) is highly relevant for shaping the future. That enthusiasm for these fields can also be successfully aroused in rural areas is shown by **missimo**. As a mobile experience space, the two-storied special truck of the non-profit Kaiserschild private foundation will be visiting elementary schools all over Austria starting in the fall, giving school children the opportunity to try out new technologies on 100 square meters of exhibition space. The interactive interior of this unique vehicle was designed by the Ars Electronica Futurelab, and in the future will be operated by experts from the Ars Electronica Center. During the festival, **missimo** can be explored on Linz's Hauptplatz.

The **FOUNDING LAB** organized by Ars Electronica and the Institute for Digital Science Austria (IDSA) will focus on what a new university for holistic research into digital transformation should look like: 75 students and 15 fellows from all over the world will be working on a range of topics related to digitization as well as new strategies and formats for creating and communicating knowledge.

The students complete the **Summer School** (August 23rd to September 11th), the **Fellows Forum** (September 6th to 10th) – then it's off to the Fall Term (October 2023 to January 2024). If you want to get a glimpse of the knowledge transfer of the future, be sure not to miss the accompanying conference for the **FOUNDING LAB** on Wednesday, September 6th.

The content-related focal points and strategic orientations of no less than 56 art universities from all over the world can be studied as part of the **Campus Exhibition**, which stretches across POSTCITY, through the University of Arts Linz and into the Salzamt. This time, the Taipei National University of the Arts will present itself as the **Featured University 2023**. In addition, the School of the Art Institute of Chicago, **PRISMA** (a cooperation between three universities from Chile and Argentina), Tokyo University and **Festival X**, which brings three universities from Abu Dhabi and Dubai to Linz, will also be taking part. The potential for cooperation between science

and civil society is demonstrated by the **Citizen Science Exhibition**. The **ISALA** initiative from Belgium, which promotes women's health and awareness-raising, and the **konS – Platform for Contemporary Investigative Art**, which brings together engineers, scientists and artists to develop joint perspectives on the present and the future, are representative of a whole series of inspiring projects, most of which are among the winners of the European Union Prize for Citizen Science. The grand finale of the first day of the festival is the opening. This time it is not only for the festival, but also the public starting signal for the **FOUNDING LAB** and the **IDSa**. The celebration will take place in the huge train hall and in the courtyard of POSTCITY – the award-winning light and sound artist Robin Fox (AU), the Swiss artist duo Luc Gut and Rolf Hellat, who create sound installations and performances, and the Japanese artist Kyoka (JP) from the experimental label Raster-Noton, who combines her audiovisual performance with electronic music.

S+T+ARTS Day

Thursday, September 7th, 2023

The triangle of science, technology and art has long become the main driver of sustainable social progress. Why? Because it – and art above all – produces the disruptive innovation we need to become sustainable. Whether it is the brewing climate catastrophe or the rapid triumph of AI systems: To be able to cushion the ecological, social, economic and political shocks that lie ahead of us, we do not need the next product design, but a fundamental change in market logic. It is precisely these forward-looking approaches and the associated paradigm shifts that the European Commission sets out to promote with its **S+T+ARTS initiative – Science, Technology, Arts**. Ars Electronica serves as a unique platform for discussing, presenting and forging alliances between science, technology and the arts that are as unusual as they are groundbreaking.

Under the title **Next Renaissance**, this year's **STARTS Day** will once again be a meeting place for innovators from art, industry and research. In this case, **Next Renaissance** stands for a European initiative of the EIT Culture & Creativity that promotes the fusion of scientific, technological, cultural and artistic knowledge and thus stimulates ideas that are fit for the future. Highlights of the **STARTS Prize Winner Exhibition** at POSTCITY include the outstanding cinematic work **Broken Spectre** (Richard Mosse), which brings to life the devastating consequences of the 4,000-kilometer Trans-Amazonian Highway, and **Pollinator Pathmaker** (Alexandra Daisy Ginsberg), a pollinator artwork created by an AI tool and planted and maintained by humans. As winners of the Grand Prize in two categories, both artists will be awarded the coveted STARTS

Trophy on Thursday. In order not to miss the many program points, we recommend our visitors to experience POSTCITY within the framework of the WE GUIDE YOU tours and to listen to the theoretical reflections of the STARTS conference afterwards or join in the debate themselves. Joint discussion also forms the basis for other programs away from the former mail distribution center.

More-than-Planet Day

Friday, September 8th, 2023

Festival Friday follows on seamlessly from Thursday. Starting with the innovation that we need in and for the 21st century, it is now a matter of fitting these solutions into a bigger picture: into holistic thinking about the future. Because even though yesterday we thought we were the crown of creation, today we must face the fact that we are only a small – albeit powerful – part of the planet's ecosystem. From this in turn follows that the future of our species is inseparably linked with the prosperity and ruin of the great whole. Not out of gratitude because it has produced us, but because we are perfectly adapted to its living conditions and no others, we should protect it. The second day of the theme symposium starts on Friday at 11 am and runs until 5 pm. All contributions of this day will focus on the question **Who owns the planet?** in line with this year's festival theme **Who Owns the Truth?** The theme day is supported by the project **More-than-Planet**, co-funded by Creative Europe. On Saturday, the discussions about ownership and finding the truth will continue in the same time frame. Experts from different disciplines will meet and focus on central issues of our time: truth, sovereignty of interpretation and statehood. Whether you have a professional background or not, everyone is invited to follow the discussions on stage. Parallel to this, the **Theme Exhibition** takes up the reflections in a creative way: While interdisciplinary artist Andy Gracie draws on scientific exploration of galaxies and media artist Dorotea Dolinšek draws inspiration from space expeditions, Charlotte Jarvis

and Patricia Saragüeta explore the artistic interpretation of medical research. The latter realized their artistic research within the framework of the **European Media Art Platform (EMAP)**. Visual artist Christo Rizzo shows what drone images and microscopic photographs mean for our perspective on the world, and composer and multifaceted artist David Shongo explores human responsibility for the climate catastrophes of our time. A few steps away are the winners of the **Ars Electronica Award for Digital Humanity**, which aims to promote cultural exchange in a digital world. The focus is on the African initiative **Masakhane**, which discusses how algorithmic control and bias (co-)determine social inequality – and won the top prize for it in 2023. Meanwhile, new technical visions are being developed at the **Ars Electronica Futurelab** – which will once again have a branch in POSTCITY during the festival, as will the Solutions Division, which is pushing an interactive encounter zone. The future of computer animation can be experienced at the Ars Electronica Center, where the **Expanded Animation Symposium** and the **Ars Electronica Animation Festival** will be held. Immersion in fantastic virtual worlds has never been so easy – promise! **The Bruckner Orchestra** rounds out the evening with the **Big Concert Night**, which turns POSTCITY's rustic train hall into a hotspot for classical music. With the same passion, but less classical, it continues with the acts of the **Nightline** – expect artists like Noémi Büchi, Jessiquoi, Soraya Lutangu Bonaventure and Myriam Bleau.

Dare-the-Truth Day

Saturday, September 9th, 2023

Again, the festival picks up where it left off the day before, inviting people to dare to tell the truth. Accepting an inconvenient truth — as we all know — is not easy. This is especially true these days for the scientific evidence of the developing climate catastrophe. The measurement results of a globally researching scientific community allow no other conclusion than that we need a radical change of course and that the window of opportunity to do so is closing fast. Accepting this truth is difficult because the consequences will be arduous, uncomfortable, and expensive, but also because it means that a decades-old promise of a better, richer, and easier future is going up in smoke. This Saturday, Ars Electronica will be focusing on people who have not only accepted this truth but are already doing everything they can to make the best of it. Under the title **End of Truth?**, international speakers will come together for the third part of the theme conference — supported by the **European Digital Deal** program sponsored by Creative Europe. The younger generation is also thinking about solutions: The **Create Your World Exhibition** at POSTCITY will once again open up a space for discovery and exploration for visitors from kindergarten age upwards, who will be experimenting together with the latest and further developed inventions. The fun continues as soon as the **Prix Ars Electronica's Golden Nicas** awards ceremony in the **u19** category takes place at POSTCITY. The spectrum ranges from homemade robots to animated games, films and handcrafted masterpieces. For a long day at the festival, it is best to get provisions at the Bio-Austria farmers' market, which opens its market stalls only on this Saturday. The **Garden Partner Exhibition** provides an international flair at several POSTCITY venues — this time Rotterdam, New York, Montreal, Bangalore and Hamburg are

among them. Among other things, they will show the results of the residency programs of the **V2 Lab for Unsustainable Media**, the scientific and artistic output of the initiative **Hexagram** and a live performance of the **Climate Service Center Germany (GERICS)**.

On the first floor of the brilliant POSTCITY, the focus will be on new developmental leaps in technology, with local and international partners presenting their thinking, prototypes and market-ready products. The projects range from 3D-printed clothing and **BCI applications** (Anouk Wipprecht, g.tec medical engineering, OnShape & Hewlett Packard), to explorations of labor as a variable in capitalism (IMPAKT - Centre for Media Culture) and an augmented reality game against fake news (*Museum of Fake*, Polycular), to the presentations of **Robots in Architecture** from Linz. Next to the location of Ars Electronica, the Stadtwerkstatt is a hub for exciting art projects that skirt the norm or put it up for discussion: For example, Franz Xaver's **Endlose Annäherung an Null**, visualizations in which he points out glitches, or **Minuskunst** by Tanja Brandmayr, a project that approaches quantum theory in an artistic way. What STWST 2023 is all about is the role of artificial intelligence in human decision-making: **AI, tell me what I should want!**.

Festival visitors will also be able to track down the future of AI and Co at the **Futurelab Night** in Deep Space 8K. For those who prefer to look into the future outdoors, the festival Saturday is the right place for Linz's **Klangwolke** — and has been since 1979.

This time, visitors can experience a post-apocalyptic tale about a young girl that blends video, light and sound design, aerial performance, acrobatic show dance and tap dance into a breathtaking symbiosis.

Prix Ars Electronica Day

Sunday, September 10th, 2023

It would not be Ars Electronica if art did not have the last word. Whether it is education (WED), innovation (THU), holistic visions of the future (FRI) or the truths of our time (SAT), it is art that plays an essential role in all of this. Art is free and need not shy away from naivety, subjectivity or radicalism in order to hold up the famous mirror to us, our thoughts and actions. This is especially true on days when there is talk of a new era in many places, and when the new increasingly announces itself not as evolution, but as revolution.

The last day of the festival belongs to the winners of the **Prix Ars Electronica**, their visions, ideas and projects. The winners of the Golden Nicas (in the categories Digital Music & Sound Art, New Animation Art and AI & Life Art) as well as many innovative entrants will be represented on site at POSTCITY. Examples are the sound installation by the collective Atractor Estudio (CO) + Semantica Productions (UK), Ayoung Kim (KR) with **Delivery Dancer's Sphere**, a mix of 3D animation and live-action shooting, and Winnie Soon (HK/UK) with the **Unerasable Characters Series**, which problematizes and stages media censorship. Verena Friedrich's installation **Erbsenzähler** is part of the exhibition, as is Nadita Kumar's **From Paradigm to Paradigm, Into the Biomic Time** and Francois Knoetze et al.'s work **Dzata**, which invites visitors to engage with archiving

and its inherent fiction. If you are looking for more interaction, follow the open discussion between the winners of the Prix Ars Electronica 2023 and the jury at the Prix Forum.

In addition to the Prix activities, the **State of the ART(ist) Exhibition** brings to Linz all nine of the 2023 winning projects from the competition of the same name from around the world. The focus will be on this year's winners Mahsa Aleph from Iran and Taiye Ojo from Nigeria, who deal with historiography and counter-histories in their own individual ways. Fittingly, also on Sunday, a panel is scheduled by **S+T+ARTS4AFRICA**, a project that promotes collaboration with innovation hubs in sub-Saharan Africa. The topic of the panel: **Art-Tech Collaborations in Africa** and with African partners.

And there is more international exchange: a newly formed European network will also come together at Ars Electronica 2023 and will have its grand finale on Sunday at the **Digital Deal Summit**. Here, representatives of the 14 partner institutions will meet to discuss ideas, possibilities and opportunities for reconciling the digital world with democratic values. Finally, the train hall in POSTCITY will once again become a stage for music: Maki Namekawa (JP) and Cori O'Lan (AT) will perform pianist Keith Jarrett's **The Köln Concert** from 1975 in their program **Pianographique** on the last day of the festival.

CONFERENCES, LECTURES, WORKSHOPS

Symposium Perspectives on Political Education Glue. Irresolvable conflicts or social cohesion

Arbeiterkammer OÖ (AT), Pädagogische Hochschule OÖ (AT), Ars Electronica (AT)

Our society currently seems incapable of setting a significant course for the future. Priorities, realities of life and needs seem too different to pull together. People react to this situation with apathy and fatalism or with protest and provocation. Especially for young people who want to become active themselves, the question arises whether they can only make themselves heard through actionism or whether they will also be heard and taken seriously within the existing political arenas. At this year's symposium on Political Education,

the complex distribution of responsibilities in the areas of climate policy developments, digital education and new social participation structures will be addressed, discussed and examined from different perspectives. The program consists of keynotes (Barbara Blaha and Knut Cordsen), workshops, presentations and a panel discussion. As one of the highlights, young people will present their own project on the theme of the symposium. In addition, this year the award ceremony of the education prize *Klasse! Lernen* will take place.



Gerfried Stocker, Katharina Soukup-Altrichter, Manfred Fadl at Symposiumsreihe Perspektiven Politischer Bildung / Perspectives of Political Education Conference.

FOUNDING LAB Day: A new university starts

What will the university of the future(s) look like? How will we re-define our understanding of traditional academic disciplines to bridge the gap between deepening academic and non-academic knowledge? Who "owns" the knowledge created at institutions that consider the perspectives of citizens, students and faculty equally? What do we need to learn, teach, reflect and discuss to still be able to own our knowledge in the age of AI, and what skills does the university need to equip us with to make us fit for the challenges

of the climate emergency and global economic and political instabilities? Conducted in collaboration with the newly founded Institute of Digital Sciences Austria (IDSA), the first conference day of this year's Ars Electronica Festival marks the start of this new university and is dedicated to these questions. Inspired by a collective keynote given by students of the FOUNDING LAB Summer School, fellows, students and experts will deliberate visions for the new university with the director and the Founding Convent of IDSA.

Prix Forum

The Prix Forum brings together the honored artists who have received the Golden Nica and Award of Distinction in their respective categories at Prix Ars Electronica for an artist talk and discussion of their award-winning works. Prix Electronica Exhibition is a great opportunity not only to experience the work, but also to hear directly from the artists themselves about their motivation and the artistic, technical background behind the realization of their works.

New Animation Art, a new category this year, includes Ayoung Kim (KR), winner of the Golden Nica for *Delivery Dancer's Sphere*, Award of Distinction winner Bassam Issa (IE) of *IT'S DANGEROUS TO GO ALONE! TAKE THIS* and SANGHEE (KR) of *Oneroom-Babel* will take the stage.

Artificial Intelligence & Life Art will feature Winnie Soon (HK/UK) of the *Unerasable Characters Series*, winner of the Golden Nica. Adam Brown (US), recipient of the Award of Distinction for *Shadows from the Walls of Death* and Oron Catts (AU) and Steve Berrick (AU) of the *3SDC project (Sunlight, Soil & Shit (De)Cycle)* will then follow as speakers.

In **Digital Musics & Sound Art**, Juan Cortés (CO) from Atractor Estudio, winner of the Golden Nica for *A Tale of Two Seeds: Sound and Silence in Latin America's Andean Plains*, will speak. Finally, Alba Triana (CO) of *Harmonic Motion*, winner of the Award of Distinction and Julia Jasmin Rommel (DE) of *zwischenraum – interspace – acoustic cartography* will take to the stage.

Each session will be moderated by a jury member for each category.

Ars Electronica Theme Symposium

This year's themed symposium of the Ars Electronica Festival interrogates "Who Owns the Truth?" – a question that ties together age-old philosophical lines of inquiry with the rapid, disruptive shifts heralded by the rapid advancement of AI. Over the course of three days, each centered on a critical approach towards the relationship between truth and ownership, with illuminating panels and presentations that explore how economic systems have created a market for truth, while cross-disciplinary debates unravel the truth from the narratives told about our natural world; leading innovators and practitioners

present the exciting new ideas paving the way for us to maintain interpretive authority and data sovereignty in a digitalizing world, while interactive workshops help us reimagine the digital media that has become our dominant channels of communication. From September 7 to September 9, come experience our jam-packed program pushing our humanistic consideration of the production, distribution and consumption of truth towards a future where collective knowledge is accessible to all, towards economic, social and political infrastructures that ensure technological progress is beneficial to all.

The Next Renaissance

A S+T+ARTS Day Conference

Co-hosted with EUMETA – EUROPEAN SCHOOL OF METAVERSE

With the rise of ever-more capable technologies comes the power to bring about *The Next Renaissance*, where scientific, technological, humanistic and artistic advances unite to revolutionize the way we think, act and live. Yet with such great power comes even greater responsibility. This year's S+T+ARTS Conference explores the conflicting ethics, values and priorities that arise from accelerating technological and societal development. In partnership with EUMETA, Cultech and the EIT Culture & Creativity, the conference program examines successful projects balancing large-scale innovation with principles of data transparency and sovereignty; it tackles the role AI will play in shifting European legal and

business frameworks of the creative and cultural sectors; finally, it investigates the status quo of extant European AI structures and how we can learn from the technological infrastructures of the past. Bringing leaders from academia, industry, policy, journalism, business and law together in transdisciplinary discussions and presentations, the program grapples with the possibility of a paradigm shift presented by a digitalizing world and aims to envision a responsible innovation infrastructure for Europe and the world.

STARTS in the City has received funding from the European Commission's Directorate-General for Communications Networks, Content and Technology under grant agreement No. LC-01984766.

(Un)Earthing the Truth: Ownership and Narratives about the Planet

A More-than-Planet Conference

In asking "Who Owns the Truth?", the theme symposium of the Ars Electronica Festival positions truth as an economic object, which in turn begs the question of whether truth can be owned. In partnership with More-than-Planet – a multi-organization European project seeking to raise social awareness of environmental urgencies through inspiring creative collaborations for addressing environmental issues and increasing European environmental literacy – the second day of the symposium draws parallels between ownership of nature and the nature of ownership. In debates and keynotes traversing the deep seas and the stratospheric skies, we reshape our understanding of ownership, recontextualizing the dominant economic systems and power hierarchies that have allowed us to establish proprietary relationships with our planet.

We bring together artists, scientists, researchers and economists to question interpretive authority and envision a new equilibrium between market ideologies and the environments we share. We uncover the blurred "truth" about our planet presented to us by corporate and shareholder-motivated press campaigns and trace the ways in which truth has become a product of certain narratives that have informed our societal positions on environmental degradation and climate change. Finally, in an interactive workshop session, we forge sustainable and resilient narrative structures that foster a future where we take ownership of, rather than own, the bountiful nature around us.

This program is co-funded by the Creative Europe Programme of the European Union through the More-than-Planet project.

End of Truth?

A EUDigitalDeal Conference

Co-hosted with EUMETA – EUROPEAN SCHOOL OF METAVERSE

The third and final day of the Ars Electronica Festival's theme symposium is supported by the European Digital Deal, a three-year investigation co-funded by Creative Europe into how the accelerated, yet at times unconsidered adoption of new technologies such as Artificial Intelligence can alter or undermine democratic processes. It continues our discussion of interpretive truth and digital sovereignty by addressing an alarming possibility: have we reached the End of Truth? As the rise of post-truth politics undermines democracies worldwide, deepfakes and misinformation campaigns threaten to destroy our access to truth altogether. Yet all is not lost. Today's program calls together the guardians of the truth – politicians, whistleblowers, watchdog groups, activists, journalists – to address the impacts of AI on democracy and information networks.

In it, we take a historical dive into the beginnings and the ends of truth and examine how the separation of fact from fiction has changed over time in response to new technologies. Government officials then take the stage to address the impact of AI on democracy, and what the future of democracy holds, with an opportunity for audience members to ask them questions directly. The program then turns a critical eye to our public relationship to the truth on both a societal and individual level, tracking the ubiquitous ways in which misinformation has polluted our information streams, and the complexity that arises when the very tools used to create misinformation are also the very tools used to fight it.

This program is co-funded by the Creative Europe Programme of the European Union through the European Digital Deal project.

Workshops

Following the festival theme of *Who Owns the Truth?*, the intercultural and intergenerational workshop program will once again offer time and space to think about creative questions that generate ideas about missions and actions, rather than trying to find solutions for the commonly known problems. In the dynamic and inclusive environment that the festival is fostering, where artists, scientists, engineers, activists, creative individuals, students, and thinkers from all around the globe will gather – the diverse program will encourage them and other visitors to push professional boundaries and to think outside-the-box, to engage in dialog and exchange ideas with fellow creators. To find mutual inspiration and exchange ideas and know-how. As always, the workshop program line-up, taking place all around the POSTCITY, will be a think-tank, filled with opportunities for participants to engage in dialogue both with each other and the experts concerned.

The Realities in Transition project explores and supports alternative approaches to Extended Reality (XR), and experiments with new narratives and creative processes; it will also bring a number of workshops to this program. XR is celebrated as a space of profound possibility where users can transcend their physical limitations; we will build up the *Common XR Manifesto (CXRM)*. The *CripTech Lab: Metaverse Reclaimed* workshop will pose the question *Who owns the metaverse?* and invite participants to imagine a collective future in the metaverse that is just, open and accessible to all.

Workshops taking place in the exhibition area are a great chance to meet S+T+ARTS Prize winners, as well as people and projects that contribute to mastering social, ecological, and economic challenges. In *The Anoksis Experiment* workshop we will try to understand how we build our realities, but also how to hold space for deviating realities. Creators of *ALMA TOOLKIT*, a set of educational materials and tools designed to democratize, destigmatize intimate health learning, and

to empower people with vulvas to self-manage their bodies, invite us to run the self-exploratory session with their card game.

Besides that, the Citizen Science Award winners, whose social and political impact advances the further development of a pluralistic, inclusive and sustainable society in Europe, will help us define desirable futures for citizens and citizen scientists in the Citizen Science Futures for Sustainability workshop. In the workshop led by *The Restart Project*, creators will address the environmental costs of our linear, consumerist economy and show us how to counteract as a society.

Within the vibrant atmosphere of the festival, this program offers a diverse array of learning experiences, tailored to different settings. Some workshops will take place in an open space, inviting attendees to freely observe, engage, and glean inspiration from the creative processes. In contrast, other workshops will take place in a tailored workshop room, creating an intimate and focused environment for deeper discussions and more immersive exchange of thoughts, expertise and knowledge.

In the More-than-Planet Lab, the workshop *Systemic Change in Times of Polycrisis* will explore how we can broaden our horizons and find sustainable solutions to the polycrisis caused by the state of ecological emergency. In addition, *Planetary mattering* and *Planetary Public Stack* will encourage us to better engage with socio-environmental transitions towards building heterogeneous and inclusive perspectives and expressions of shared planetary views, concerns, interests and heritage.

In *Art-science impact: widening the frame of knowledge generation*, we will be lead through an investigation of the process and outcomes of interdisciplinary working within academic institutions; to redefine the art-science impact and investigate the conditions for success in collaboration, and the ownership of knowledge within it. In the interactive workshop that explores scenarios of *Our Future Life in Lower Earth Orbit (L.E.O.)*



Future Innovators Summit Future Humanity © Tom Mesic

such questions will be asked As: Who owns space? Who owns our future life? How might we co-create our future life with open access to an interplanetary, intersectional and interspecies world? What is a collective future in which all humanity can thrive?

How can digital transformation help the cultural and creative industries to thrive? With this question as a starting point, the *CCI Thrive* project explores cutting-edge digital technologies as a means to increase the competitiveness of the cultural and creative sector. The focus will be on cultural business models, particularly relating to non-financial value creation in the cultural sector with an innovative approach to change our behaviors, increase our knowledge and raise public awareness.

In addition, authors of *Manifesto for Creative Producing* will reconvene, inviting new audiences to build on their texts and explore “who owns the truth” in in the workshop *Expanding Models of Creative Production*. Visitors will have a chance to meet experts taking part in a series of

working sessions during the *Digital Deal Summit*, which explores the manifold challenges the digital age poses to European and global societies. *The Mechathon: How to own the truth*, hosted in partnership with Linz Center for Mechatronic, invites experts to ideate together how enabling tools contribute to societal problems and sustainability. The audience is welcome to peek into their creative processes as well and attend final presentations of their work.

The workshops provide an immersive and enriching experience that transcends traditional learning boundaries – join them.

European Digital Deal, *CCI Thrive*, *Realities in Transition* and *More-than-Planet* are co-funded by the Creative Europe Programme of the European Union. *ALMA Toolkit* is part of the STARTS Cross-Fertilization Program of the S+T+ARTS PRIZE project, which has received funding from the European Union’s Horizon 2020 research and innovation programme (GA 956603). The *European Union Prize for Citizen Science* is part of the *IMPETUS* project and funded by the European Union under Grant Agreement No. 101058677 – HORIZON-WIDERA-2021-ERA-01.

FOUNDING LAB

IDSA x Ars Electronica FOUNDING LAB

Katja Schechtner, Member of the Founding Convent

The Institute of Digital Sciences Austria (IDSA) was founded by the Austrian Government in July 2022. Its research and teaching are dedicated to all dimensions of digitalization and its transformative effects on science, art, society, and the economy. The university is built on interdisciplinarity and inter-university cooperation and will be located in Linz, Upper Austria. It aims to attract faculty and students who are interested in the interaction of technical studies, natural sciences, economics, law, social sciences, humanities, cultural studies, and artistic disciplines.

As a part of the founding process the Founding Convent, consisting of nine members, who were appointed by the Austrian Federal Minister of Education, Science and Research, established the IDSA x Ars Electronica FOUNDING LAB, which is a collaborative project between the new university and Ars Electronica. It aims to identify, develop, and present new areas, approaches, and formats that address the challenges of digital transformation. The FOUNDING LAB is inspired and builds upon previous initiatives by Ars Electronica, such as the Future Innovators Summit, the Festival University, the Transformation Lounge, and the Ars Electronica Futurelab Academy, and will incorporate Art Thinking from the very beginning. Thus, by transcending traditional disciplinary boundaries, the FOUNDING LAB confronts the complex and contradictory realities of our time, nurturing the skills required to navigate an increasingly digitized world. Experts, leading thinkers, scientists, and innovators from all disciplines convene to explore and define new pathways toward transformative digital change. The Ars Electronica Festival serves as a public platform to showcase initial ideas and outcomes of

the FOUNDING LAB Summer School and Forum. positions are then further explored within a 6-Chapter seminar series during the FOUNDING LAB Fall Term, which will focus on the facts, figures, and futures related to infrastructure, code, machines, the virtual worlds, and media and governance systems that are the founding blocks of digital transformation.

75 Students, a faculty of more than 30 Fellows, Experts, and Mentors from 50+ countries with profiles as scientists and artists, engineers and designers, scholars and practitioners, entrepreneurs and visionaries — and everything in-between and beyond — will work together from summer 2023 onwards at the POSTCITY, the Ars Electronica Center and the IDSA offices in Linz to explore and forge new pathways towards building the university of the future. Reflecting on “Who owns the Truth?”, this year’s title of the Ars Electronica Festival, a question arises: “Who owns a university?” Or rather: “To whom does a university belong?” When building a new university — “our” university — divergent concepts of belonging, ownership, power, and responsibility, but also of knowledge, authorship, facts, and truth(s), reveal a captivating reality, one that defies simplistic notions. Far from being the mere possession of a single entity, a university represents a living embodiment of collective visions, aspirations, and the collaborative endeavors of countless individuals. While founding convents, advisory boards, and presidents may steer their course, and diverse funding sources may sustain them, the true essence of universities is found in a dynamic mosaic of stakeholders. Students, faculty, alumni, staff, benefactors, and the broader community engage in an ever-evolving process of

discourse to interlink their respective narratives, contributing distinctive threads to the vibrant fabric of the university’s identity. This intricate web of interconnectedness builds these institutions, transcending conventional notions of possession — and truth. As we delve into the multifaceted dimensions of building a new university — “our new university” —, we are compelled to recognize the shared responsibility and intertwined destinies that will drive its progress.

These challenges require a new approach — one rooted in creativity and co-creation.

The FOUNDING LAB, therefore, serves as an initial impulse for creating the university that IDSA sets out to be. It test-runs new knowledge-creation strategies based on far-reaching transdisciplinary collaborations, reflected by the diverse fields and backgrounds of the inaugural students and fellows. Ultimately, the IDSA x Ars Electronica FOUNDING LAB aspires to question, discuss, and shape a university that will profoundly impact the future of nature, tech, and people on a global scale. And thus, it will itself become part of IDSA’s founding truth myth.

FOUNDING LAB 2023: Student Global Distribution Map

Map shading indicates the number of students by country.



FOUNDING LAB: The Formats

FOUNDING LAB Summer School

The FOUNDING LAB Summer School is the initial event of the program. 75 students from around the globe are joined by a faculty of artists, scientists, researchers, practitioners and thinkers to investigate the challenges of our times and how the university of the future can tackle them. Participants will examine the interplay between nature, tech and people, focusing less on specific technical, scientific aspects, and more on understanding the overarching connections and underlying structures and systems. Investigating topics like biotechnology and -arts, data bias in AI systems, or future materials and design paradigms, to name but a few examples, the students will develop visions for a new approach to academic disciplines and how to overcome them.

All students will engage in public presentations within the framework of the Ars Electronica Festival and as part of the FOUNDING LAB Forum, and further discuss and develop their proposals together with experts and the public. They will explore ideas about bridging the gap between academia and society, between art and science, between technology and nature. This next generation of thinkers will develop and present how the next generation of knowledge can take shape.

FOUNDING LAB Forum

The FOUNDING LAB Forum is a central component of this year's Ars Electronica Festival. It benefits from the inspiring atmosphere of the festival with its diverse exhibitions, performances, concerts and discursive programs. The Summer School Students are joined by 15+ Fellows, who will share their expertise and experience to support the concretization of the Students' proposals for the University of the Futures. The Forum focuses on the co-creation of knowledge between Fellows and Students to tackle the challenges of an increasingly digital world and a planet in the state of climate emergency.

In a public conference, a number of work sessions and many other program points, Students and Fellows will explore new ideas. Fellows will dive into questions of the role of AI in shaping truth and knowledge, while students will work and discuss with artists and visionary thinkers present in the festival. Like this, the FOUNDING LAB Forum also serves as a starting point and kickoff event for the very first study and teaching term of the IDSA, giving the initial impetus to the direction of this brand new university.

FOUNDING LAB Fall Term

The FOUNDING LAB Fall Term continues the reflections on the topics of the FOUNDING LAB Summer School and Forum by exploring six thematic Chapters:

- Infrastructure: Heavy Lift — the infrastructure to run the code
- Data and Code: Soft Wars — data, code and models that run our lives
- Machines, Robots and Tangibles: Moral Machines — Living with robots that care and scare
- Interfaces and Visualizations: Intangible Worlds — The Reality of the Virtual
- Media: Fake, Re-check, Double Check — A new civic media contract in the age of AI
- Digital Society and Policy: Tech-diplomacy — Negotiating with Nature, Tech and People

Art Thinking will serve as the core methodology framework for the investigation of these topics. The 25 trans-disciplinary Master and PhD students continuing their studies after the Summer School will meet the Fellows to discuss and exchange their insights, experiences and innovative ideas. At the heart of this interaction are the three full-week on site sessions on the premises of IDSA and Ars Electronica taking place over the course of the Fall Term.



© Tom Mestic



© Ars Electronica / Robert Bauernhansl

TRANSFORMATION LOUNGE

Transformation Lounge

Ars Electronica (AT) x Hakuodo Inc. (JP)

Transformation Lounge is a platform for promoting circular creativity, bringing together individuals from diverse communities such as art, industry, culture and government. Its purpose is to engage in discussions about the necessary "transformation" for the sustainable future of society and to create collaboratively new actions.

This initiative is a joint effort between the Japanese integrated marketing and innovation company Hakuodo and Ars Electronica, and was launched in 2022. The primary focus is on fostering creative transformation within companies and government initiatives to impact positively

the future of a sustainable society. The platform facilitates the convergence of artists' visions and questions regarding the future of society with the challenges faced by companies and governments in addressing social issues. This collision of ideas sparks creativity, leading to meaningful dialogues and the development of new actions involving people (sei-katsu-sha).

In the year 2023, the Transformation Lounge will host exhibitions, workshops and talk programs in a café lounge setting. These events feature artists and companies whose work serves as inspiration for the activities fostered by the platform.

Future Compass

Ars Electronica (AT) x Hakuodo Inc. (JP)

Future Compass is an "instant toolkit" for initiating a transformation.

Participants will receive an invitation to engage in self-reflection and ponder their future using a coaster-shaped toolkit while enjoying coffee or drink in the Transformation Lounge.

The first step for participants is to visualize "what I trust" to gain a deeper understanding of themselves and the underlying biases that influence their perspectives. Subsequently, they will challenge the conventional wisdom they hold, even questioning themselves as the most difficult counterpart, and explore "questions for the futures" that might encourage change.

With this compass for the futures, participants will journey through the Ars Electronica Festival and encounter various works, moments and individuals that address these questions.

Additionally, the Future Compasses of festival participants will be on display in the Transformation Lounge. Comparing one's own compass with that of others will offer opportunities for generating fresh ideas and engaging in dialogues that may differ from one's initial outlook.

At the end of the Ars Electronica Festival, attendees can take their own Future Compass home, enabling them consciously to pursue transformative actions in their daily lives.

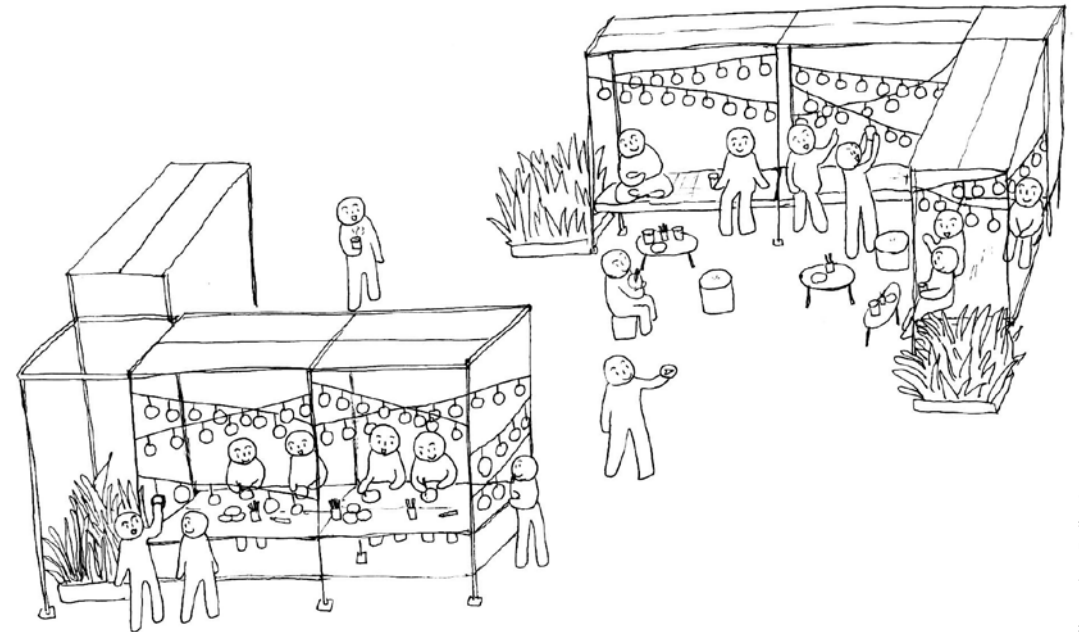


Illustration: Emiko Ogawa

Yuima Nakazato (JP)

Biosmocking

It is safe to say that almost all the garments worn by most people are mass-produced, even though each person's clothing preferences and body type are different. This project started with the question of whether it would be possible to bring one-of-a-kind items to as many people as possible. *Biosmocking*, a textile-modelling method for creating three-dimensional textures, utilizes digital fabrication to control precisely the supercontraction property of specially-tailored Brewed Protein textiles. This makes it possible to bring an entirely new sense of depth to garments. Experimentation with numerous prototypes and fabrication techniques has further improved this production



© Yasunari Kikuma

process, resulting in the ability to create three-dimensional textures as well as modify the shape of the material itself. This technology is bringing us closer to delivering garments that are tailored to each individual with comparative ease.

Yuima Nakazato (JP)

DFT Textile

The back ground to DFT Textile is the amount of unwanted, disposed-of clothing piling up in Kenya, which is almost beyond measure. Left untreated, these discarded garments are a shameful symbol of the social issues we face today. As someone who is responsible for designing clothes, I felt an urgent need to visit Kenya and witness this situation with my own eyes. Our journey began with coming face-to-face with a vast amount of leftover clothing. Cheap and generic attire such as denim and T-shirts had obviously become utterly universal. A simple yet fundamental question arose in our mind: "Do we really need to make any more clothes?" The production began when 150kg of used clothing was brought back to Japan from Africa. Most of the clothes did not have proper labels, and so their origin and component materials were impossible to ascertain.



© Yuima Nakazato

These sorts of clothes are generally very difficult to recycle, but using dry fiber technology with Seiko Epson we were able to convert them into new textiles for creating new garments. It was almost as if we were rescuing clothes that had nowhere else to go.

FASHION FRONTIER PROGRAM (JP)

FASHION FRONTIER PROGRAM

Climate change, racism, economic disparity ... We human beings are facing a number of serious challenges. And now it is obvious that the fashion industry has to fundamentally change. Under these circumstances, *FASHION FRONTIER PROGRAM* is a project designed to act and lead our society in the right direction, by searching, praising and educating future fashion designers. We need to make changes, and the hope is that this program will move us towards to a better future. Age, gender, race ... Anyone can apply to this program. We expect someone with a passion to become a fashion designer. We will ask the selected candidates to present the design of a garment that represents social responsibility and creativity at a high level. Throughout the process, we will provide materials, support from technical advisors and an opportunity to learn, together with input from experts from various fields. The final announcement concerning the

project will be published through various media. Garments are essential for us to live. Throughout this program, we intend to learn, think and elevate social awareness of garments, not only for the participants, but for all of us. We encourage all of you to move forward towards the new era with the *FASHION FRONTIER PROGRAM*.

Founder: Fashion designer Yuima Nakazato



© YASUNARI KIKUMA

City Intelligence Lab

Creating a smarter and more sustainable city

AIT Austrian Institute of Technology is Austria's largest research organization, excelling globally in infrastructure fields. With seven centers, it focuses on future infrastructure topics and collaborates as a specialized R&D partner for industry. AIT drives fundamental innovations in Energy, Transport, Health, Digital Security, Vision, Automation, and Technology Experience. It also specializes in Innovation Systems & Policy. AIT fosters innovation through scientific expertise, market experience, customer relationships, and exceptional research infrastructure.



City Intelligence Lab

SIMULATE – Interactive pedestrian flow simulation

AIT Austrian Institute of Technology is Austria's largest research organization, excelling globally in infrastructure fields. With seven centers, it focuses on future infrastructure topics and collaborates as a specialized R&D partner for industry. AIT drives fundamental innovations in Energy, Transport, Health, Digital Security, Vision, Automation, and Technology Experience. It also specializes in Innovation Systems & Policy. AIT fosters innovation through scientific expertise, market experience, customer relationships, and exceptional research infrastructure.



SIMULATE – Interactive pedestrian flow simulation

Thinking in Circles – Ars Electronica Festival's Sustainability Strategy

Our economy's linear model, producing, using and discarding goods, poses significant environmental challenges due to excessive resource consumption. The Ars Electronica Festival actively adopts a circular economy approach, striving to keep resources in use for as long as possible and promoting material and energy recovery, mirroring the natural cycles of the environment. This sustainable goal is deeply ingrained in our festival, guiding our planning and implementation phase.

We are proud to maintain our "Green Event" certification from the Climate Alliance of Upper Austria, a testament to our commitment to reducing the festival's CO2 footprint. In keeping with this spirit, we critically evaluated our internal processes and procedures in 2022, with a particular focus on seven key sustainability areas: mobility, catering and food, event location (including energy, water, sanitation, technology, equipment, procurement and waste), social responsibility

and communication. By raising awareness and creating incentives for our visitors, artists and partners, we foster a collective effort to drive meaningful change. This year, we aim to analyze and gather data from each aspect of the festival, laying the groundwork for future carbon footprint reductions. Our long-term goal is continually to optimize organizational processes, extending beyond the festival, with a keen eye on climate and resource preservation. Strong and enduring collaborations with partners and service providers play a crucial role in promoting sustainable practices.

Central to our sustainability strategy is the festival architecture, designed as a regenerative system that prolongs the lifespan of produced objects through effective reuse and recycling methods, leading to significantly reduced waste. We believe in a perpetual cycle of sharing, borrowing, reusing, repairing, refurbishing and recycling existing materials and products for as long as possible.

Supported by our team members, partners and several "Sustainability" Partners, we have successfully implemented various actions in these areas.

Working with architects and carpenters, we created a modular exhibition architecture, space-saving and reusable in the following years, effectively minimizing waste. Moreover, scaffolding elements from the construction sector find new life as exhibition architecture indoors and outdoors through our longstanding partnership with Ringer GmbH. After the festival, these elements return to their original purpose. To create large parts of the festival's guidance system, we effectively reuse IBC Containers, a food industry waste product generously provided by Spitz. After the event, these containers serve regional farms, providing food and water to animals. Our efforts to reduce waste include standardizing prints and using environmentally friendly materials, drastically reducing the number of prints. We prioritize eco-friendly materials like thin grass-cardboard and plywood boards for indoor and outdoor signage respectively, all stored and reused efficiently for years to come. Festival banners, cardboard signs and other prints are used again after the festival by Fridays for Future and in artist studios, thereby extending their usability. Plants have long been integral to our festival architecture, and our partnership with Linz city gardens and gardeners inspires innovative approaches to integrating suitable plants, adding to the festival's ambiance. These plants are thoughtfully pre-planted to provide oxygen and atmosphere during the festival and returned to the city garden afterward. Our sustainability plan extends to the technical infrastructure, achieved through our partnership with Computer Center Feldbach (CCF), a local company epitomizing innovation and sustainability. In addition to fulfilling the Green Event criteria, we are committed to incorporating the following Sustainable Development Goals (SDGs) into our engagement, activities and actions in the framework of the festival:

SDG 4: Ensuring equal access to high-quality education for all.

SDG 5: Promoting gender equality, ending discrimination and violence against women and girls and fostering equal opportunities in leadership roles.

SDG 12: Using natural resources responsibly and efficiently, aligning with our "Thinking in Circles" approach.

SDG 13: Taking action to combat climate change and its impacts, incorporating education, awareness-raising and capacity-building for climate adaptation.

SDG 17: Embracing global efforts and partnerships among various societal actors to achieve the Sustainable Development Goals.

Over the years, Ars Electronica has recognized the importance of digital transformation, its profound impact on society. We join institutions and initiatives worldwide, advocating for Digital Humanism and striving for a digital society based on human and ecological needs, cultural values, and sustainability. Through the European Platform for Digital Humanism, we invite partners to participate with us in shaping a transformative future for all citizens.



BIO AUSTRIA Farmer's Market © vog.photo

EXHIBITIONS

Prix Ars Electronica Exhibition

Complexities of Being — Layered Truths

Every year since 1987, the Prix Ars Electronica has spotlighted media artworks from all over the world and served as a trend barometer offering inspiring, current and forward-looking insights into the interface between art, technology and society. The exhibition, which showcases the works of the Prix Ars Electronica winners, is undoubtedly one of the highlights of the Ars Electronica Festival and will take place at POSTCITY, the festival's main venue.

The three categories for 2023 are New Animation Art, Digital Musics & Sound Art, and Artificial Intelligence & Life Art, with 3,176 entries from 98 countries. 46 works were selected from among them as award-winning works, and 19 of them are exhibited here.

This year, the jury's focus was on complex, multi-layered and carefully crafted narratives that express the “real” of geopolitical, sociopolitical, cultural, gender, and diversity, and that hold inconvenient truths simultaneously in all three categories.

For the Artificial Intelligence & Life Art category, an artistic critical attitude reminding us how the concepts of intelligence and life are subjected to human bias, was highly appreciated.

It is a reminder and warning that we should be aware that there is no such thing as “neutral and objective” intelligence, the jury mentioned.

The New Animation Art category, which was renewed this year, was recognized for expanding the horizons of art by incorporating the dynamic and transformative qualities unique to this medium, and for exploring innovative storytelling techniques and art forms.

In the Digital Musics & Sound Art category, works that “resonate with humanity” were highly evaluated for their deep humanity, interpretation of the world and history, the senses and the body, digital and musical instruments, and ancestral wisdom that hints at social issues.

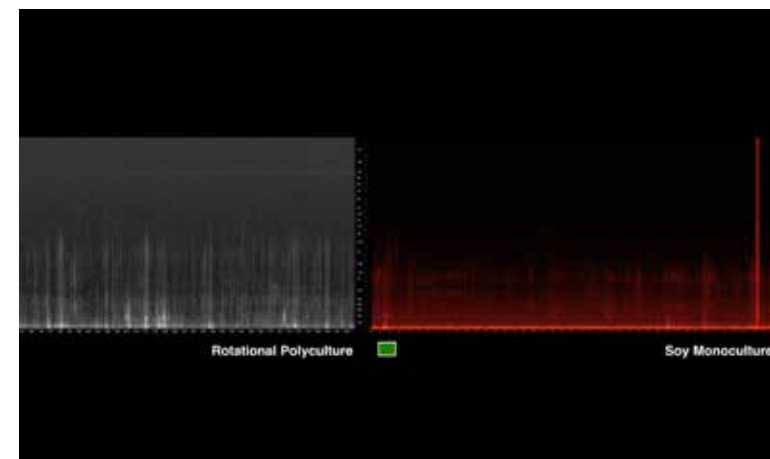
To bring the name of Prix Ars Electronica to the forefront, the long-standing and familiar name of “CyberArts Exhibition” has been changed to “Prix Ars Electronica Exhibition” this year. In these turbulent times, the power of art to provide new perspectives and show forward-looking insights as a mirror of technology and society is becoming increasingly important. The Prix Ars Electronica is a guiding light for the future through art with the latest award-winning works being added to its archive every year as it continues to evolve.



Delivery Dancer's Sphere © Ayoung Kim
Golden Nica New Animation Art



Unerasable Characters Series © Winnie Soon
Golden Nica Artificial Intelligence & Life Art



A Tale of Two Seeds: Sound and Silence in Latin America's Andean Plains © Atractor Estudio + Semantica Productions
Golden Nica Digital Musics & Sound Art

Winners of the Prix Ars Electronica 2023

New Animation Art

GOLDEN NICA

Delivery Dancer's Sphere — Ayoung Kim (KR)

AWARDS OF DISTINCTION

IT'S DANGEROUS TO GO ALONE! TAKE THIS — Bassam Issa (IE)

Oneroom-Babel — SANGHEE (KR)

HONORARY MENTIONS

Distant Distraction, Foul Breach, Separate Sensation — Lark Spartin (CA)

Dzata: The Institute of Technological Consciousness — Russel Hlongwane — Substance Point (ZA), Francois Knoetze and Amy Louise Wilson — Lo-Def Film Factory (ZA)

FuneralPlay — Ruini Shi (CN)

GLITCHBODIES — Rebecca Merlic (HR/DE/AT)

huě iànn — Yu-Han Chen (TW), Ching-Wen Hsu (TW), Ruei-Sin Jhang (TW), Li-Hua Zhan (TW), Tung-En Chien (TW), Pei-Chi Wu (TW)

I Took a Lethal Dose of Herbs — Yvette Granata (US)

Inter net — Zi Yin Chen (TW), Hsiang Feng Chuang (TW)

Le Mal des Ardents (Ardent Other) — Alice Brygo (FR)

Lebensraum / Living Space — Sven Windszus (DE)

Rhizomatiks x ELEVENPLAY "multiplex" — MIKIKO (JP), Daito Manabe (JP), Motoi Ishibashi (JP), Satoshi Horii (JP), Yuya Hanai (JP), ELEVENPLAY (JP), Rhizomatiks (JP)

PLSTC — Laen Sanches (FR)

Smog Season — Witaya Junma (TH)

Artificial Intelligence & Life Art

GOLDEN NICA

Unerasable Characters Series — Winnie Soon (HK/UK)

AWARDS OF DISTINCTION

3SDC project (Sunlight, Soil & Shit (De)Cycle) — Oron Catts (AU), Ionat Zurr (AU), Steve Berrick (AU)

Shadows from the Walls of Death — Adam Brown (US)

HONORARY MENTIONS

Biobot — Zoran Srdić Janežič (SI)

Codex Virtualis_Genesis — Interspecifics (MX)

Ecologies of Care — Ani Liu (US)

ERBSENZÄHLER Quality Sorter V2 — Verena Friedrich (DE)

From Paradigm to Paradigm, into the Biomic Time — Nandita Kumar (IN)

Interspecies Robot Sex — Miriam Simun (US)
Masakhane — pioneering participatory approaches to building African language technologies, for Africans, by Africans — Masakhane (INT)

Monsters and Ghosts of the Far North — Lena Geerts Danau (BE), Andra Pop-Jurj (RO), alternaa (BE/UK)

Perhaps, art begins with the fireflies — Nelo Akamatsu (JP), Yuichi Oba (JP)

QT.bot — *Sitting here with you in the future* — Lucas LaRochelle (CA)

SH4D0W — *Who is the Master and Who the Shadow? A live performance with an improvising AI, as the protagonist.* — Mikael Fock (DK)
SHIFT — Géraldine Honauer (CH)

Digital Musics & Sound Art

GOLDEN NICA

A Tale of Two Seeds: Sound and Silence in Latin America's Andean Plains — Atractor Estudio (CO) + Semantica Productions (UK)

AWARD OF DISTINCTION

Harmonic Motion — Alba Triana (CO)
zwischenraum — *interspace* — *acoustic cartography* — Julia Jasmin Rommel (DE)

HONORARY MENTIONS

30 Cycles of Flux — Richard Garet (US/Uy)

تسا شوماخ هک ینابز / A TONGUE THAT IS TURNED OFF — Rogine Moradi (IR)

A Natural History of Networks / Softmachine — Ralf Baecker (DE)

Antenna — Floris Vanhoof (BE)

Bias II — Artemi-Maria Gioti (GR)

klimaton ARCTIC~2020 — Adnan Softić and Nina Softić (feat. Thies Mynther & MOSAIC Expedition Team) (INT)

MELENCOLIA — Brigitta Muntendorf (AT/DE)

OSZILOT — Luc Gut (CH), Rolf Hellat (CH), OSZILOT (CH)

Rhizomes — Aho Ssan (FR)

Syphon — Wojciech Rusin (PL)

Temporary Stored — Joseph Kamaru (KE)

TRAILS — Mariam Gviniashvili (GE/NO)

Isao Tomita Special Prize

TRIPTYCH — Robin Fox (AU)



Oneroom-Babel © SANGHEE
Award of Distinction New Animation Art



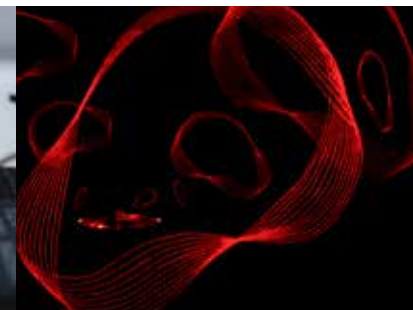
Lebensraum / Living Space © Sven Windszus
Honorary Mention New Animation Art



Shadows from the Walls of Death / Adam Brown
© Axel Heise
Award of Distinction Artificial Intelligence & Life Art



ERBSENZÄHLER Quality Sorter V2 © Verena Friedrich
Honorary Mention Artificial Intelligence & Life Art



Harmonic Motion / Alba Triana
© CamiloMartin, AlbaTrianaStudio
Award of Distinction Digital Musics & Sound Art



klimaton ARCTIC~2020
© Adnan Softić and Nina Softić
Honorary Mention Digital Musics & Sound Art

S+T+ARTS Prize Exhibition

STARTS is an initiative of the European Commission to foster alliances between technology and artistic practice that effectively implement European policies to nurture innovation and benefit the art world as well. The focus is on people and projects that help address social, ecological and economic challenges this world faces. The STARTS Prize is awarded annually to innovative projects at the interface of art, technology and science that have the potential to contribute to sustainable economic and social innovation. This year's exhibition showcases two Grand Prize winners and a selection of honorary mentions and nominations that demonstrate the potential of artistic and creative input to create an impact by addressing current ecological, technological and

socioeconomic issues. The projects show how artists can guide us through the digital transformation to a more sustainable future by being aided by technology, caring about mental health and inclusion of society, revealing biases around computing technologies and information systems, recording of environmental damages and developing solutions to cure them. The exhibition presents striking artistic-driven innovations of different scales: from multidisciplinary collaborations and artist-tech partnerships to community-led digital investigations and individual initiatives.

The STARTS Prize has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 956603.

Featured Artists:

Broken Spectre — Richard Mosse (IE)

Pollinator Pathmaker — Alexandra Daisy Ginsberg (GB)

It Could Be You — HsienYu Cheng (TW)

Labyrinth Psychotica — *The Anoiksis Experiment by Roomforthoughts* — Jennifer Canary (NL)

Inside the NYPD's Surveillance Machine — Amnesty International (INT), Superposition (NL)

VFRAME: Computer Vision for OSINT/OSI Research — Adam Harvey (US), Josh Evans (US), Jules LaPlace (US)

ALL PLAYERS TOOL LAB. — Masatane Muto (JP), Dentsu Lab Tokyo (JP)

Future Materials

Geo-Llum — Samira Benini Allaouat (IT)



© Dentsu Lab Tokyo, Masatane Muto

All Players Tool Lab



© Taiwan Contemporary Culture Lab — Clab

HsienYu Cheng — It Could Be You



© Amnesty International, Superposition

Inside the NYPD's Surveillance Machine



© Alexandra Daisy Ginsberg

Pollinator Pathmaker in Human Vision, 2023



© Tom Ross

Richard Mosse — Broken Spectre_NGV



© Adam Harvey, Josh Evans, Jules LaPlace

VFRAME Computer Vision for OSINT OSI Research

European Union Prize for Citizen Science Exhibition

For the first time ever, Ars Electronica is awarding the European Union Prize for Citizen Science on behalf of the European Commission. The exhibition reveals the diversity and extraordinary creativity demonstrated by European Citizen Science initiatives. The Grand Prize Winner *Isala: Citizen-science map of the vaginal microbiome* and the winners of the Category Awards for Diversity & Collaboration: *Urban Belonging Project* and for Digital Communities: *The Restart Project: The Right to Repair and Reuse your Electronics* illustrate the broad spectrum of challenges Citizen Science approaches successfully address. Twenty-seven Honorary Mentions combine empirical and scientific as well as humanistic and artistic research methodologies with citizen involvement. They are divided into five sections reflecting on the nature and effect those approaches have:

A Shared Sense of Place (*Catch the Water Monsters; CurieuzeNeuzen; Ocean Routes: Exploring and valuing the maritime culture of Esposende – An ocean literacy and citizen science approach; Phénoclim; Surfing for Science; Surfside Science*)

Breaking Black Boxes (*#SOPHYGRAY; ARTigo: Social Image Tagging; Dark Sky Meter; Europeana Transcribe on Transcribathon.eu; EVE Online's Project Discovery*)

Mapping the Human and Non-Human (*DRYRivERS: A citizen science app for advancing the science*

and management of intermittent streams; European Bird Census Council: Citizen scientists monitoring birds for policy, research and society in Europe; Mosquito Alert: Community intelligence for mosquito-borne disease preparedness and response; Projecte Rius; Project Roadkill; Whale Track: Community marine mammal monitoring for nature restoration)

Pushing for Change (*SensJus: Sensing for Justice; Paleo-energy: How forgotten patents can shake the future; GEOVACUI-2: Citizen Science and cooperation initiatives against depopulation of rural areas; Digital Violence: How the NSO Group enables state terror; When gig workers regain control: Data governance model for a new French mobility service by gig workers*)

Co-creating a Future Together (*Digi-ID PLUS; AquaGranda: A Digital Community Memory; YouCount: Empowering youth and cocreating social innovations and policy-making through youth-focused citizen social science; CitiS-Health: Citizen Science for Urban Environment and Health; HARNESSTOM Citizen Science Platform: Unlocking tomato genetic resources to benefit farmers, citizens and chefs*)

The European Union Prize for Citizen Science is awarded in the context of the *IMPETUS* project funded by the European Union under Grant Agreement No. 101058677 – HORIZON-WIDERA-2021-ERA-01.



© Isala Team

Isala Citizen-science map of the vaginal microbiome



© The Restart Project / Mark Phillips

The Restart Project. Fixing continues during the pandemic at community repair events.



© Urban Belonging Project & Pedro Borges

Urban Belonging Project / participant portrait



© Vanessa Milan

Aqua Grande: A Digital Community Memory



© Pim Geerts

Catch the Water Monsters



© Mosquito Alert

Mosquito Alert: Community intelligence for mosquito-borne disease preparedness and response

State of the ART(ist)

State of the ART(ist), a collaborative project between the Austrian Federal Ministry of European and International Affairs and Ars Electronica, was established in 2022. The State of the ART(ist) Initiative continues in 2023 with a significantly expanded new focus. The starting point of this initiative was Russia's brutal acts of war on Ukrainian soil, with its complex effects on world affairs and the individual lives of artistically engaged citizens, who provided the impetus for the initiative's orientation. In 2023, the fundamental question of the prize will be widened and adapted to the conditions that characterize the context of risk and existential insecurity in the current global reality. The State of the ART(ist) Initiative 2023 focuses on those global issues that originate from different sources, but whose consequences lead to similarly precarious conditions and circumstances for individual artists. Existential threat scenarios for artists are an oppressive reality with different origins and backgrounds. This year's focus is on artists whose

livelihood is massively affected by the impact of the following threatening situations:

- Trouble spots, political interference and warlike aggression.
- Lack of freedom of expression or social repression of individual lifestyles.
- Natural disasters or consequences of the climate crisis, leading to radically changed living conditions.

The prize is aimed exclusively at artists who find themselves in situations and places that can be directly linked to the above criteria and whose individual life situation is therefore characterized by "uncertainty" and "risk". The answer to the question "What is Risk?" becomes a basic requirement for a valid submission. However, this aspect does not constitute an evaluation criterion for the jury. The jury's work and the selection of the winners will be based exclusively on the artistic quality of the submitted works.

Jury Statement

Christl Baur (DE), Ivor Stodolsky (DE/FI), Leila Nachawati Rego (SY/ES), Lucia Pietroiusti (IT), Marita Muukkonen (FI), Martin Honzik (AT), Simon Mraz (AT)

The State of the ART(ist) 2023 Open Call has garnered tremendous response, with a staggering 564 submissions received from artists residing in 58 different countries. This overwhelming participation serves as a testament to the global resonance of the State of the ART(ist) Initiative, which aims to shed light on the challenging conditions faced by artists worldwide.

The jury has carefully considered the submissions, reflecting on the essence of being an artist at risk. We recognize the immense risks faced by these artists, including living under war and conflict, enduring violations of basic human rights such as freedom of speech and artistic expression and facing persecution for political reasons, race, ethnicity, gender and sexual orientation.

In an important development of the State of the ART(ist) 2023, the jury has also taken into account the risks associated with environmental breakdown. This includes the direct threats posed by climate change and biodiversity loss, as well as the specific forces — individual, corporate and governmental — that endanger the lives and

livelihoods of activists, organizers and communities at the forefront of extraction and destruction. We hold great appreciation for the artistic vision that offers unique approaches to making invisible issues visible. The selection process prioritized works that showcase and engage with human values, highlight overlooked conflicts and contribute to a greater understanding of environmental concerns.

We value the contributions of artists who have been silenced or repressed in various contexts, ranging from Ukraine, Iraq, Kurdistan, to Myanmar and Nigeria. Their voices and expressions enrich our collective understanding and serve as a testament to the unwavering courage and resilience of the human spirit.

We are profoundly inspired by the courage and resilience demonstrated by artists living and working in challenging situations around the world. Together, we stand united in our commitment to fostering an environment that nurtures and protects their invaluable contributions to the cultural fabric of our global community.



© Soheil Moradian

Mahsa Aleph (IR)

Jowhar

The project consists of tear-catcher jars filled with ink instead of teardrops: ink as the recaptured essence of words. The essence — or the recycled ink — is captured from words, for it to convert into other words. Each time a word is washed, it leaves a shadow of itself; and each time the ink is recaptured from a word, it pales in color. However, no sound or words disappear; they turn into other words. Recapturing ink from words is a chance for rewriting. Washing words recaptures the ink from the paper as shedding tears purges the spirit and polishes the soul. In old times, they used to place tear-catchers in graves. Some say, the more teardrops the jars contained, the longer a mourning period it indicated; the lamentations continuing all the way until the evaporation of the

last teardrop. The sentence repeatedly written on the eight paper scrolls in this installation reads: “The future is merely a part of the past which has been forgotten.” A word is born out of another word. No sound disappears or is obliterated. Music is related to words, and words are related to music. The river and the waterfall are both quenched from the rain but occur through different geographies. This current will never stop flowing. The future is merely a part of the past which has been forgotten.

© Mahsa aleph

The research was done during my research grant in the bs project 2021 at Braunschweig University of art. All rights belong to the artist

Taiye Ojo (NG)

AND IF WE OBSERVE THE PRESENT

Conversations with Bodo Oilfields

My creative practice combines art and research carried out in the environment of the Ogoni communities in the Niger-delta region while raising awareness of its socio-environmental interconnections and the impact of human actions on nature. For this project, I will develop a new body of written work (with visual, sonic and interactive elements) that explores the toxic legacy of oil pollution in Ogoniland. I will capture a selection of poems that confront, via an intersectional lens, endemic abuse, the architecture of exploration and exploitation, the culture of silence and denial, and the effect of neocolonial politics, commerce, and military adventurism. This project is concerned with the notion of futurity or ecological futures, including but not limited to: Anthropocene and climate futures, ecofeminism and queer futures, black futurity, post-pandemic futures, the effect

of subsidence on coastal oil communities, and a focus on remediation, reconciliation, militant conflicts, and public health crises. I will also delve into cultural (food) practice and related emotions because the Ogoni landscape is deeply connected to the locals' firsthand experiences, and the plummeting state of the creeks resulting from oil spillage. I am interested in asking how I can highlight the way the creeks and the inhabitants influence each other. I will reflect on the local significance of this work as an act of activism and, at the same time, as an opportunity to become a participant in the universal dialogue about the environment. The aim of this series is to bear witness to the intensity of destruction in this “zone of sacrifice,” this place that provides fuel for the carbon bloodstream of our society and yet is so forgotten and ignored by the same people who benefit from it.



© Bura-Bari Nwilo

Kira Xonorika (PY)

Cosmic Land

This series envisions and conjures up a future that transcends the binary epistemologies of civilization-dystopia and techno-utopia, centering on eco-justice and the existence of trans and Indigenous people: life-centric design. It draws inspiration from exobiological ecosystems and the transformative potential of metamorphosis, reframing hybridity as a source of power. During the Middle Ages, taxonomical figures such as the Monster of Ravenna were used to disseminate normative ideas about bodies, erasing multimodality and dehumanizing gender and sexual diversity. Through colonialism, these ideas were exported and contributed to the racial division of the world. For many indigenous cultures around the world, taking on the form of non-human species involves connecting with an element of their strength that can only be possible through a certain anatomical configuration, a process of bodily reorganization through symbiosis. Likewise, connecting with the spirits and forces of the earth and its elemental qualities. Additionally, shapeshifting in trans and queer cultures takes

place through fashion semiotics, communicating through decoration as a manifestation of regalia and a celebration of communal spirituality, “clothing as an extension of the flesh.”

Through the power of machine learning, I have been able to reimagine the potential of the body in envisioning a regenerative and protopian future, in which bodies take on multiple forms and commute with nature.

This series confronts the homogenizing tendencies of AI systems in their databases and challenges cultural hegemony and the amalgamation perpetuated through colonialism.



Underwater (Remix) © Kira Xonorika

Ma Ei (MM)

Where is a place for me to sleep in peace?

Since staging a coup on February 1, the Myanmar military has carried out a brutal nationwide crackdown on millions of people opposed to its rule. The junta forces have conducted mass killings, arbitrary arrests, torture, sexual violence and other abuses that amount to crimes against humanity. Houses can be raided, and people captured at any time. The constant worry of dropping bombs disrupted my ability to rest well at night. The people of Myanmar couldn't sleep because of the sound of hovering aircraft. They wished for a peaceful sleep. That is why I created this series of photographs, performed in a sleeping position with night dress in different locations to shed light on the peoples' restless nights. Even though I am now in a safe place, fear and worry

still haunt me. I intend to keep on working on this project not only for the Myanmar people, but also for all humans who are still not at peace. This project was created in different risky situations.

Kyaw Khant — Photography / Naung Yoe — Photography / Htet Wai — Photography and Photo Editing



© Kyaw Khant

Kholod Hawash (IQ)

Long Nights

The project is based on defending women and their freedom and combating oppression and violence in the Middle East. Women are subjected to the most severe types of marginalization. Therefore, the project is depicted through a purely feminist technique that women in the Middle East adopt to furnish homes. But here I put a woman's voice, her image and her awareness, which express her desires and opinions. Her demands for freedom are made through the oldest craft method, she made her voice by re-making the house and furnishing it.

The works are based on stories of violent societal customs and beliefs and women's confrontations with these practices, which include violence, rape and confiscation. By portraying women in both their violent and poetic worlds, these are stories of women told in their own voices.

Support received from:
Kone Foundation, FINLAND



© Kholod Hawash

Mac Andre Arboleda (PH) and Rollyna Domingo (PH)

Pictures of Nothing

Pictures of Nothing is a video essay exploring the connections between animal conservation and human surveillance. Using otherwise useless camera trap data in the conservation of the elusive and endangered Palawan binturong in the Philippines as a starting point, the work surfaces and contemplates the stark terrors facing the country: that the Philippines is among the deadliest countries for environmental activists, the Philippines is a country most at risk from climate crisis, and Ferdinand Marcos, Jr., son and namesake of a former dictator, is now the president of the Philippines and is prioritizing digitization efforts (meaning: more intense surveillance) under his regime.



© Mac Andre Arboleda and Rollyna Domingo

Filmmakers: Mac Andre Arboleda and Rollyna Domingo
Camera trap data courtesy of ABCConservation
Support received from: PARDICOLOR



© Necati Öz

Ümit Güç (TR)

Footprints of Ants

Focusing on the anger that local agricultural workers feel toward refugees, *Footprints of Ants* portrays the story of Syrian refugee workers and local agricultural workers who live in the same tent camp. One day, two children, Barış and Evin, who know nothing of this heated anger driven by poverty, disappear. Locals and refugee workers search for the children. While conducting this search, for a moment, they share the same emotions and the search for children evolves into a search for human values.

The film has four parts: the first is “Pain,” which demonstrates the connection between a woman’s suffering and childbirth. “Journey” asks, why journey? The journey that takes place in the film is a representation of a trip to the fields to seek labor and make money. The metaphor of people and other living beings moving constantly leads us to think of groups that have had to relocate from past and present. The third part is called

“Search” asks what exactly the characters, who have left their previous homelands or geography, are in search of. And finally, “Ricat,” which in Arabic military tactics means “withdrawal.” Here, the director reflects on the cycle of life and people’s inward withdrawal and attempt to nurture their lives, not as a military tactic but as part of life itself.

Written and directed by: Ümit Güç
 Cast: Evin: Gurbet Kancak, Barış: Mahir Aslan, Selma: Fatma Zalim, Delal: Filiz Karadağlı Khaled: Khaled Dikko, Süleyman: Süleyman Bolat, Ercan Ertik, İsmail Emre Halvacı, Serdinç Çağlayan, Zeynep Arslan, Rabia Kancak, İbrahim Kancak, Bahçeköy ve Çadır Halkı
 Assistant Director: Arzu Görgülü
 Director of photography: Necati Öz
 Art director: Esra Fidantek
 Sound: Tuncay Ayvaz
 Camera: Cihan Kar
 Crew: Görkem Yazgan, İlker Cengiz Gül, Mahsun Tosun, Fırat Yetişgin, Orhan Sayın

Alevtina Kakhidze (UA)

Invasions 1.2.3

INVASIONS 1.2.3. is a film that was made following the liberation of the Kyiv region from the Russian occupiers in 2022. Ukrainian artist Alevtina Kakhidze meets with friends in Irpin, Muzychi and Mostyshche. Thanks to the 360-degree format, the reality of the Russia – Ukraine War becomes manifest in every square inch: on the left are a destroyed bridge and houses, on the right are playing children, a happy dog Chuck and a freshly planted seedbed. In the film, Alevtina’s clothes change from mourning to festive, and in the end, she is in the kitchen wearing her casual house clothes, preparing dinner made

from the occupying plants. Her walk with a Kyiv scientist-botanist sheds light on another war in Ukraine – between plants.



© Alevtina Kakhidze

Indigene Corefio (ZA), Huuke Harris (ZA), /Xam Sam Fortuin (ZA), Xopher Wallace (ZA), Diana Ferrus (ZA), Sthando Masuku (ZA), Elder Nkosenathi Koela (ZA)

!Habesi

!Habesi, the name of our project, is the word for “roots” in N|uu, a Khoe language. We chose to name our work *!Habesi* because roots refer to land, to a source, culture, ancestry, family, stability and places of belonging – all themes that our work creatively explores.

The 1913 cut-off date of the Land Rights Act in South Africa prevents the |Xam/Khoe people from claiming the land they had been dispossessed of in the 1600s. *!Habesi* seeks to highlight indigenous land rights.

We spent a week in communion in the Kalahari Desert in order to interview Queen Dr. Katrina Esau about what she envisions the future of her community may have been without colonial interruption or the erasure of Apartheid. We then interpreted her narrative into painting, music, poetry and augmented reality. This sound journey explores the medium of archiving ancient consciousness. The audience sees ten photographs (two of which have AR layers) and one portrait of Ouma Katrina (with AR layer).

Production: |Kx’am / Sound production: Indigenous Frequency Cast / Composer: Queen Katrina / Indigenous instrumentalist: Mntana WeXwele / Poet: Dr Diana Ferrus
 Poet: Indigene Corefio|Huuke Harris / Researcher: Hamid Ntetha / Fine artist: /Xam Sam Fortuin / Videographer: Sthando Masuku / AR visual artist: Xopher Wallace / Costume: Gift Kgosi (No Modern Slave) / Grace: Tsui Goab (God) / Medicine: Our Divine Ancestors



© Sthando Masuku

State of the ART(ist) — Research

Out of respect for Ukrainian participants of the State of ART(ist) Award, no Russian projects should stand next to a Ukrainian winner. However, it should always be possible to engage with the content of system-critical, oppositional art from Russia or Belarus. As a result, the idea for research on the topic of "What is Risk?" was born in order to showcase artists advocating for democracy and peace from the two

aforementioned countries as a separate endeavor outside of the State of the ART(ist) Award.

The research addresses three topics: Advocacy for LGBTQ+ rights, queer life and religion; critical street art and documentary photography across journalism; art and activism.

In each of these areas, activists and artists in Russia and Belarus are acutely endangered at present.

Alisa Verbina (RU)

Queer Crucession

Following Russia's 2022 invasion of Ukraine, the Russian government significantly broadened the legislation on "LGBT(Q+) propaganda", criminalizing any advocacy or support for non-heterosexual relationships and stigmatizing queer behavior as "deviant". Simultaneously, the state employed institutional religion as a tool to propagate discriminatory attitudes and hate policies against the LT(Q+) community. *Queer Cursession*, which took place during the May Day demonstration in St. Petersburg in 2018, was a creative endeavor to reappropriate and subvert the government's propaganda techniques, fostering an event of radical inclusion and resistance.

Through two parallel video-documentaries, *Queer Cursession* bridges historical gaps, creating a speculative occurrence that leverages the powerful agency of queerness for a

transformative impact on society. At the same time the videos refer to the specific historical events from the past.

Religious consultant and the main priest of LGBTQ+-friendly St. Petersburg Christian commune Mother of Solidarity: Aleksandr Khmelev / Academic consultant and philosophy expert: Arina Atik / Choir voices, opera singers: Anastasiia Gutorkina and Dinara Daurova / Other acknowledgments: Artem Konevskikh, Chantal Schlacher



Art Group Yav — Anastasya Vladychkina (RU), Alexander Voronin (RU)

AR Hunter. The Seven Deadly Sins of Russia

Street art in St. Petersburg faces the problem of creative freedom due to the inability to coordinate with local authorities. We, the art group Yav, have been actively creating oppositional street art since 2015, facing censorship and detention. In 2020, we developed the concept for *Seven Deadly Sins* aimed at shedding light on the pressing issues of Russian authorities, but we encountered censorship.

Our response to the limitations of artistic expression was the use of augmented reality. We created the mobile app AR Hunter for Android and iOS, providing artists and activists the opportunity to place their works in augmented reality. In 2020 — 2021, with the help of augmented reality, we restored a large number of destroyed oppositional street art in many Russian cities and continue to do so.

Returning to the project *Seven Deadly Sins of Russia* in 2021, we presented it in our AR Hunter app, choosing a conceptual approach. The sins of Russia are depicted as matryoshka dolls, symbolizing hidden problems of Russian authorities: corruption and greed of officials and police, police lawlessness, intolerance towards LGBTQ+, denial and envy of Western values, and the lies of state media.

Three of the seven sins were presented in the historical center of St. Petersburg, while the remaining four were in the heart of Moscow. Visitors using our AR Hunter app can see bold oppositional street art works on building façades in the two Russian metropolises. Thanks to the use of building photos as markers, these works can only be destroyed by demolishing the buildings or blocking the app, which Google Play and App Store will not allow.

The project attracted media attention and achieved its goal: to make Russian citizens think about what is happening in their country. Also, in February 2023, we restored artists' anti-war works that had been destroyed in 2022 and presented them to the residents of Norway using augmented reality through our AR Hunter app.



Theme Exhibition

(Co)Owning More-than-Truth

Developed within the framework of the European project More-than-Planet, this year's theme exhibition, *(Co)Owning More-than-Truth*, calls for a complete shift in our worldviews, relationships, language, consciousness, and narratives across the planet. From significant signs of climate change to fake news, it is evident that the truths humanity collates on the planet — be they numbers, facts, narratives, voices, or orders of life — are still patchy and biased, with their impacts and consequences varying for individual beings, societies, and nature. While truth is vital for human progress and development, we need more than just truth; we require new sets of actions to transcend beyond human advancements.

(Co)Owning More-than-Truth addresses this point by viewing truth as a pharmacion to navigate current topologies of the knowledge structure, to map them out as dynamic and multifaceted entities and to accommodate the truths that are drifting and shifting. On display are myriads of artworks gliding from truths unearthed from the landscapes, ecosystems and cycle of life in and out of Earth to ground truths of collecting data and processing information to challenge existing regimes of knowledge. Deviating from the quandary of what the truth is and to whom we delegate the right to the truth, *(Co)Owning More-than-Truth*

offers a space where interdisciplinary practices, approaches, and narratives are pluralized to unearth a more profound and inclusive understanding of being together, forging a path towards a consensus of collective efforts for the crises we face as a whole. Through the selected artworks, the exhibition encourages you to question prevailing norms and engage in critical reflections about the complexities of true ownership and its impact on global urgencies through various acts of owning: Navigating, Mapping and Shifting.

Navigating Truths

(Co)Owning begins with sensing and realizing what is before us as well as what can be imagined and experimented with. In *Navigating Truths*, new forms of ecosystem, food chain and symbiosis are presented to expand the horizon of how truths could be perceived and unfolded. Through artistic speculation and scientific imagination on queer and postcolonial futures, marginalized narratives on territories, technologies that calibrate the usage of natural resources as well as scientific theories create a base for understanding different matters, bodies, species and their relationships, while recognizing and questioning individual lens carved to form truths.

Mapping Truths

In *Mapping Truths*, the exhibition delves into various practices of calibrating and mapping the cartographies of both natural and digital ecologies to not only unearth truths about our surroundings but to identify nonhuman agencies that coexist with us on the planet. From Southwest of Colombia to the Karst regions of Slovenia, indigenous spirituality, governance, data on natural disasters such as wildfires, melting glaciers and permafrost as well as offshore infrastructure and species are meticulously laid out to expand on a new sense of community. Here, different temporalities and technologies are artistically contested to combat limitations of human perception for it is not merely to generate facts or truths, but to actively own and connect more nodes between multifarious entities.

Shifting Truths

The advancements of technologies and media have reached a state where the fine line between fake and real is blurred, circulation of specific content is dominated by the stakeholders while personal data with information and narratives is evermore tokenized. Who creates and validates them? Are the tools and outputs accessible to everyone? Whose voice is being marginalized and whose narrative holds more significance? How could we further envisage our subjectivities to include and expand our current knowledge system? The final section brings us to the heart of the exhibition's inquiry: taking truths as a human construct and reevaluating the power of multiple narratives in shaping truth and our planet.

Selected artworks challenge the audience to tackle the implicit trust in certain sources of data and reflect on how individual experiences and perspectives shape the understanding of truth. At the nexus of art, technology and society, *(Co)Owning More-than-Truth* endeavors to bring different subjects, fields and knowledge together. Yet, this signifies the utmost truth we are all aware of: No single entity or community could take hold of crises at a planetary scale, and we all co-own the planet together. By shifting the perception of truth as a social construct, the exhibition challenges the audience to engage with a multitude of perspectives, inviting it to be an active participant in the construction of its meaning. As we navigate, map and embrace shifting truths, the exhibition serves as the platform where truth is not a fixed destination but a continuous journey of exploration and discovery of the future we want to own.

Presented in the context of the More-than-Planet project, part of the theme exhibition is co-funded by the Creative Europe Programme of the European Union. The exhibition features works from EMAP (The European Media Art Platform) residency created through the European Media Artist in Residence Exchange (EMARE), Art Science Residency funded by Art Collection Deutsche Telekom, Randa Art|Science Residency project organized by Institut Ramon Llull, hosted by Ars Electronica and the Barcelona Institute of Science and Technology (BIST). The exhibition also includes artworks awarded the ArTS (Art, Technology, Society) Production Grant for Swiss Artists, a grant supported by the Swiss Arts Council Pro Helvetia. Creative Industries Fund NL generously supports a section of the exhibition.

Agnes Meyer-Brandis (DE)

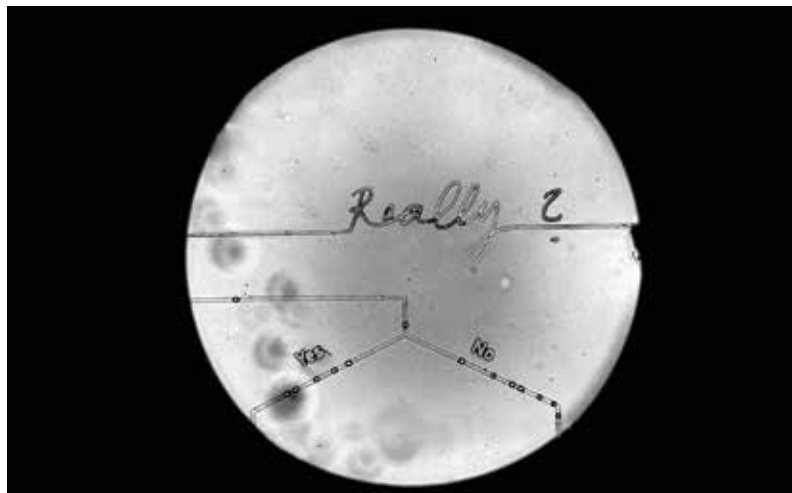
Microfluidic Oracle Chip & Autopoiesis Answering Machine (MOC&AAM)

The *Microfluidic Oracle Chip (MOC) & Autopoiesis Answering Machine (AAM)* is a small cybernetic agent powered by droplets that flow through handwritten text like blood through a vein or sap through a plant. A machine that gives a glimpse into a "Universe of Questions" which appear before our microscopes and offers a simple YES or NO. *MOC&AAM* is the result of an artistic investigation into synthetic biology laboratories. The oracle is essentially a network of interconnected microfluidic chips, containing tiny sub-millimetre channels through which fluids can flow, in this case consisting of a multitude of microscopic, handwritten questions. The droplets in the liquid have been specially made: They are so-called "GUVs" with a polymer coating, used to study the function of biological membranes and to build artificial cells. In the first realisation, most of the questions were posed by the scientists involved. Some are aimed at solving basic scientific puzzles (can we reproduce this?), others at simple

everyday problems (will I finish my work before lunch?). At the end of each question, the droplets turn to either the word YES or NO and continue their journey to the next question. Version #7 is based on a conversation with ChatGPT. I asked what unanswered questions it had, if it had any questions at all. Regardless of ChatGPT's self-proclaimed limitations, all of these questions (have you ever experienced a power cut? / are you wearing socks right now?) can be answered by the oracle machine. In a separate conversation, the answers were returned to the AI.

Sound: Michael Moser

Microfluidic Chip Oracle & Autopoiesis Answering Machine (MOC&AAM) began as part of an Artist in Residence Project at the Max Planck Institute in Postdam Golm. Many thanks to Naresh Yandrapalli and the Tom Robinson Lab, Dirk van Swaay
This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.



© Agnes Meyer-Brandis



© Matjaž Rušič and Katja Goljat

Gregor Krpič (SI), Simon Gmajner (SI), Jan Babič (SI), Marko Jamšek (SI), Gal Sajko (Jožef Stefan Institute) (SI)

StellaVerde

Inspirational prototype of precision garden as a possible scenario for sustainable food production

StellaVerde is a vertical garden arrangement, in which a functional connection between animals, plants and robots allows plants and animals (in this case fish) to use robots according to their needs. The project accumulates several conceptual vectors addressing future food production, one of them being CARE via PLANT-MACHINE intercognition and interaction, which is tied to a better understanding of plants and animals inhabiting the established circular ecosystem. With the implementation of a comprehensive and constantly upgraded array of sensors for soil moisture, temperature, light, humidity, gases in the ecosystem and individual plants and fish tanks, we are able to provide radical care to plants growing in radical conditions, according to their specific individual needs. The machine, in this case a five-legged spiderbot and custom-

developed computer code for its locomotion, and an algorithm for the plants' well-being, interprets the data and translates it into a watering rout(in)e for the spiderbot.

Authors: Gregor Krpič and Simon Gmajner / Scientific collaborators: Dr. Jan Babič, Dr. Marko Jamšek, Gal Sajko (Jožef Stefan Institute) / Technical solutions: Uroš Mehle, Marsel Osmanagić, Andraž Tarman, Luka Žagar, Martin Konič, Jure Sajovic / Hands-on assistance: Nastja Ambrožič, Eva Debevc / Producer: Lea Lipnik / Innovation catalyst: Jurij Krpan, Kersnikova / The project development was supported by the European Commission — DG Connect, S+T+ARTS Regional Centers initiative. / The prototype solution was supported by the konS project, co-financed by the Republic of Slovenia and by the European Regional Development Fund of the European Union. This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Adriana Knouf (US)

TX-2: MOONSHADOW



handmade solar sail, custom 6U CubeSat covered in protective sigils for transgender and queer joy, and a sculpted “meteorite” that contains lichen-human hybrid structures, *TX-2: MOONSHADOW* draws upon the history of transgender desires for extraterrestrial encounters and suggests possibilities for non-human experiences of outer space.

The project was the outcome of a fellowship co-commissioned by Art Hub Copenhagen within the framework of *Repairing The Present*. / *Repairing The Present* is co-funded by the STARTS program of the European Union. Expert Fabrication Assistance: Giorgia Piffaretti. 3D Modeling and Industrial Design: Felipe Rebolledo. Spacecraft Fabrication Space: Georg Rasmussen, CLICK/ Kulturværftet, Helsingør, Denmark. / Presented with the kind support of Creative Industries Fund NL.

TX-2: MOONSHADOW is an experiment in speculative satellite construction and non-human space travel. By its existence, it shows that space missions can be constructed for queer, post-colonial futures, contrary to contemporary commercial, military and expansionist ends. Consisting of a

Alizée Armet (FR)

Ghostly Plants of Damaged Worlds



“From one day to the next, the soil is overloaded with heavy metals, preventing plants from feeding and photosynthesizing. A massive invasion of albino plants occurs.” The device between technological world art and biomedica art presents a technological and industrial assemblage of scientific equipment such as a microscope, pH sensors, a visualization tablet and plant-feeding serum containers.

By “manipulating” plants and organisms, this attitude displays the prejudice that plants are the property of humans subject to exploitation, conquest and overexploitation. In the image of the mutation of photosynthesis, we wish to reconsider the relationship between humans and “earth soil”. By creating an artificial source of food, we want to go further than the spirit of mere possession and predation.

This project is funded and presented in the context of the EMAP project co-funded by the Creative Europe Programme of the European Union.

Ghostly plants of damaged worlds is an installation featuring a series of plants affected by albinism. They are white in color due to an inability to produce photosynthesis. Affected by albinism, each one is unable to produce photosynthesis. It transforms itself into a mutant form of plant that is obliged to pump sap from its host or a nearby plant, yet has a phytoremediation capacity to clean up heavy metals in the soil. The installation is based on a plausible fact conceived and created within a speculative framework:

Cecilia Vilca (PE)

La Verdad (The Truth)



Due to the inability of politician Keiko Fujimori to tell the truth, I trained an AI voice to do so. It was 2021, and she was running for president for the third time. But where is the truth? Does it exist? In 2002, the Truth and Reconciliation Commission (CVR) collected public hearings from armed conflict in Peru. These have been available on CDI-LUM's YouTube channel to encourage reflection and memory since 2016. There, I found Liz Rojas Valdez denouncing her mother's disappearance

as a victim of state terrorism in 1991. The desire to honor a person's pain took hold of me. This audiovisual installation is a dialogue of times in which the truth is finally acknowledged, but what is said was written from my visceral response to the visualization of Liz's video testimony. A guerrilla AI was configured. I am hopeful that perhaps this impossible confrontation will bring some restitution. Pain does not prescribe. Truth exists, even if it is artificial, and in the learning process.

Original idea: Viewing Keiko Fujimori's speeches. Audio and transcript cleaning: Cecilia Vilca.

AI training was performed by Cecilia Vilca using a TensorFlow Implementation of DC-TTS by Kyubyong Park.

The video testimony by Liz Rojas Valdez was broadcast live and recorded on public television (Peru, 2002). Today it is available for viewing on CDI-LUM's YouTube channel. This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Cristo Riffo (CL)

Sistema Cinco: Non-Human Determinations



Sistema Cinco explores through technology the interdependencies and relationships of microorganisms, opposing nature's molecular technologies with human-made ones. It consists of a hacked microscope with robotic components that allow movement and exploration of vectors over microbial samples. The images that are projected live from the microscope are in opposition to the mapping of large terrains with the use of drones,

where viewers can find connections and similarities between the microcosms in manners of scale, forms and shape. The microscope is connected to AI to imagine realities of cybernetic management with algorithmic governance. Control algorithms will be based on Stafford's Beer *Viable System*, a non-hierarchical organization structure inspired by the nervous system of biological organisms. The *Viable System* was the heart of the project *Cybersyn*, used for the management of Chilean state companies during the government of President Salvador Allende, from 1971 to 1973.

Montreal Supporting Institution: EASTERN BLOC / Collaborators: Robotics & Interface programming: Pascale Tetrault / AI programming: Jonathan Wilansky / The participation is the result of a collaboration between Ars Electronica and the Ministerio de las Culturas, las Artes y el Patrimonio and the Ministerio de Relaciones Exteriores | Gobierno de Chile.

Charlotte Jarvis (GB), Patricia Saragüeta (AR)

ORGAN OF RADICAL CARE: UNA MATRIZ COLABORATIVA



© Charlotte Jarvis

Organ of Radical Care: Una Matriz Colaborativa is using new science to grow a collaborative uterus from menstrual blood of multiple women, trans and non-binary people. A collective colony of endometrial cells has been grown and the next stage is to differentiate the colony into decidual cells that could host a fertilized egg. If successful it will be a world-first. The cell colony is being exhibited and kept alive in a glass chalice, which is fed, cleaned and returned to the incubator every night in a continuing performance of care. The women, trans and non-binary activists from Argentina who are contributing to the cell colony have been recorded speaking a poem written

by Patricia for the project. Film documentation shows Charlotte and Patricia taking some of the biological samples to Tierra Del Fuego in Patagonia — the literal end of the world, conceptualized here as a “portal” to the future we hope to realize. The project aims to be what Donna Haraway describes as “split and contradictory”; to generate “rational conversations and fantastic imaginings that change history.”

Scientific Consultants: Prof. Susana Chuva de Sousa Lopes, Anastasia Bragina, Manuel Selg / Poem: Patricia Saragüeta / Translation: Sarahi Valeria Fuster Cortés, Diego Trujillo Písanty, Amber Scott, Fiona Athie / Glass: Atelier NL / Lab colleagues Argentina: Luciana Ant and Clara Campos, Saragüeta Lab / Lab colleague Linz: Anastasia Bragina, ARS Electronica Lab / Film: Charlotte Jarvis, Wo Portillo del Rayo, James Read / The work is being realized within the framework of the European Media Art Platforms residency program at Ars Electronica with support of the Creative Europe Culture Programme of the European Union. Additional support from MU Hybrid Art-house, the Royal College of Art, CONICET and FCEN-UBA. This project is funded and presented in the context of the EMAP project co-funded by the Creative Europe Programme of the European Union.

Daniel Haas (AT)

dBlech



© Daniel Haas

dBlech is an audiovisual installation, an object that creates, manipulates and reflects sound and light. A mirror-polished metal-plate is excited with transducers driven by audio signal to create

sound and vibration. Through the plate, the signal becomes audible, with its material properties directly affecting the sound characteristics. At the same time, the surface is deformed, visualizing the transverse waves in the mirror. This artwork connects multiple layers of our perception. Sound and light are inextricably linked since both arise from one and the same source. It blends into its environment, takes the space and starts to change the vibration of its surroundings until everything resonates in unison.

Funded by The University of Arts Linz and Linz Kultur. Artistic and technical support: Joachim Smetschka, Holunder Heiß, Cécile Bucher, Matthias Narzt, Enrique Tomas, Wolfgang Dorninger

Dorota Gawęda (PL/CH), Eglė Kulbokaitė (LT/CH)

BROOD (The Second Body)



© Dorota Gawęda and Eglė Kulbokaitė

BROOD (The Second Body) focuses on the integral weirdness of the world—the running trope in both scientific investigation and folkloric tales that function as interfaces for interaction with the surroundings. Taking the form of a multi-channel video installation and combining a range of footage: from scenes shot on location, staged green

screen material, CGI to algorithmically generated sequences and found footage. In the project, the artists think through interactions and processes of fundamental particles of nature and a brood of spirits of vernacular belief as not only metaphors but interfaces and processes that hold potentiality for a radical reimagining of our world—in which human and nature, human and nonhuman, are thoroughly imbricated.

The project has been produced in the frame of the ArTS Production Grant for Swiss Artists supported by the Swiss Arts Council Pro Helvetia. / CERN, Collide Residency / *BROOD (The Second Body)* has been produced together with Justyna Chaberek and Oskar Pawełko (performance); Juliette Ruetz and Julian Hutcheson (SFX make-up); Fritz Schiffrers (character development); Moritz Freudenberg (cinematography and postproduction); Robert Samplawski (light).

Vladan Joler (RS), Felix Stalder (CH), Gordan Savičić (AT)

Infrastructure of a Migratory Bird



© Katerina Sedy

The Northern Bald Ibis (Waldrapp) is a migratory bird with a historic habitat in Europe, the Middle East, and North Africa and a rich cultural history dating back to ancient Egypt. Its current global status on the ICUN's Red List is “endangered”. In medieval Europe, the bird bred north of the Alps (in Switzerland, Southern Germany, and Austria) and spent winters in the south. It became extinct around 1621 due to over-hunting and adverse climate conditions (“little ice age”). In 2013 a project led by Johannes Fritz began to rewild the

Northern Bald Ibis in Europe. Most of the birds have been equipped with GPS trackers and are monitored in real-time. In the first nine years, the number of rewilded birds rose from zero to almost 200. According to current models, at least 357 birds are necessary for the population to be self-sustainable. This number is projected to be reached by 2028, at which point the infrastructure mapped here is expected to be transformed significantly. This map represents the extent of the infrastructure in the early 2020s.

This diagram consists of a relational graph and three scales. The graph shows relationships between social, technological, informational and ecological elements which make up the anthropogenic ecosystem in which the bird is becoming wild again. The scales show the spatial, monetary and temporal dimensions of many of the elements that make up the relational graph.

Presented with the kind support of the Swiss Arts Council Pro Helvetia.

David Shongo (CD)

CEUX SANS QUI LA TERRE NE SERAIT PAS LA TERRE



© David Shongo

The installation *Those Without Whom the Earth Would Not Be the Earth* draws inspiration from the reflections of the ecologist Malcolm Ferdinand, who offers a critique of our current approach to the global ecological collapse. Ferdinand highlights a fragmentation between concerns for a better future for our planet on one hand, and an unanswered societal urgency on the other.

The title of the artwork references an excerpt from *Notebook of a Return to the Native Land* by poet Aimé Césaire. In ironic manner, the poet

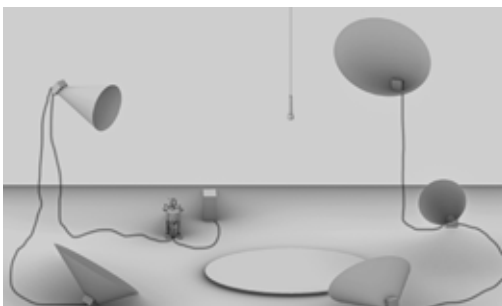
reminds us that those who suffer from systems of injustice and exploitative practices are precisely the ones who have taken care of the earth by living in harmony with nature, thus not contributing to its destruction. The work is set in the context of the Democratic Republic of Congo, which has been a coveted and exploited space since Belgian colonization due to its rich biodiversity and mineral resources. This historical and international covetousness has turned the DR Congo into a site of permanent conflict, social injustice and ecological threats, with its ecological footprint ranking highest globally. The artist establishes an analogy between ecological toxicity (resulting from abusive exploitation of the land and subsoil) and social toxicity in his country characterized by economic inequality and an unjust system.

Video: David Shongo / Photographies: David Shongo / Source of archives: Africauseum / Texts: David Shongo / Production: Studio 1960 / This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Klaus Spiess (AT), Emanuel Gollob (AT), Paul Gründorfer (AT), in cooperation with Jens Hauser (DE/FR)

CHRONOLALIA

Towards an oscillating truth



© Klaus Spiess

CHRONOLALIA explores truth as a post-anthropocentric, fluid entity influenced by various timeframes. Directed by time-sensitive microbiota species, our laboratory data and AI, visitors

engage in a ritual, using an artificial voice apparatus to navigate internal, environmental, consumerist and artificial timers, while transforming into the AI's body. Full body vibration and oscillation serve as biomedias, facilitating interaction with the microbiome and self-transformation. This strong temporal subjectivity gives rise to a de/synchronized meta-organism, embodying a "subjectless subjectivity of technology." The audience weaves diverse temporalities into a shared polytemporal feedback system and sonic time experience. This experience offers multi-perspectival authorship and a nomadic concept of time.

Christoph Freidhöfer, Hans-Jürgen Hauptmann, David Bosch, Austrian Science Fund PEEK AR 687, Medical University of Vienna

Felipe Castelblanco (CO), Lydia Zimmermann (CH)

Cartographies of the Unseen



© Lydia Zimmermann

Conceived as a participatory research process in the southwest of Colombia, the films gathered here, *Cartographies of the Unseen* meander through a vertical landscape shaped by territorial conflicts and resistance in the region between the Andes and the Amazon. The project includes films produced in collaboration with Nambi Rimai, an Indigenous Media Collective established in 2019 with members of the Awá, Inga, Kamneta,

Quillasinga, and Siona nations. Together, the artists have traversed altitudinal zones across a fiercely contested territory near the Ecuadorian border, guided by the upward movements of water from the forest to the mountain. For centuries this area has been the epicenter of ecological and epistemic violence against land, rivers, clouds, and all kinds of living forest beings. So these works are two-fold: they invite the viewer to join a filmic journey across vertical layers of the territory, while documenting an ongoing biocultural peace-building process sustained by indigenous spirituality and governance.

Support from: Fachausschuss Film und Medienkunst Basel and PROHELVETIA – COINCIDENCIA, Colombian Ministry of Culture. Thanks to: AWAI Territorial Agency, The Putumayo River, Sumak Kawsay Foundation, Kustruktur and Camilo Pachón (AMA). / This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Iodine Dynamics — Arnaud Guillon (FR), Chun Lee (TW/UK), Dustin Long (US), Aymeric Mansoux (FR) and Marloes de Valk (NL)

What Remains



© Iodine Dynamics

What Remains is an 8-bit game by Iodine Dynamics, blending visual novel and adventure elements. The story translates real events from the 1980s into an epic quest to save the world. The game lets you experience the fight against industry disinformation, showing you several ways to push back and regain agency by joining forces with others. The 1980s was the decade in which many of the problems we face today became painfully apparent. The collateral damage of

industrial capitalism — acid rain, the hole in the ozone layer, global warming — became visible at the same time as the rise of neoliberalism, with its push for deregulation. In those days, several industry disinformation campaigns were successfully used in attempting to delay regulation. The game is based on those campaigns, showing strategies that are still used today. The game is developed for the original NES hardware. To not generate more e-waste, the game is developed on reused and repurposed cartridges.

What Remains is a project by Iodine Dynamics (Arnaud Guillon, Chun Lee, Dustin Long, Aymeric Mansoux and Marloes de Valk), 2018. *What Remains* is made possible with support from Creative Industries Fund NL, Democracy & Media Foundation, Het Nieuwe Instituut, Akademie Schloss Solitude, ZKM Center for Art and Media Karlsruhe, V2_Lab for the Unstable Media, WORM Pirate Bay, Then Try This, Varia, ESC Medien Kunst Labor and Hotel Mariakapel. Our server is kindly hosted by servus.at. / Presented with the kind support of Creative Industries Fund NL.

Karen Palmer (GB)

Consensus Gentium



© Karen Palmer

Consensus Gentium is an interactive artwork for iPhone about surveillance and algorithmic bias that monitors you back via AI-driven facial recognition technology. The artwork is set in a near future where AI bias runs rampant in a surveillance state. The audience interacts with the narrative via a smartphone, ultimately revealing the frightening potential of today's surveillance technologies. The project harnesses the facial detection technology available in all smart devices and uses machine learning to create a new type of narrative experience. As the audience switches

between apps, they uncover a world of surveillance and algorithmic bias masquerading as smart technologies. But they are subconsciously impacting the story as their reactions are measured by the devices' camera. *Consensus Gentium* encourages debate about data privacy, algorithmic bias and enables audiences to become aware of their subconscious behaviors, to take control over their data and ultimately their lives. The project is being developed in consultation with computer scientists, techno activists and neuroscientists to create a world that is more science fact than science fiction.

Executive Producers: Lizzie Franke and Kristin Irving (BFI)
Producers: Tom Millen, Thalia Mavros, Jackson Lapsley Scott, Tuyet Huynh / Technical Developers: Tom Shannon and Ahmed Buttar / Cinematographer: Anthony Gurner / Editor: Jack Foster Production Designer: Tom Paris / Sound Designer: Gareth Fry / Music: Cesare Marchese, Colin Emmanuel / Principal Cast: Miriam Teak-Lee, Zachary Hing, Tolu Kingba / This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Pamela Neuwirth (AT), Harald Purrer (AT), Simone Boria (GB/AT)

MEMESIS

Oracle Of The Anthropocene



© Pamela Neuwirth, Harald Purrer, Simone Boria

MEMESIS is an oracle in the age of automation. Memesis simulates the topic of AI and provokes by means of a reverse Turing test: Are we already enough machine to deal with artificial intelligence? When you enter Memesis and use the "useless machine," you come into contact with the Oracle. The oracle is strange and speaks in the almost extinct language of the Pirahã, which seems to contradict universal grammar:

this voice indicates the current state of the machine. In the therapeutic setting of MEMESIS, the "useless machine" is the medium in the communication between human and machine: the machine thereby develops an apparent life of its own between utopia and dystopia. Irritated by the experimental set-up of the algorithm, the user of the "useless machine" does not pass the reverse Turing test, but the machine itself does, which leads to dadaistic situations.

Concept: Harald Purrer, Pamela Neuwirth. Video art: Simone Boria. Production: Gregor Hagmüller, Harald Purrer, Pamela Neuwirth / Production/Credits: Gregor Hagmüller (AT) is a mechatronics engineer and works at the company Fronius. / Ada Productions, Linz. / Culture Association DHS, Linz. / Net Culture Association servus.at, Linz.

Marco Barotti (IT/DE)

APES



© Marco Barotti

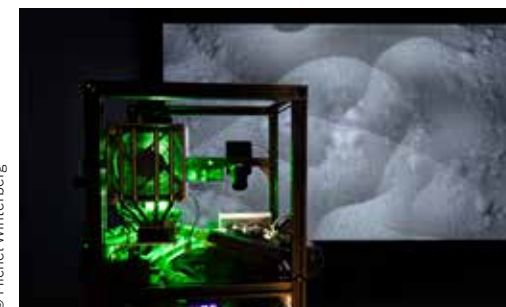
"Apes are our closest relatives and are commonly seen as a symbol of our evolution". Proceeding from this assumption, the work investigates the benefits and dilemmas that the new digital evolution brings to our society by navigating through the topics of cybersecurity, data consumption, surveillance capitalism, behavior modification and energy demands. We human beings have made great progress in inventing smart systems that are supposed to think and design a better future. Are we, as a society, ready to act as intelligently as the machines we have created? Can the new digital evolution guide us towards a respectful and sustainable cohabitation with our fellow

humans, the planet and other species? *APES* is a collection of kinetic sound sculptures made with recycled WI-FI antennas. They are driven by algorithms showing dynamic counters of data consumption and cyber-attacks; everything from Facebook likes and Google searches to cyber-attacks happening in real time. The *APES* move with predictive patterns dictated by the various names appearing on the screens. These motions are accompanied by sonic events produced by an AI program trained to deep fake the calls of real apes and by evolving soundscapes generated by a granular synthesizer driven by the data flows. The artwork also exhibits interviews collected during the research with scientists and experts associated with the project.

Software programming Marco Accardi / Anecoica Studio; Assistant Design Xueqi Huangfu; deep fake research and production Lea Schönherr, Joel Frank; cyber-attacks API implementation Endres Puschner; digital wellbeing, inputs Asia Biega; technical advisor Benjamin Maus Funded by "CASA – Cyber Security in the Age of Large-Scale Adversaries" (EXC 2092) and BBK-Projektbüro NEUSTART / Supported by Pina, Izis Festival, Ars Electronica, Loop Space Seoul

Michel Winterberg (CH)

Melting – the show must go on!



© Michel Winterberg

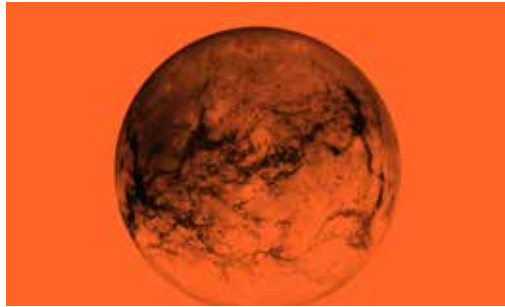
The dramatic changes of the melting glaciers and permafrost in the age of the Anthropocene are addressed in the installation *Melting – the show must go on!* It refers to the enormous energy consumption of the computers and server farms used globally. The internet, the sum of all Google or

ChatGPT search queries or Bitcoin mining consumes considerable power and generates waste heat. The components used in the work originate from computer cooling technology, but here they are used to create ice on a metal plate, which is suddenly melted after a certain time. Through a camera, the slow nature-imitative event is projected as a video image that is aesthetically and acoustically transformed with spherical soundscapes, which were generated from the electromagnetic emissions of the apparatus itself. The title *the show must go on!* is also an indication of the persistent forces of consumerist behavior. How quickly can or will mankind be able to adapt its lifestyles?

Presented with the kind support of the Swiss Arts Council Pro Helvetia.

PROTO-ALIEI PROJECT (CO/JP)

FORMATA



© Juan M. Castro

Today, at a time when our anthropogenic impact is expanding beyond Earth, what would it mean to experience alien material assemblages as active and performative? *FORMATA* is a hybrid installation that stages lively, autonomous blobs inside an experimental reactor emulating the conditions of an extraterrestrial planet with liquid formamide. Composed of substances similar to those found in meteorites and comets, these vibrant

blobs defy stasis: they deform, actively move and self-divide. The bodily encounter between the audience and alien active matter is critical to our project. It is important not only in the way that these entities help us to materialize the other and the unknown, but also for the way in which they compel us to re-evaluate our place in an active cosmos. Through these encounters, *FORMATA* challenges our current relationship with matter, deconstructing the human/non-human hierarchy and replacing it with an “unscaled agency” of living, partially alive and non-living entities.

Experimental laboratory — Gifu Prefectural Industrial Technology Center / Rock Design — Yasushi Inoue / Support — The Institute of Advanced Media Arts and Sciences (IAMAS); Department of Information Design, Tama Art University; and The Graduate School of Arts and Sciences, The University of Tokyo. This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

RYBN.ORG (FR)

The Great Offshore



© Tanja Kanazir, Drugo More, RYBN.ORG

The Great Offshore is a long term artistic investigation into the depths of offshore banking, presenting a web of documents, photographs, gleaned objects, narratives and diagrams collected during several research trips to some of the most notorious tax havens: Dublin, London, Switzerland, Liechtenstein, Jersey & Guernsey, Delaware, the Bahamas, Cayman Islands, Malta, the Netherlands, Luxembourg. As the investigation

has advanced, the project has shifted its scope to the most recent and extreme offshore infrastructures, including Art Freeports, Luxembourg space mining initiative, Maltese golden passports and cryptocurrencies programs, dystopian luxury bunkers and engineered islands from the Seasteading Institute, etc. By connecting these heterogeneous extraterritorialities designed for wealthy individuals (HNWI) and multinationals, *The Great Offshore* documents the emergence of a new regime of liquid governance.

The Great Offshore has been developed since 2017 with the support of: DICRéAM, Espace Multimédia Gantner, FNAGP, La Gaîté lyrique, H3K & Atelier Mondial; Eucida, Institut Français — résidence Les Collectifs, _V2, FIBER & Waag; CNAP, UV editions; M-Cult, EMAP/EMARE. Collaborators: Wilfried Bartoli, Jean-François Blanquet, Marie Constant. DinahBird. / This project is funded and presented in the context of the EMAP project co-funded by the Creative Europe Programme of the European Union.

Jonas Staal (NL), Jan Fermon (BE)

Collectivize Facebook



With three billion users today, Facebook (Meta) impacts our social, economic and political lives in an unprecedented way. *Collectivize Facebook* is a collective action lawsuit that aims to force legal recognition of Facebook as a public domain that should be under ownership and control of its users. Facebook infringes upon the right to self-determination of peoples and individuals in various ways. The corporation instrumentalizes users as neo-feudal data workers, turning our affective labor into its capital. Facebook

employs racist algorithms and is used in various surveillance capacities that infringe upon privacy and further impacts democratic elections in disproportionate ways, of which data capture and targeted campaigns of Cambridge Analytica are a recent example. And the corporation has willfully advised authoritarian regimes such as that of Duterte in the Philippines. The indictment against Facebook therefore demands that (1) Facebook is recognized as a public domain and (2) the ownership model of Facebook is transferred to its 3 billion users. This means the lawsuit does not want to reform Facebook or to nationalize it: its aim is to transform Facebook into a transnational cooperative, under shared ownership and governance of its users. This installation offers you the chance to read the indictment against Facebook in various languages, and to join the case as a co-claimant before it is filed at the United Nations Human Rights Council in Geneva.

Presented with the kind support of Creative Industries Fund NL.

Juliane Jaschnow (DE), Stefanie Schroeder (DE)

HC SVNT DRACONES



© Juliane Jaschnow, Stefanie Schroeder

Humanity's most significant legacy will be its nuclear waste. We follow an online conference on the search process for a final repository for nuclear waste that does not yet exist and will be closed for one million years. How will this place be marked, what can remain legible and for whom, human and non-human life forms? The nature of the warnings to the distant future is contained in a permanent loop between virtual and real space.

Hic sunt dracones (Here be dragons) served as a warning of unexplored and dangerous territories; early globes and world maps pictured the space beyond the known world with mythical animals, monsters, sea serpents. One way for humans to open up unfamiliar terrain for use is to adopt the animal's gaze. The multi-channel installation *HC SVNT DRACONES* is an outgrowth of the research for a partially three-dimensional film about warning signs, feedback loops, fluorescent bird flocks, eternity damage, insect VR cinema, geology and political systems.

This project is funded and presented in the context of the EMAP project co-funded by the Creative Europe Programme of the European Union. / Additional funding by the German Federal Film Board FFA. / With the support of the Centre for the Advanced Study of Collective Behaviour/ LocustVR, University of Konstanz. LocustVR is a combination of a locomotion compensator sphere for freely moving animals and a perspective correct virtual reality projection.

Špela Petrič (SI), Studio Teratope (NL)

AIxxNOSOGRAPHIES



© Réon Córdova

At a time when AI is one of the world's highest-growth industries and its applications in healthcare are rapidly expanding to keep up with the aging population and diminishing workforce, *AIxxNOSOGRAPHIES* is an art-research framework looking into advanced automation in healthcare. For this, it uses three hybrid artistic methodologies with the intention of revealing the use of medical AI to a wider public and critically contextualizing it. The "Performative Ethnographies" are site-specific actions during which participants embody amateur ethnographers and are taken on a guided tour of the infrastructures leading to

one of the applications of AI in healthcare. The participants choose a particular vantage point from which they observe the encounters, take field notes, and report on the reality of others through the analysis of their own experiences. In so doing, they create an accumulative record of observations to express various values, concerns and commentary. As a nod to similar efforts in the field, the "Atlas of Medical AI" presents a series of maps authored by various researchers exploring actors and topics associated with particular AI technologies. Finally, a video essay collects the insights of the previous two activities into a narrative navigating the complexities of the healthcare transition we are currently undergoing.

Concept and execution: Špela Petrič / Maps & research: Janita Chen & Réon Córdova / Design: Miha Turšič / Video: Rob van Pelt / Performer: Ira Brand / Co-organised by: Sustainable AI Lab Bonn and ELSA AI lab Northern Netherlands / Special thanks: University Hospital Bonn and University Medical Center Groningen / This artwork was created with support of the Creative Industries Fund (NL) and during the ArtScience Residency, enabled by the partnership of Ars Electronica and Deutsche Telekom and with the support the Sustainable AI Lab of the University Bonn.

Waag Futurelab (NL), Northern Photographic Centre (FI), ART2M/Makery (FR), Leonardo/Olats (FR), Zavod Projekt Atol (SI), Ars Electronica (AT)

More-than-Planet Lab



© Waag Futurelab

More-than-Planet Lab is where ideas, approaches and practices are brewed to reconstruct our concept of the planet and planetary imaginary. From satellite images, CO2 data, sea level measurements to GPS data, technology has aided us in shaping our knowledge about the planet.

Yet, what does it mean to *own* sets of data, information and precise imagery of the planet we call home? What are the *Truths* constructed around visions of the planetary? How should we narrate and engage in the process of perceiving the planet as a new "We," transcending continents, species and planets? We offer an experimental space teeming with living traces, narratives and imageries to carve a new lens into how we perceive the planet. Through exploring ongoing projects and participating in workshops, we aspire to deepen our understanding of the planet and raise collective awareness of urgent planetary issues.

This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Anne Duk Hee Jordan (DE/KR), Pauline Doutreluingne (BE)

Brakfesten / La Grande Bouffe



© Anne Duk Hee Jordan, Pauline Doutreluingne

Brakfesten / La Grande Bouffe zooms into a symbiotic ecosystem and consists of a public sculpture in the forest, which grew over several months and became simultaneously the film set for the macro film *Brakfesten – La Grande Bouffe* as the ultimate step of the project. Here the work investigates the Swedish forest area that is threatened with extinction due to Dutch Elm Disease. From autumn to spring, elm beetles lay their eggs inside the bark of the elm trees. When the eggs start to become small

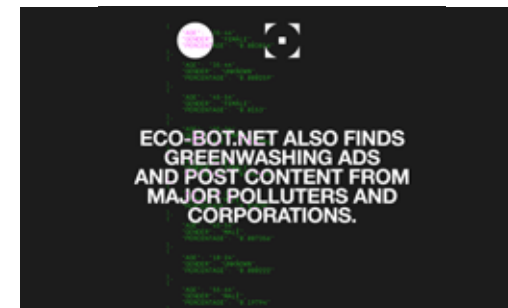
larvae, they begin a symbiosis with fungi. A mycelium and a beetle become strong forces. Together they form a deadly disease for the elm trees. The point of departure is to observe the desperate act to cut down all the trees. They lie there like infected dead bodies. The ecosystem is totally disturbed. But the more one looks at the infected trees, one understands it is all about restoring the ecological cycle.

Directors: Anne Duk Hee Jordan and Pauline Doutreluingne / Sound Composer: Midori Hirano / Video Editor: Judy Landkammer / Animation: Moana Vonstadl / Camera: Leif Eiranson, Anne Duk Hee Jordan, Isak Mozard / Footage Research: Pauline Doutreluingne / Commissioned by: Public Art Agency Sweden / Produced by: Public Art Agency Sweden in collaboration with Baltic Art Center / Curators: Edi Muka, Helena Selder / Producer: Anna Norberg / Film assistant/producer: Isak Mozard / This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Barnaby Francis (GB), Robert '3D' Del Naja (GB), Dale Vince (GB)

Eco-Bot.Net

Defending The Digital Environment



Eco-Bot.Net is a cross-sectoral initiative launched online during COP26 (2021) to expose the scale of corporate greenwashing and climate change disinformation on social media, co-created by artists Bill Posters, Rob Del Naja of Massive Attack and UN Ambassador Dale Vince. Created in partnership with data and citizen scientists, technologists, investigative journalists and artists, the system exposes, flags, and visualizes

thousands of pieces of content from Facebook, Instagram and Twitter, including aggregated post and sponsored ad data, reveals hidden targeting data from greenwash campaigns, and using a network of automated bot accounts flags verified greenwashing and climate disinformation posts with public health warnings online. All data is publicly available, giving researchers, press, litigators and policy makers data-driven, epistemological evidence to hold fossil fuel companies and social media corporations to account. In 2023, *Eco-Bot.Net* received "Innovation of the Year" at the British Journalism Awards. In 2024 the project will relaunch with a new AI architecture in partnership with Oxford University's Human Centred Computing department and Climate Litigation Lab.

This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Roos Groothuizen (NL)

I want to delete it all, but not now



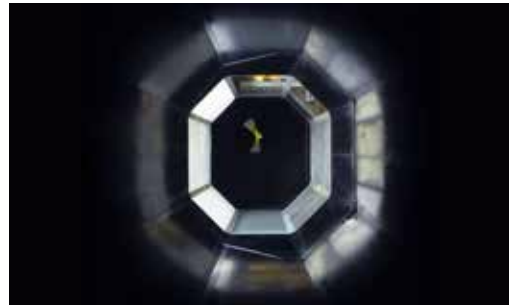
We all have thought about going offline or exploring alternatives, but that has not led to any action so far. What is holding us back? The installation is based on an escape room, a popular game form where you and your friends lock yourselves up in a game room and find the exit by solving puzzles. Roos chose to disrupt the typical elements of an escape room. The familiar door — through which you eventually must escape — is no longer there. The linearity is also gone. Instead, the puzzles continuously loop, rendering it impossible to finish the game. The room blurs with the real world. How can you still escape? And from what?

With contributions from: Geert Lovink, Cyanne van den Houten, Derk Over, Isa van Weert, Remco Akkerman and Ruben Baart. / Commissioned by Tetem (Enschede, NL). Presented with the kind support of Creative Industries Fund NL.

I want to delete it all, but not now is an unsolvable escape game that challenges our personal motives for escaping the data industry. Apps, platforms and social media have become an essential part of our daily lives. The downside is that our online behavior is continuously being registered and resold and we have basically no idea what we are giving permission for.

Juliane Jaschnow (DE), Stefanie Schroeder (DE)

The Effect of Cannonry on Thunderclouds



To what extent is this kind of image document, fiction, trophy, counterattack? How close are manipulation and prediction? Is the weather still real? A film about the image of the storm and the storm as image: Stormchasers chase storms with their cameras and turn them into photographic trophies. In front of the green screen of the television studio, the weather presenter points into the void. At the Max Planck Institute, birds fly against artificial wind. Lovestormpeople flood the Internet with skewed right-wing populist slogans. Escape games play with social fears. On fruit plantations anti-hail cannons fire sound waves of 130 decibels into the sky.

Produced in the framework of PMMC Lab, werkleitz Gesellschaft Halle (S.). / Funded by ESF—European Social Fund and MDM—Mitteldeutsche Medienförderung. / This project is presented in the context of the EMAP project co-funded by the Creative Europe Programme of the European Union.

In Europe, the tradition of weather shooting has been documented for centuries. The danger of approaching thunderclouds is supposed to be banished by cannon fire. Internet, television and press are filled with weather similes: shitstorms, data floods, waves of refugees. Language, metaphors, images are instruments of control. They are used to dispel — and instill — fear. The social domain is imagined as an inevitable catastrophe by describing it with metaphors from nature.

Spektr Z (SI)

(Sensor Polygon for Electromagnetism, Communication, Technology, Research & Sensing)

Oculus Super Ignes Vigilantes Volavimus



© Katja Goljat, Majjaz Rust

SPEKTR Z — Sensor Polygon for Electromagnetism, Communication, Technology, Research and Sensing is a hybrid mobile laboratory which started operating in July 2022, during the devastating fires in the Karst region, the largest natural fire in Slovenia's recent history. The laboratory is of a hybrid nature, consisting of modules and equipment for remote sensing, reception and processing systems for sensor data. Also, a special department of the laboratory is devoted to public presentations of activities and cooperation with tactical media workers, artists, creative and high-tech industry, research as well as

state institutions. *Oculus Super Ignes Vigilantes Volavimus* uses the Common Data Processing and Display Unit (CDPDU), a data display and processing architecture built to open hardware and software standards, developed within the Arctic Perspective Initiative. The work presents various layers of data gathered within the laboratory's operation during fires in the Karst region and allows the visitors to freely navigate through and manipulate these layers of data.

Production: Projekt Atol Institute within the konS = Platform for Contemporary Investigative Art Partners 2022: C-ASTRAL, Institute for forest management of Slovenia, Slovenian Armed Forces, GOZDIS — Forestry institute of Slovenia IOS — Institute for ecology and sensors, Civil Defense corps of Slovenia, Triglav National Park, Center of Excellence SPACE-SI, ZRC SAZU — Remote sensing section

Production of the work is supported by the Republic of Slovenia (MK) and Republic & the European Regional Development Fund of the EU
Special support: C-ASTRAL

This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Sebastian Schmiege (DE)

Prompt Battle Training Station



© Lina Schwarzenberg

Do you have what it takes to be a prompt engineer? Prompt engineers use magic spell-like prompts to get artificial intelligence to generate the best new images, texts, videos or pieces of

music. How good are your prompts? Are they good enough to hold their own against other prompt engineers?

Train your skills at the *Prompt Battle Training Station* and prepare for the prompt battles of the future. *Prompt Battle Training Station* is a spin-off of the original *Prompt Battle*.

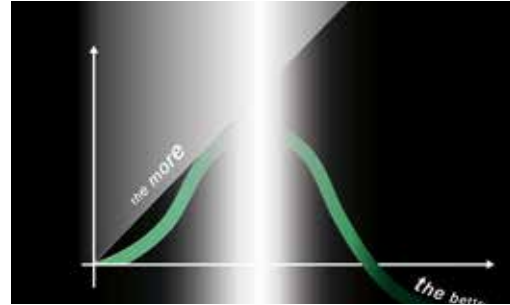
Prompt Battle Format developed by Florian A. Schmidt & Sebastian Schmiege with the design students at HTW Dresden: Bernadette Geiger, Ella Zickerick, Emily Krause, Levi Stein, Lina Schwarzenberg, Robert Hellwig
Moderation: Yidi Tsao

This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.

Werner Jauk (AT), Laura Sophie Meyer (DE)

Every BODY knows/owns the TRUTH

An installation of the Ars Electronica Research Institute AERI
“auditory culture”



Auditory culture shows the scientific and artistic research on the transgression of the mechanistic in the digital cultures of recent years. It condenses expressions of the body in the evolution of language and music in an artificially emotional installation

to experience bodily truth in mediatized worlds. It goes “forward back” from the seeing / understanding “world view” to the experiencing / “intentional” (being in tension) hearing as “listen up & stop thinking, what is right and order (of things)”. This is especially in mediatized worlds, which are outside of the physical grasping of the visible and therefore its understanding – but “touching” the body hedonically. The paradigm of modernity turns from linear progress, the striving for “the more, the better”, to the inverted u-shaped function of living “middle of intensity” which is most “pleasing” – a human-made cultural evolution turns “forward back” into a natural evolution as human digital culture by/for *Every BODY*.

Sasha Litvintseva (GB), Beny Wagner (DE/US)

Total Conversion



Total Conversion is a proposition, a question, a method all at once. Rather than answer the questions it asks, the 2-channel video installation sets in motion an open-ended method of being in the world. At the center of the film’s overlapping stories is the question of the human body and how it must constantly intake parts of the world in order to maintain its own life. Does the body

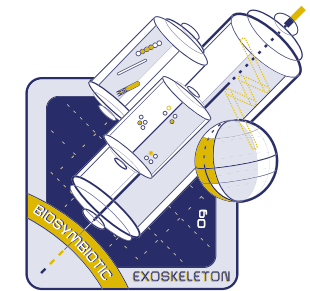
become what it eats? Or, as some nineteenth century European scientists believed, and turned into twentieth century common sense, does the body dissolve the world completely into its own material structure? The installation makes incorporation an issue of physiological, psychological, spiritual, literary and scientific dimensions. It is at once a matter of metamorphosis and decay, the eucharist and epigenetics, the philosophy of matter and imperial conquest, industrialization and annihilation.

This work was realized within the framework of the European Media Art Platform residency program at IMPAKT [Centre for Media Culture] with support of the Creative Europe Culture program of the European Union. Supported by Queen Mary University of London, University of Southampton, South-West and Wales Doctoral Training Partnership. / This project is funded and presented in the context of the EMAP project co-funded by the Creative Europe Programme of the European Union.

Dorotea Dolinšek (SI)

Biosymbiotic Exoskeleton

The artistic aim is to assemble a spacesuit as a complete life-support system. This wearable, heavily technologized capsule is the ultimate interiorization of humans and isolation from the environment. The symbiotic coexistence with the non-human personal microbiome makes our presence possible in space. This bodily interconnected vessel of organisms faces radical conditions which the somatic body shows more physiological plasticity than its microbiome. Relative sterility inside this wearable architecture of a spacesuit can lead to dysbiosis. The artistic investigation aims to enhance symbiotic collaboration between humans, technology and non-humans to let a personal biosymbiotic environment evolve, thus raising the prospect of interplanetary existence through coexistence. It can also benefit responses to ecological issues on planet Earth.



Curatorial guidance: Christl Baur, Martin Honzik, Jurij Krpan, Sandra Sajovic / Technical solutions: Dmitry Morozov / Expertise support: Anastasia Bragina, Kristijan Tkalec, Manuel Selg / Graphic design: Barbara Sušnik Construction: Andraž Tarman (Rompom) / Inflatables: Ursula Klein (Schulteswien) / Technical support: Simon Gmajner, Jure Sajovic / Special thanks: Gabriele Berg, Leo Schatzl, Randolph Helmstetter, Florian Voggender, Johannes Buchwieser, Miha Turšič, Gernot Grömer Co-produced by: Kersnikova Institute, Ars Electronica This project is funded and presented in the context of the EMAP project co-funded by the Creative Europe Programme of the European Union.

Noor Stenfert Kroese (NL), Amir Bastan (IR)

ZOE

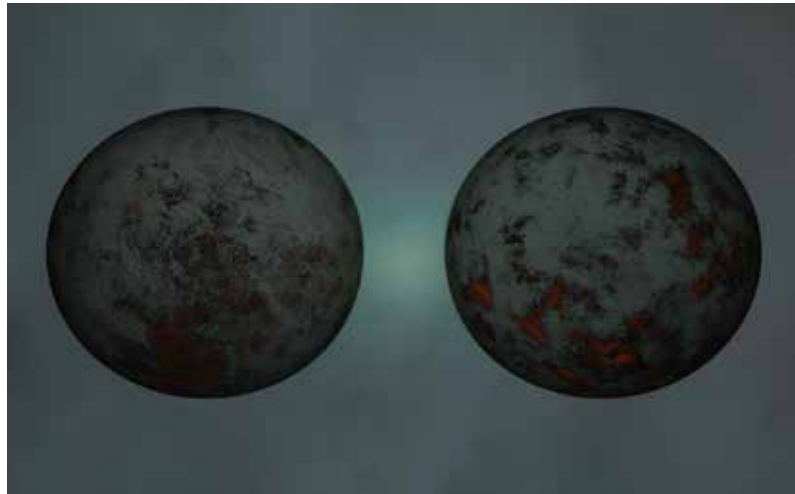
A temporary co-existence between reishi mushrooms and a custom-made robotic system



ZOE is a temporary co-existence between reishi mushrooms and a custom robotic system. With *ZOE*, Noor Stenfert Kroese and Amir Bastan explore the internal communication between a robotic system and reishi. Nature and technology create an ecosystem that cares for and affects each other through sensing technology, continuing research on interaction and unknown communication within fungal mycelia networks. Sensors collect data from the environment and the reishi-mycelium, which creates an internal

communication between the reishi and the robotic system. The behavior of the reishi defines the behavior of the robotic system, which in turn influences the shape of the light-sensitive reishi. Over time, the reishi-fruiting bodies are sculpted to reflect the shape of their ecosystem. The data creates a sensory experience while exploring this unknown communication. Daily collected data create data-carpetts of the reishi and their environment, giving rise to any correlation between them. These tactile data visualizations explore the outcome and the unknown communication of this temporary co-existence of different rhythms.

Noor Stenfert Kroese & Amir Bastan / Support: Produced by Productiehuis Theater Rotterdam with support from by Municipality of the City of Rotterdam, Fonds 21 EXTRA and Art Climate & Transition – EU Creative Europe project. / In co-production with Creative Robotics, KUKA CEE and Mushroom Research Center Austria. / This project is presented in the context of the More-than-Planet project co-funded by the Creative Europe Programme of the European Union.



© Andy Gracie

Andy Gracie (GB/ES)

Massive Binaries

Massive Binaries develops two overlapping narratives about the processes and phenomena of interactions within binary systems. The gravitational wave detection of merging neutron stars serves as one system, and contemporary polarized ideologies serve as the other. The bridging mechanism between them is the use of AI as a tool for enhancing information on the one hand, and as an eraser of truth and meaning on the other. Interactions between massive systems generate strange outcomes and new forms of information, while artificial intelligence plays a sort of schizophrenic role in data manipulation. While the gravitational waves from the neutron star merger rippled through spacetime over tens of millions of years, clashes between increasingly entrenched belief systems caused destabilizing

and coercive reinterpretations of value and truth. *Massive Binaries* teases out multiple possible narratives, folding and refolding fragility, complexity, loss, time, truth and risk into new forms and relationships.

AI assistance — Ali Nikrang (Ars Electronica Futurelab)

Unreal engine assistance — Friedrich Bachinger (Ars Electronica Futurelab)

Fabrication assistance — Benoit Duchesne

Voice over artists — Kira O'Reilly and Eric Goode

Studio assistance — Ali Yerdel

Audio mastering - Dan Barrett (Frozen Smoke)

This artwork was developed during the Randa Art|Science Residency, which is organized by the Institut Ramon Llull and hosted by Ars Electronica and the Barcelona Institute of Science and Technology (BIST), in collaboration with the new hub of Art, Science, and Technology from Barcelona, Hac Te, and the NewArtFoundation.

The RANDA Art|Science Residency is organized by the Institut Ramon Llull and hosted by Ars Electronica and the Barcelona Institute of Science and Technology (BIST), in collaboration with the new hub of Art, Science, and Technology from Barcelona, Hac Te, and the NewArtFoundation. The residency is named after the cave on Mallorca Island where medieval philosopher Ramon Llull had his illuminations that influenced his interdisciplinary thinking and became an inspiration for art, science and technology.

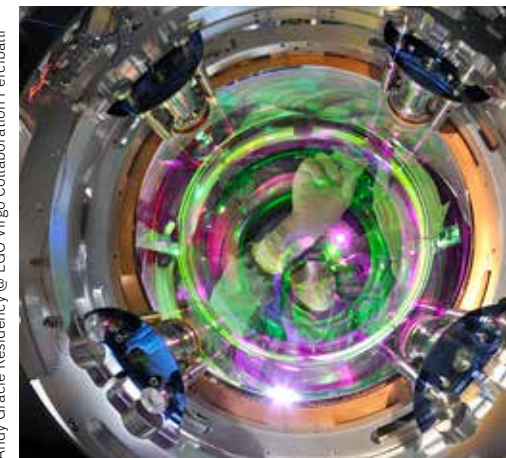
The winner of the first edition was Andy Gracie, whose project *Massive Binaries* explored the extraction of knowledge from processes of merging and collision related to gravitational waves and particle accelerators. Gracie has been hosted at the Institut de Física d'Altes Energies (IFAE), from BIST. The NewArtFoundation contributed to the production, preservation and exhibition of the artwork created during the residency.

Gravitational Waves unite experimental physicists, theoreticians and engineers at IFAE, as

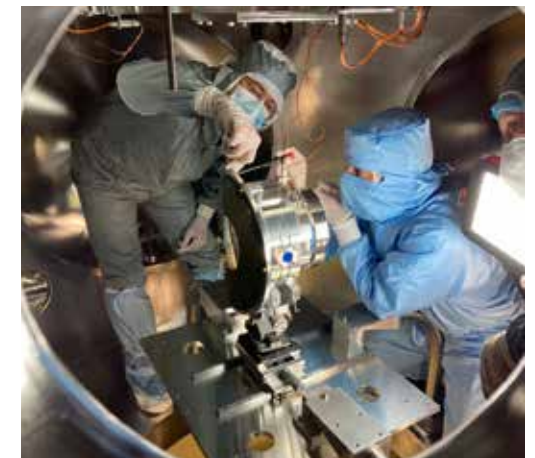
they embark on a shared mission: exploring this window to the universe newly opened in 2015. This cosmic symphony now resonates with all of humanity, inviting us to delve into fundamental inquiries. Andy Gracie's residency brought forth a unique set of inquiries and perspectives, fostering connections between the ordinary and the extraordinary aspects of this quest.

Massive Binaries develop parallel narratives about how imposing and influential forces interact and produce new phenomena through processes of negation and transformation. One side of the other unfolds a story about the gravitational wave event GW170817, a merger of two neutron stars 140 million light years distant and the signaling of multi-messenger astronomy.

The other side develops a debate between two AI entities, each with opposing political and ideological world views. As they strive to inhabit an unstable common ground, they also begin to produce exotic phenomena which just might hold new truths.



Andy Gracie Residency @ EGO Virgo Collaboration Perciballi



Andy Gracie Residency IFAE

ARS ELECTRONICA GARDENS

Connecting Visions: Exploring Truth and Technology through Art

As a platform for art, technology and society, Ars Electronica has consistently embraced bridge-building between disciplines and industries as a promising and indispensable endeavor rather than a burden. The *Ars Electronica Gardens Exhibition 2023* serves as a dynamic platform for cultural and scientific partners worldwide. Through their artistic projects, these partners contribute diverse perspectives, enriching the festival with insights into a wide range of themes and thoughts. The exhibition provides a fitting stage, gathering viewpoints from a global community to explore the interplay of truth, technology and our collective future, all aligned with this year's festival theme, "Who Owns the Truth?" Beyond the pursuit of knowledge, the *Ars Electronica Gardens Exhibition* celebrates cultural diversity and fosters meaningful dialogues that transcend geographical and cultural boundaries. The artistic projects presented here not only reflect technological advancements but also testify to how art and culture shape the development of technology, mirroring human society itself.

The *Gardens Exhibition* embodies collaboration and inclusivity, offering a space for diverse perspectives to coexist within the exhibition setting. Among the esteemed Garden Partners participating in the exhibition are FutureFantastic from Bangalore, the Virtual and Physical Media Integration Association of Taiwan from Formosa, Hexagram from Montreal, The Hyphen Hub and the XR Ensemble from New York, V2_Lab for Unstable Media from Rotterdam and Civic Creative Base Tokyo from Tokyo.

Each contributes captivating projects that challenge conventional wisdom and delve into the profound implications of truth ownership in the digital age. Visitors are invited to engage with thought-provoking works that challenge preconceptions and encourage critical reflections on the nature of truth, knowledge ownership and our shared future. The *Ars Electronica Gardens Exhibition 2023* stands as a testament to the power of creativity, innovation and global collaboration in shaping our understanding of truth in the digital age.

ARS ELECTRONICA GARDEN ANCONA / BOLOGNA

Sineglossa (IT) — Valerie Tameu (IT), Michele Cremaschi (IT)

Metabolo / Isotta

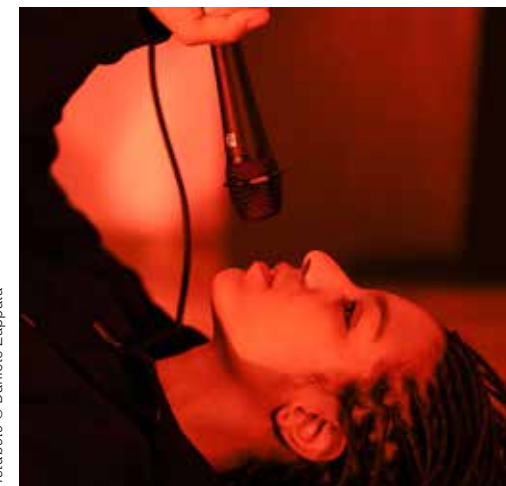
AI as a creative and problematic partner

Generative AI has changed the way content is produced. Most importantly, it invites us to rethink technology, to see it no longer as a mere tool, but as a true co-creation partner. This new relationship, however, is all yet to be investigated, in order to avoid the dystopian future ending ultimately in humanity's extinction, as alarmingly foreshadowed by the major global players. *Metabolo* creates an ecosystem of mutual influence between the human body, artificial machines, and marine ecosystems in a multi-species relationship of coexistence. With *Metabolo*, the artist raises the possibility of using technology to promote other forms of intelligence and culture, not just Western and anthropocentric ones. This is achieved through the selection of datasets created by certain fish species and the reinterpretation of indigenous practices, represented by the myth of Mami Wata, an aquatic deity worshipped in several West African countries, a hybrid and at the

same time alien being. *Isotta* (Intelligent System for Organic Tweeting and Thoughtful Artistry) is an artwork designed to act as a co-creative writing partner for Twitter users. It uses a mechanical vintage input device where users find themselves trapped in the need to meet tomorrow's requirements and today's uncertainty. The more hesitant the user, the snappier the algorithm, set on a course towards an unavoidable tweet publication by its strict deadline. The user is caught in a tension between the desire for genuine creation and the machine's ability to effectively approximate it.

Metabolo, by Valerie Tameu, is curated and produced by Sineglossa in collaboration with Play with Food, Free University of Bolzano, as part of Food Data Digestion, a project supported by Fondazione Compagnia di San Paolo within the fund call ART-WAVES.

Isotta, by Michele Cremaschi, is developed at Computer Science Faculty — Free University of Bolzano as part of his PhD research program.



Metabolo © Daniele Zappalà



Isotta © Michele Cremaschi

ARS ELECTRONICA GARDEN AOTEAROA

Human-Computer Interaction Lab, University of Otago (NZ)

Communicating through Space, Time and Culture

Communicating through Space, Time and Culture Garden Aotearoa explores how material cultures can be experienced and extended. Regenbrecht's and Duncan's *Turangawaewae with a Voxel World* challenges conceptions of communication and extends our understanding of our virtual self. *Turangawaewae with a Voxel World* invites participants to converse with artists Aotearoa New

Zealand-wide in a spatialized virtual experience of a traditional carved meeting house or *Whareniui*

Garden Aotearoa: Uwe Rieger, Marc Aurel Schnabel, Yinan Liu, Mizuho Nishioka and Tane Moleta
University of Otago, Human-Computer Interaction Lab:
Holger Regenbrecht, Stuart Duncan, Kerian Varaine and Laurie Lloyd-Jones

Holger Regenbrecht (NZ), Stuart Duncan (NZ)

Turangawaewae with a Voxel World

Haere mai – welcome to our virtual Māori meeting house. Encounter fascinating people from Aotearoa, New Zealand. Share with them what you believe is your home, your place to stand, your place in the world. What is real?

What is virtual? What is in-between and beyond? Immerse yourself in our sparse world of volumetric pixels and meet “voxelised” people from and at the other end of the world!

Expect low fidelity and high engagement!



© Holger Regenbrecht

ARS ELECTRONICA GARDEN ARAD

kinema ikon (RO)

kimæra

The kimæra project, composed of nine works made by twelve artists over the course of two years, aims to become a hybrid body, an interactive digital meta-installation where each work/module will be functional as a part and as a whole. The installation combines old media with digital (new) media, public city space with IoT (internet of things), augmented reality, 3D printing, AI-generated sound and image, mobile applications, NFT, etc. coordinated by a central computer, each of the nine modules having an

input and an output that enables the works to interact with each other.

Modules by: Alex Halka, gH, reVoltaire, Bogdanator, Floriama Căndeia, Marina Oprea, Ioana Marșic, Thea Lazar, Adrian Ganea, Flaviu Rogoian, Suzana Dan, Dragoș Dogioiu (RO)

AR application: DARV app

Software development: Florian Weinrich (AT)

Modules and main computer programming: Mihai Sava (RO)

Green screen application: Ilie Ciotir (RO)

Curator: Calin Man (RO)



© kinema ikon

ARS ELECTRONICA GARDEN BANGALORE

BeFantastic (IN)

FutureFantastic

An AI Art Curation for Climate Change

We find ourselves on this planet at a time defined by digital and technological advancements, and in an age where technological systems are shaping our societies and perceptions of the world, ourselves, and other living beings to an unprecedented extent. We are also in a time of environmental challenge and are facing the vast and varied impacts of climate change.

Complex machine learning models and the promise of artificial intelligence is advocated as a way out of these moments of crisis. They generate thought-provoking responses to a wide range of inputs that leave us awestruck. AI technologies are now in the hands of millions, taking the public imagination by storm.

While we can be enthused, amazed, scared, or even charmed by AI, we should remember that despite being an intelligent, autonomous, automated, immaterial and abstract technology,

it is very much dependent on and built out of planetary resources, and demands human labor. As much as we need to interrogate the bias and ethical issues behind these systems, and question its role and impact on our environments, can we as a conscious and creative community leverage this nascent and fast developing field for the good it can bear?

Through *FutureFantastic*, we ask: can AI and art come together to help us pay attention, extend concern and imagine a world where the mindful use of technology can bring about a radically open, environmentally equitable and optimistic future?

FutureFantastic as a festival in India was made possible by the generous contribution of its primary supporters, The British Council's India/UK Together Season of Culture, and Rohini & Nandan Nilekani Philanthropies

Anupam Mahajan (IN), Cameron Naylor (GB), Kanchan Joneja (IN), Kristina Pulejkova (GB)

Wood Wide Web

In *Wood wide web*, and the knowledge of a carefully curated dataset, endangered tree ecosystems from India and the UK were personified to tell stories of their erasure. Based on a collection of sounds, interviews, and visual data from the field shared by Farmers for Forests (India) and the Kew Gardens Library and Archive (London), audiences embody the tree, mourning the loss of their existence. AI models were trained to generate text and textures that made these elder giants come alive, inspiring care and compassion for our planet in an increasingly desensitized world and preserving the truth held within the old forests.



© Falana Films

Diane Edwards (GB) n Upasana Nattoji Roy (IN)

Give Me A Sign

Through the language of Indian dance mudras (hand gestures), *Give Me a Sign* explores the insecurities we feel in tackling challenging situations, particularly with our changing climate. Repurposing mudras that hold generations of meaning-making in the Indian culture, it invites a philosophical, analytical and speculative conversation around the narrative of the time and freewheeling change. The artwork aims to elucidate this bridge between humans, machines and cultures with an illusionary AI avatar called Shunya, through an audiovisual experience.



© Falana Films

Malavika PC (IN), Papia Chakraborty (IN), Asli Dinc (DE)

Where Do I Come From? Where Do I Go?

Vulnerably capturing their own waste to build a dataset, three artists bared themselves raw by confronting the relationship with their daily consumption patterns. *Where Do I Come From? Where Do I Go?* is a multi-format exhibit that urges us to contend with our personal truths; this is an artwork that offers a poignant reminder that our daily actions have real-world consequences. A digital waterfall of refuse built with the generated dataset changes as audiences pause to observe it, serving as a metaphorical stance to reset the clock, from the fast and dirty flow of life, time



© Falana Films

and the climate crisis hidden amidst everyday infrastructure.

Antariksha Studio (IN), Murthovic (IN), Thiruda (IN)

Elsewhere In India

Combining the thrill of a live performance with the excitement of a video game experience, *Elsewhere In India* was a wild ride through a world where cultural heritage was on the brink of extinction. With a blend of cyborgs and artists, ancient traditions and cutting-edge technology came together to create a musical adventure.



© Falana Films

Dara.network (IN)

Radbots

Radbots is a collection of conversational video-bots created by leading playwrights, artists and screenwriters from India, Sri Lanka, the UK and Germany. This project represents AI Art history

and leverages the bleeding edge of AI and ML present in year 2020 to create a Turing-test passing video chat experience that is crafted to represent and even amplify marginalized voices.

ARS ELECTRONICA GARDEN BARCELONA

ESPRONCEDA — Institute of Art and Culture (ES) — Daniel González Franco (CO),
Cathline Smoos (FR)

Love Vibes

A Journey of Dance, Unity and Connection

Love Vibes is a unique fusion of virtual reality and dance, presenting an unconventional installation/performance that explores the concept of subjective truth. Dubbed by the public as the ultimate ice-breaking tool for lonely souls, this immersive experience dynamically responds to live music, gradually engaging participants in a semi-choreographed group dance that fosters unity and camaraderie. Through synchronized visuals and spontaneously suggested dance movements, *Love Vibes* creates an unparalleled shared experience, enhancing the sense of connection between the participants.

Drawing inspiration from the captivating aesthetics of 1980s synthwave, *Love Vibes* transports participants into a visually stunning retro-futuristic

realm. Once inside the VR headset, vibrant neon lights cast a mesmerizing and psychedelic filter over reality, enveloping individuals in a pulsating atmosphere that harmonizes with the celebratory sounds of human expression.

At its core, *Love Vibes* delves into the depths of the present moment, consciousness and the quest for meaning. Challenging conventional truths, it evokes a sense of wonder and offers fresh perspectives. Instead of promoting an implicit physical separation, *Love Vibes* uses VR to embrace the beauty of genuine connections. By dismantling barriers and blurring boundaries between the real and the virtual, *Love Vibes* facilitates transformative experiences that inspire change and deepen connections.



© Espronceda

ARS ELECTRONICA GARDEN BLACKSBURG

Virginia Tech (US) — Thomas Tucker (US), Tohm Judson (US)

Swirling Senses

In the realm of virtual reality, we embark on a journey where sound and visuals attempt to obscure the boundaries between the virtual and the real. However, even within this illusion, we maintain a connection to the tangible world through subtle sensory cues. But what if we could augment those cues, allowing a more immersive experience? Can we also ensure inclusivity and extend the reach of traditional VR to accommodate users with disabilities?

Swirling Senses serves as a conduit bridging the digital and the physical worlds to create an immersive experience that aims to convince our minds of a "true" virtual reality. In contrast to conventional VR that isolates users, *Swirling Senses* takes an alternative approach, expanding the boundaries, striving to convince our minds of the experience. By integrating VR with theatrical sets, soundscapes, scents and live puppetry, the

environment manipulates our senses to foster a heightened sense of reality. As we venture through this landscape, the evolving sonic atmospheres and intertwining fragrances create an illusion that engulfs us, leaving us immersed in the experience. Mysterious objects and creatures, brought to life by puppeteers, respond to our physical touch and proximity, further strengthening our perception of an authentic reality. Together, *Swirling Senses* challenges our expectations of VR, coaxing our minds into embracing a world that transcends the confines of VR, bursting the boundaries of the imagination.

Thomas Tucker, Artistic and Creative Director
Tohm Judson, Sound Design and Interactive Engineer
Rodney Kimbangu, Puppeteer, Videographer and Interactives
Lucas Freeman, Unreal Programmer



© ThomasTucker

ARS ELECTRONICA GARDEN CHICAGO

Chicago Gamespace (US) — Thorne Brandt (US)

Reality.beta

The simulation hypothesis—that our lived experience is a computer simulation—has gained legitimacy among philosophical circles and the public imagination in recent years. The rapid improvement in the verisimilitude of video game worlds is often cited as part of a trajectory that will result in virtual space indistinguishable from the physical world as we know it. In a period of several decades, games have blossomed from rudimentary two-dimensional vector and pixel-based graphics to polygonal three-dimensional immersive worlds. But what if the architects of our simulated world have been improving the resolution and graphical quality over our history?

And what if you could peer back into earlier constructions of the real world? Chicago Gamespace is delighted to exhibit work by Chicago-based new media artist Thorne Brandt. Brandt has created a looking-glass style mobile photobooth titled *Reality.beta* that “proves” we are living in a computer simulation by sending users’ photos of themselves from earlier version of the simulation when it had worse graphics. After posing for a photo, visitors will view polygonal, crudely texture-mapped images of themselves from the beta version of reality. This project is organized by Chicago Gamespace director and curator Jonathan Kinkley in partnership with the artist.



© Chicago Gamespace

ARS ELECTRONICA GARDEN DUBAI

CIFRA PLUS PORTAL L.L.C. (AE)

Mise en Abyme

Reflection on Interconnectivity

What is the keyword for art in the digital age?

We believe it's interconnectivity. And while the whole concept of truth, authenticity, and ownership is being reshaped in the context of AI, it's crucial to find ways to benefit from this interconnectivity.

At CIFRA, we are creating a new immersive encyclopedia of media art, using *Mise en Abyme* as the core concept and approach. We are building the platform and weaving the context around the artworks just like a canvas: all roles, entities and practices are interconnected and integral to the overall picture.

Playlist is one of CIFRA's main creative tools. We allow everyone to create and curate their very own digital space: just with one click, the artworks can be composed in thematic playlists. At Ars Electronica Gardens, we are inviting everyone to create a playlist, mirror your inner world through engaging with digital art, and find like-minded creators — just the same way we do on our platform, but this time merging digital and physical spaces.

Community is the key. We strive to make art engaging and accessible for all by bringing artists, curators, art industry experts and art lovers together and building engaging narratives.

As artists are the heart of CIFRA, we invite them to join all our activities and special projects.

ART ME UP is a special project that guides a viewer through

one artwork, providing them with associative clues or “rhymes” in various areas, ranging from art history to culinary — all to enrich the experience and deepen the understanding.

CIFRA TV is a video format, providing an exclusive glimpse into the lives of fascinating heroes and institutions that shape the ever-evolving art scene.

Media Art Comics is an educational media magazine that delves into the evolution of media art through captivating visual storytelling.

CIFRA Immersive bridges digital art platform and metaverse features to provide viewers with multi-sensory experiences in immersive virtual worlds. All these parts are integral to CIFRA's immersive world of digital art.

CIFRA is a streaming, educational, and marketplace platform for new media art, based on a subscription model. Our mission is to connect artists, collectors, galleries, curators, institutions and viewers and simplify the way they interact with each other. We strive to make media art more accessible to the public eye in a world where borders are tightening and restrictions are increasing.



CIFRA — Mise en Abyme

ARS ELECTRONICA GARDEN ENSCHEDÉ

Tetem (NL) — Abner Preis (NL)

Underneath the Wings of a Butterfly

Step into a journey where a butterfly leads you through a contemporary mask of happiness. This shiny, golden facade hides a world grappling with decaying nature, drastic climate change and a boiling revolution. Our planet yearns for reinvention. Abner Preis, an artist and storyteller, fills this space with colorful, humorous and critical installations. The exhibition invites you to rediscover this world, recover seeds from the past and contribute to a hopeful future. Experience and interact with Abner's creations as he combines the tangible and the virtual.

Follow the augmented butterfly as it traverses a world shaped by human influence, ultimately taken over by technological butterflies, bees and low poly flowers. Immerse yourself in a near-tangible experience that brings to life urgent

issues such as climate change, the refugee crisis, economic recession and consumerism.

Amidst this AR world, discover *The Miracle Basket*, a Virtual Reality (VR) experience. You become the center of a story told by a grandfather, recounting a carefree past when harmony with nature prevailed. The arrival of a spaceship loaded with people and consumer goods disrupts the paradisaic village, transforming it into an apocalyptic world. Throughout this VR journey, unravel the power of decisions and your role as a human in shaping a hopeful future.

This exhibition is a co-production with Institute of Time, an interdisciplinary film and new media company based in Utrecht and Istanbul specializing in AR and VR productions. The VR installation *The Miracle Basket* was developed in collaboration with Valk Productions.



© Abner Preis

ARS ELECTRONICA GARDEN FANO

Umanesimo Artificiale (IT)

meat, metal and code

meat, metal and code, a term originally coined by Stelarc to identify the contemporary body, is the title of the exhibition paying homage to the pioneering artist and serving as a framework in which truth might be manifested: as an inevitable exchange between entities. Whether at a micro level between microbes as showcased in the project *Where do I end... and you begin?* by Marisa Satsia, or at a macro level between humans and artificial intelligence systems as in the projects *Divergences* and *Multi-Node Shell* by Luca Pagan, new forms of exchange generate new information

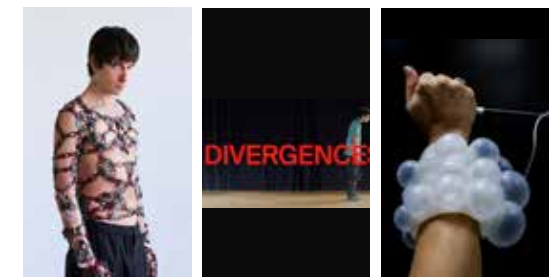
and thus new perspectives and interpretations of the truth. By embracing these exchanges, the exhibition aims to foster an environment where truth can be explored and understood in diverse and dynamic ways.

Umanesimo Artificiale creative director: Filippo Rosati; *Multi-Node Shell* artist lead: Luca Pagan; *Divergences* artists lead: Federica Sasso, Luca Pagan; *Where do I end... and you begin?* artist lead: Marisa Satsia, supported by the Cultural Services of the Deputy Ministry of Culture of Cyprus Republic as part of the program TRANSIT 2021-2025 for the support of mobility and display of the work of Cypriot artists abroad.

Luca Pagan (IT)

Multi-Node Shell

Multi-Node Shell utilizes biosensors to explore sound potential as a language through body movement perception. Neural networks process sensor data, serving a dual role: teaching the machine expressive body-sound associations and recognizing behavioral states affecting software and sound.



© Luca Pagan

© Federica Sasso,
Luca Pagan

© Marisa Satsia

Federica Sasso (IT), Luca Pagan (IT)

Divergences

Divergences is a collaborative research venture between two artists together with the Rehab Technologies Lab at the Italian Institute of Technology in Genova, Italy. The project explores the interaction between virtual and physical realms, delving into the perception of the human body in its surroundings.

Marisa Satsia (CY)

Where do I end... and you begin?

Can we combine our breaths to inflate a chamber and cultivate a soup of nurturing nutrients? The breaths of participants activate and transform the inflatable chamber, pushing them into the glass chamber where breath microbes form a biofilm, engaging in microbial battles. This exploration blurs the boundaries of ownership, inviting us to contemplate the interplay of breath, microbes and the shared space we inhabit.

ARS ELECTRONICA GARDEN

FORMOSA

Virtual and Physical Media Integration Association of Taiwan (TW)

Sensory Voyage

Taiwan's Metaverse Exploration

Embark on a “Sensory Voyage: Taiwan's Metaverse Exploration”, an immersive journey into the Taiwanese artistic universe, where technology and tradition harmonize. Here, virtual reality and artificial intelligence merge with art, carrying you through landscapes of memories, personal narratives, ecological narratives, and cultural reflections. This exhibition invites you to experience an array of interactive installations, animations, and digital narratives, each challenging your perception of reality and truth. Journey through this metaverse, from the whimsical and fantastical to the profound and introspective, as we unravel the rich tapestry of Taiwanese culture and identity through the transformative lens of technology and art.

“Sensory Voyage: Taiwan's Metaverse Exploration” is more than an exhibition; it's a deep-dive into the interplay of truth, Taiwanese identity, and digital innovation.

As you traverse this compelling metaverse, you'll be left not just with an unforgettable sensory experience, but with a resonating question: 'Who truly owns the truth?' By the end, Taiwan's unique fusion of tradition and technology will have imprinted itself in your consciousness, extending the voyage beyond the exhibition space.

Curator: Hsin-Chien Huang Producer: Hsiao-Yue Tsao
 Technical Director: Wei-Chieh Chiu Programming: Jiun-Yan You Opening Ceremony Director: Billy Chang
 Partners: Ministry of Culture, Department of Cultural Affairs, Taipei City Government, National Science and Technology Council, Taiwan Creative Content Agency, Taiwan Public Television Service, Hakka Public Communication Foundation, Hakka Affairs Council, Kaohsiung Film Archive, National Taiwan Normal University, National Taipei University of Technology, Virtual and Physical Media Integration Association of Taiwan, Metaverse Alliance, NVIDIA, Meta, Oready Innovation LAB, Peppercorns Interactive Media Art Inc., Mountain Art Foundation, Compal Project Manager: Yi-Ning Lo

Hsin-Chien Huang (TW)

Samsara

It is the near future, the Earth's environment has been destroyed by human beings. We have to abandon it and find a new home in space. After hundred years of space travel, we have re-engineered our DNA and artificially evolved into a new form. Many years go by before we suddenly realize that we didn't reach a new world, but returned to Earth in another time as a different life form. Several attempts are made to leave Earth which leads back to it. We realize that our past, present and future are fused together.

Hsin-Chien Huang (TW)

Bodyless

The story is from director's childhood memories which depicts the reduction of humanity by military government during martial law in Taiwan, the colonial culture as well as the digital era, creating a story beyond reality. A political prisoner who has become a ghost has returned to the living world to visit his family, but has found out that the house is empty. An ominous force damages the spiritual world, reducing human forms and memory to simple geometrical shapes.

Che-yu Hsu (TW), Wan-Yin Chen (TW)

Gray Room

I had a childhood memory of waking up in the middle of sleep and found myself sitting outside the house. It felt like everything was displaced. My grandmother was woken up by my crying and came out to take me home. In Gray Room, I use the 3D scan model to visualize my late grandmother's house as a method to explore the relationship between architectural space and body, and to examine my perception of memory and death from a material perspective.

De-Chuen Wu (TW)

Mirror

Three tin toys keep changing their costumes on the stage and performing in turns. However, they find themselves trapped in a dreamlike state resembling a mirror image, unable to extricate themselves.

Chih-Yen Hsu (TW)

Where is Noddy

I hide, because I want to be found or to be forgotten.

Kids are playing hide and seek. They conceal themselves all around the apartment: under the table, behind the curtain, behind the fridge, in the closet. All the other kids are found one by one and discuss the next game excitingly. The last little boy Noddy still stays in the closet peeking at them.

Wen-Chieh Chang (TW)

Wonder of Life

What is life?

It's the veins on a lotus leaf,

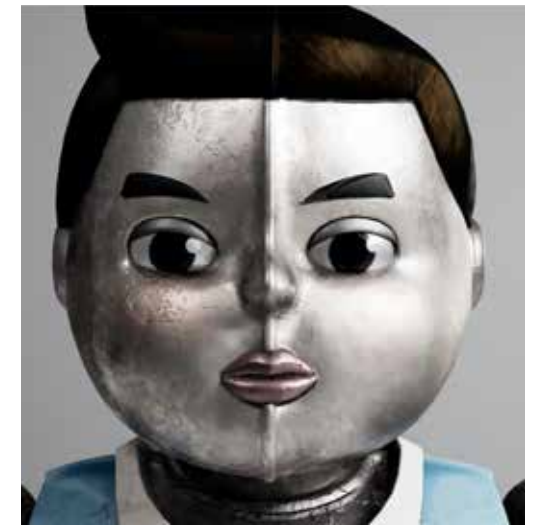
It's the transient resting and then the fly-away of a dragonfly.

It's a faint fragrance dissipating in the air,

It's ripples waving through the water surface and disappearing...

Life...

lies within every little wonder & mystery of nature in the lotus pond at dawn.



© Wu De Chuen

Hsiao-Yue Tsao (TW)

Blue Tears

This work weaves an old sea tale into a story centered around the unique bio-luminescence in the sea around the island of Matzu, known as “Blue Tears”. The naïve hero's desire to give his heroine a good life leads him down a path of greed and ultimately to his demise in a shipwreck. *Blue Tears*, a symbol of an alien species, serves as a haunting reminder of the impact of global warming. The love between the two main characters leads them down divergent paths, creating an eternal paradox of materials and souls.

Fish Wang (TW)

Red Tail

At a train station floating in the cloud, a mysterious red tail catches the boy's attention. Chasing the red tail, the boy travels through countless magical places, runs into bizarre creatures, and finally he meets a man who seems to know his secrets more than he does. The red tail reminds the boy of his own memory and sadness. So what are the secrets hidden behind it, and where will they lead him next?

Wen-Chieh Chang (TW)

Childhood Revisited

There is a darkroom flashing with dim red lights. A person carefully puts the negatives into the cassette with both hands, focusing on the paper below with a magnifier moving up and down in flaring lights. An image emerges on the paper. The sound of splashing water and laughter brings the person back to the 1940s via this photo to look at the big world through the lens of childhood. A person returns to childhood with dreams and imagination and enters a timeline where the restraints of time and space do not exist.

Hsin-Chien Huang (TW), Wen-Chieh Chang (TW)

Kuo Hsueh-Hu: The Reminiscence of Taiwan in His Heart

This work is inspired by *Kuo Hsueh-Hu: The Reminiscence of Taiwan in His Heart*, written by Sunny Kuo, the second son of Kuo Hsueh-Hu. These three selected paintings of Kuo are a demonstration of the painter's affections for his motherland despite living abroad. The spirit of the paintings, themes and his home are closely linked, an idea that will surely move the audience, too.

Wei-Tseng Lai (TW), Mu-Fan Hsu (TW), Yu-Yu Chou (TW), Chun-Yi Wei (TW), Bo-Yu Chen (TW)

OverShadowed: Dependance

Under the Lights

OverShadowed: Dependence is a VR escaping game, in which players find a way to switch between self and shadow to figure out the link between true items and hallucinations. By making use of the features of light and shadow, players complete each chapter.

The main character is a teenager who suffers from trauma and illusions. He wakes up trapped in a mental hospital: the ward exudes a familiar atmosphere.



© Wen-Chieh Chang

Claudia Wang (TW)

Metaverse Fashion: Civilisation of Love

From Claudia Wang's fashion brand 23 Autumn/Winter collection, a series inspired by Y2K nostalgia has been launched. This seeks to cultivate the mischievous and open-minded spirit we experienced in our childhood through vibrant designs and bright colors. With the theme of *Civilization of Love*, the collection focuses on body and gender diversity issues, showcasing virtual clothing through the use of AI technology to enhance the inclusivity and artistic creativity of fashion.

Yen-Jung Chang (TW), Tzren-Ru Chou (TW), Yuting Hsueh (TW), Hsin-Chien Huang (TW), Jao-Hsun Tseng (TW), Hsi-Chun Wang (TW)

ASOMROF

This work draws inspiration from Hakka mythology and culture. It presents hypotheses regarding the future globalization of the Earth, promotes the vision of achieving prosperity among diverse ethnic groups and carries on the Hakka spirit. To enhance the experience, the work integrates various technologies such as AR, VR, emotion recognition, blockchain technology, motion capture and dance. By utilizing these technologies, it aims to create a unique and immersive experience for its audience.



Sophie's Secret © Yen-Jung Chang

Hsin-Chien Huang (TW), Peppercorns Interactive Media Art Inc. (TW)

Chinese AI Impressionism: Dynamic and Serene Landscapes

By combining five Chinese landscape paintings of historical significance and utilizing machine learning techniques, the artists enable the computer to learn and generate 15,000 images that fuse elements from the five original artworks. The resulting artwork is presented through projection, featuring a constantly evolving contemporary ink landscape generated by AI.

Jade Lien (TW), Jett Lien (TW)

A Meditation on Noise and Signals

In today's information age, how to extract desired information and filter out unnecessary signals from the noise field in this world is an art form we must master to find inner peace. In the visual component of this work, a series of clear images are turned into noise and transformed into an abstract landscape while in the audio component, noise is in turn converted into music. By juxtaposing these methods, the boundary between noise and signals is reinterpreted, creating a meditative audio-visual experience.

Che-Kuang Chuang (TW)

Subsistence Machines in Meta World

Subsistence Machines in Metaworld is an artist's collection of imaginative machines, addressing needs in the metaverse. The artist compares real and virtual worlds, using media symbols to create these machines for food, clothing, appearance, residence and transportation in metaverse. Through animations and drawings, Chuang prophesizes a future in the metaverse. These NFTs endure in Web 3.0, inspiring future generations.

Yen-Jung Chang (TW)

Sophie's Secret

Sophie comes across a worm on the street, and the worm penetrates her chest and plunges inside her body. The worm in her body becomes her secret. She first tries to get rid of it, but she soon discovers that her parents, too, have worms inside them. She eventually finds a method to deal with this secret.

Yuting Hsueh (TW)

Asomrof in Bacta Tank

Characters from *Asomrof*, a sci-fi narrative in new media art about Hakka space migration. *Asomrof in Bacta Tank* displays the Hakka papercutting style CG characters in an aquarium-like device that allows the audience to experience holographic 3D with the naked eye.

Hsiao-Yue Tsao (TW)

Beimen VR

West District in Taipei City houses historical sites whose former glory has faded. Taipei West Gateway project employs AR and VR technologies to offer a nostalgic tour of Japanese colonial-era Taipei. VR exhibit showcases landmarks while providing a 360° view. AR exhibit displays a 3D map for visitors to explore. These works aim to deepen an appreciation for Taiwan's history.

ARS ELECTRONICA GARDEN HALLEIN

Escape Fake 2.0 (AT)

Museum of Fake

Museums are special places. They are worlds within worlds, mirroring but also contradicting what lies outside of them. By exhibiting pieces of history, museums often pull together distant pasts, alternative presents and futures. In doing so, they make us question which moments in history were definitive tipping points.

In the augmented reality game *Escape Fake*, we play with these questions by creating the character Hannah, a quantum reality hacker, who tries to fix a broken future by preventing fake news from escalating at certain moments in time. But while Hannah has an overview of time, she cannot access certain points in time. She needs the players to work within their present, to trace down where the butterfly effect started. Indeed, as the notion of truth becomes more ambiguous in the age of AI, our most powerful strategy is to empower citizens to exercise their agency.

The *Museum of Fake* is placed in Hannah's dystopian future. It is a dialogue between the interactive augmented reality experience and the artistic works which tackle the topic of disinformation from diverse and, sometimes, contradictory angles. In the *Museum of Fake*, visitors can look back at the year 2023, and reflect on the significance of historic events, technological change, or empathic communication for the trajectory of journalism and disinformation. The rest can only be up to them.

Project lead: Irina Paraschivoiu / Curation: Irina Paraschivoiu, Thomas Layer-Wagner / Exhibition design: Susanna Vogel, Lukas Rettenbacher / Produced by Polycular / Partners: Expert Forum, La Fabbrica, Pro Progressione / *Museum of Fake* is part of the project *Escape Fake 2.0* and is co-funded by the European Union through the Creative Europe Programme and by the European Media and Information Fund managed by the Calouste Gulbenkian Foundation.



© Polycular

ARS ELECTRONICA GARDEN HAMBURG

Climate Service Center Germany (GERICS) (DE) — Hen/i (US/DE), Do Mayer (DE)

Disco Planet: Letheia

Which truth are we referring to anyway? Truth produced by our individual bodily experience or truth produced by our societal institutional arrangements and collective life-worlds?

Disco Planet: Letheia starts the journey from a place, framed by a deep-time past and modeled and funded future-pathways, called "Landscape of Now". From this place Do wants to start by exploring our everyday practices and habits (bed, washing, way to school/work) and then scale up to bigger institutions that produce truths professionally: science, media, finance and art institutions. This mapping of institutions places them in an environment of institutions that situates them in the context of a wider economy and in this way explores their functional role in society. Taking an elevator to a science satellite, we can

observe these institutions from a top-down place and correlate this with knowledge we have about our earth-system and future pathways.

Hen/i starts from our inner experience and thought. Starting with a meditative talk and practice to open our mind to our own senses, we will progress to a social art practice to confront ourselves with our inner conflicts and "stuck" states in a live performance. Coming out of this real-life practice, we will meet/merge in a shared "steam room" which is a simulated/real-life place of transformation, to relax with our shared perspectives and start the arduous work of changing. (Letheia, a mixture of Alétheia [truth] and Léthē [forgetting])

Thanks to the HIDA Fellowship, Akademie für Theater und Digitalität, Dortmund und GERICS Hamburg



© Daniela Stülwold

ARS ELECTRONICA GARDEN LINZ

Creative Robotics, University of Arts Linz (AT)

Fashion and Robotics

Exploring the future of individualized apparel (re)manufacturing

There is a great need for increasing sustainability in the fashion industry: *Fashion and Robotics* (FAR) investigates ways to keep apparel in the cycle longer through collaborative remanufacturing. To do so, FAR implements a designer-centric framework based on visual programming, combining parametric design with collaborative robotics. The prototype explores a process that applies nano-fibers out of recycled polymers through high-voltage on re-manufacturable clothing.

Creative Robotics, University of Arts Linz (AT): Johannes Braumann, Amir Bastan, Emanuel Gollob / Fashion & Technology, University of Arts Linz (AT): Christiane Luible-Bär / In collaboration with: TCKT - Transfercenter für Kunststofftechnik GmbH (AT): Christoph Burgstaller, Harald Ladner / Software: KUKA|prc, vvvv gamma, iiQKA Hardware: KUKA iisy, KUKA iiwa, electrospinning tool by NanoWings / Supported by KUKA Roboter CEE / FAR — Fashion and Robotics is funded by the FWF PEEK Programme for Arts-based Research and realized by the University of Arts Linz in cooperation with the Johannes Kepler University Linz.



© Fashion and Robotics

ARS ELECTRONICA GARDEN JAKARTA

Media Art Globale (MAG) organized by Connected Art Platform (CAP) (ID)

TEMPEH UNIVERSE

Indonesia food heritage & vegan's life

Previously in Ars Electronica, we have usually highlighted Indonesia local foods, such as tea, spices, sambal, jamu. This time we would like to show *TEMPEH UNIVERSE*. Indonesia has experienced our heritage foods being claimed by another country. The question is who has “the ownership” of traditional and heritage foods like tempeh? Do tempeh have DNA like humans to prove their inheritance too? Indonesia has made tempeh and used it as their daily food in Central Java since 1600. It is made from fermented soybeans, by natural culturing and controlled fermentation. Various ingredients of tempeh have medicinal value with an impressive nutritional content. Since the pandemic, the movement of eating healthy foods has become a lifestyle, for which reason tempeh is well known in Europe, too. Together with our collaborators, MAG garden will reveal the secret of tempeh and at the same time put the tempeh in the Indonesian DNA. Notanlab will respond with an installation

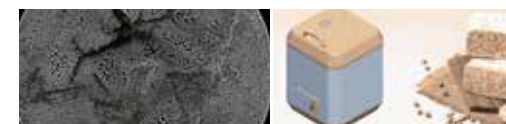
which exploits a series of algorithms trying to imitate the emerging and self-organized structures present in some biological systems. Some types of fungi create extremely complex structures based on elementary communication processes. Binus University and partners have produced an innovation which offers a solution to tempeh production. They will make it more hygienic and efficient through portable machines which are called I-TempeH. MAG is eager to explore their experiments combined with imagination in the *TEMPEH UNIVERSE* through AI, with multisensory experiences.

Curator & Artistic Director: Mona Liem (ID)
Connected Art Platform (CAP), Media Art Globale (MAG) Festival, Binus Global. Collaboration research: Bina Nusantara University, Krida Wacana Christian University, Bina Nusantara High School. Notanlab, Mona Liem (CAP). PIC of Partnership. Dr Rinda Hedwig, Dr Diah Wihardini. CAP team (Bintang Gemilang, Sean Lee, Adam I. Hawari, Jessalynne T.)

Notanlab (ID)

Two Sides

Good and bad have permeated all cores of the living universe. As in the human body, the cells attack each other. Perhaps, from the observer's perspective, this is the rhythm of the universe to keep life in harmony. Tempeh's substance resembles and gives answers to the philosophical struggle of good and bad.



Two Sides © Notanlab

Tempeh Maker © AIH for Binus Lab

Rinda Hedwig (ID), Marcel Saputra (ID), Trias Septyoari Putranto (ID), Kenneth William Santoso (ID), Davrell Mylka Jowkins (ID), Savita Sondhi (ID)

Indonesian Tempeh Maschine (I-TempeH)

Indonesian Vegan Food Heritage

Tempeh is an Indonesian word that refers to a variety of fermented soybeans bound together into compact cakes by a dense mycelium of fragrant white *Rhizopus* mold. *I-TempeH* is an automated, hygienic tempeh production machine. It produces tempeh in less than 48 hours with energy-efficient consumption.

ARS ELECTRONICA GARDEN MILAN

MEET Digital Culture Center (IT)

AI-generated storytelling meets Mauro Martino

Generative artificial intelligence allows artists to create narratives that escape the confines of traditional structures, giving rise to a new kind of storytelling in which the creative process is characterized by continuous transformation. One of the areas in which AI is having a significant impact is the generation of video from text, allowing artists to create unprecedented audiovisual works based on the power of language. This approach is perfectly reflected in two works of Mauro Martino that are presented during the Ars Electronica Festival 2023: *Mapping the NFTs Revolution*: using advanced deep-learning and data-viz techniques, the artist guides the audience through 5 years of evolution in the NFTs aesthetics and market, documenting the qualitative dimension of an intangible revolution. Based on an impressive amount of data — 5 million NFTs, tens of millions of market trades, hundreds of blockchains — *Mapping the*

NFT revolution is also one of the first examples of digital art to use the text-to-video approach. The preview of *Milan, Factory of the Future*, where the text-to-video approach is further developed around “the words of the city” enhancing the incessant flow of creativity, technique and imagination that is at the heart of Milan's identity. The result is a unique narrative experience that challenges conventions and audience expectations. This work is part of the “Nice to meet you” project by MEET and SEA Aeroporti Milano.

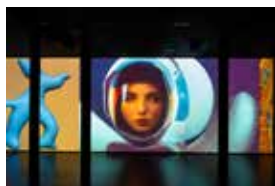
Garden Curator: Maria Grazia Mattei, Founder and President MEET; Artist: Mauro Martino, Founder of the Visual AI Lab — IBM Research, Partner: SEA Aeroporti Milano
Milan, Factory of the Future is presented in collaboration with SEA Aeroporti Milano, as part of *Nice to meet you*, a SEA project curated by the MEET Center that has promoted digital art since 2019. In collaboration with YES Milano. Project supported by the Italian Council (2023), Directorate General for Contemporary Creativity, Italian Ministry of Culture

Mauro Martino (IT)

Mapping the NFTs revolution

Based on an impressive amount of data collected and analyzed over more than 3 years of scientific research, *Mapping the NFTs revolution* is not only the most extensive exploration of the NFT phenomenon to date, but also an artistic reflection on its potential and on the space-time continuum that makes it possible (the metaverse).

The result is an exciting data-film suspended between reality and imagination, one of the first examples of digital art to use the text-to-idea approach.



© Luca Marenghi

108

Mauro Martino (IT)

Milan, Factory of the Future

The work is based on the use of new artificial intelligence systems to create a “literary” audiovisual work that originates from texts of various genres, selected and inserted into the creative process with machine learning and AI systems. The audiovisual images thus originate from cultural, artistic pages, narrated by various personalities from historical and contemporary culture who mention and/or describe Milan. The work is also enriched by the musical contribution of composer Philip Abussi.



© Mauro Martino

ARS ELECTRONICA GARDEN MONTREAL

Hexagram (CA)

imprints

Hexagram Network Research-Creation

Hexagram Network's exhibition at the Ars Electronica Festival brings together recent research-creation works by members of the Network, mainly student members. Its theme *imprints* emerge from the artistic, interdisciplinary and collaborative approaches promoted by Hexagram.

The works address current issues related to notions of environment, place, territory and identity. They are the result of research and creation processes involving artists, researchers and experts from different fields of expertise. The artists' interdisciplinary co-creation approaches are carried out through residencies in scientific environments, as well as through the exploration of scientific techniques, technologies and imagery from fields such as Earth and Atmospheric

Sciences, Biology, Geology and Geophysics. For these artist-researchers, the deployment of technologies traditionally developed for and used by scientific disciplines is here placed at the service of artistic creation, critical commentary and contemporary imaginaries around science and technology.

Max Boutin — Project curation and production manager.
Jason Pomrenski — Hexagram Network Technical Coordinator
Brice Ammar-Khodja — Project Technical Assistant
Mathieu DeBlois — Project Technical Assistant
Manuelle Freire — Hexagram Network General Coordinator
Gaëlle Scali — Hexagram Network Activity Production Coordinator
Agustina Isidori — Photo documentation
Anatole Michaud — Hexagram Network Communication Manager

Olivia Mc Gilchrist (FR)

VIRTUAL ISLANDS

Inspired by the artist's dual Caribbean and European heritage, *Virtual ISLANDS* explores the relationship between the experience of virtual immersion and the physicality of being submerged. This multimedia installation includes a 6 degrees of freedom (DOF) VR experience, inviting a reading of “virtual reality” practice as aesthetic / artistic creation. It foregrounds submersion alongside immersion to highlight the relation between water and identity.

Mathieu DeBlois (CA)

The Architecture of Memories

Memories, encompassing terrains, spaces, people and emotions, are reinterpreted through 3D scanning to create a Unity-based archive. Inspired by Barthes' *Atopia* (1995) and Debord's *Drift* (1956), this VR project employs point cloud images, ambisonic sounds, and melodies to craft a 360° immersive experience within this mnemonic landscape. Project developed in collaboration with composer Philippe Racz and programmer Romain Salha.

109

Juliette Lusven (FR)

Transatlantic Visions

This installation explores our relationship to the world and technology through the undersea infrastructure of the Internet, evoked as the "backbone" of our interconnectivity (Starosielski). Like an informational ecosystem, Transatlantic Visions examines this phenomenon of invisibility and circulation from the Atlantic Ocean and the web. In collaboration with Max Boutin, Marc-André Cossette and Geotop.

Guillaume Pascale (FR), Jean Dubois (CA)

The Transhumants 2

Displayed on five modified miniature screens, this installation examines the enigmatic movements of a wandering community in a desert environment. Inspired by the prospective nature of Harun Farocki's operative images and the prescient dimension of Mary Shelley's novel *The Last Man* (1826), the scene suggests an oscillating impression between the compulsive surveillance of the territory and a melancholic view of a mineral landscape.

Max Boutin (FR)

Texturologie vibratoire

A skateboarder is like the diamond of a record player, rolling on the textured ground of the city. The urban space is like an immense vinyl record, only asking to be skated, to make a sensitive experience of slide and friction, an experience of urban *dérive*. *Texturologie vibratoire* is a haptic installation proposing to see, hear and feel this materiality.



Transatlantic Visions © Juliette Lusven

Nora Gibson (US)

the dream

the dream transcends boundaries of body and mind, facilitating calm through a bio-reactive feedback system. This single channel video installation for projected generative visuals, lighting and sound score, celebrates the state of the mind and body at rest.

Brice Ammar-Khodja (FR)

Symphony of the Stones

The Archive

Symphony of the Stones is an installation that examines the correlation between the abnormally high presence of heavy metals and magnetic residues in contaminated soils. The project originated from a site-specific study and a series of interventions in a former marshaling yard in Montreal. The installation explores the interconnections between urban infrastructures, pollutants, soils and living organisms by activating mineral contaminants and various extractive residues. Software Development Support: Jean-Michaël Celerier.

Victor Drouin-Trempe (CA), Jean-Philippe Côté (CA)

Empreintes sonores

Empreintes sonores is an interactive installation that looks at the traces we leave in the digital space. The installation uses a hacked voice-activated assistant to record continuously. When vocalizations are detected, they materialize visually. It then becomes possible to navigate the frozen sound by moving in space.

Marie-Eve Morissette (CA)

ON/CONTACT

This interactive installation in the form of haptic column that the interactor squeezes against their body, is based on an interaction paradigm that puts the concept of encountering above that of controlling. The tactile exploration of the column invites self-expression while eliciting a sense of comfort.

Timothy Thomasson (CA)

Slow Track

With the intention of questioning the structural and aesthetic nature of the virtual image, *Slow Track* forgoes the excess, speed, spectacle, surrealism, sci-fi, and fantasy commonly associated with computer-generated imagery. The work deploys a 'perceptually photorealistic', slow, gentle, and possibly mundane image which is wary of the software that produces it. Rather than a computer-generated image that seduces us with spectacle, this is one which asks for patience.

Guillaume Pascale (FR)

Partitions itératives

Partitions itératives is a series of performances consisting of composing music with data streams, generally from outer space objects. These performances offer a sensitive re-reading of scientific data, replaying at the speed of sound a set of data traveling astronomical distances.

Marc-André Cossette (CA), Alexandre Saunier (FR) — ALMA

Fragments: The Shape of Things

Fragments is an audiovisual performance that explores how automated data processing systems aestheticize human relations and global conflicts. Audiovisual fragments extracted from the news are transformed with electronic instruments, video game engines, photogrammetry and sophisticated AI and A-Life techniques. News images are mystified through technological processes, recalling the digital mediatization that separates our bodies and the realities of others.



Fragments-The shape of Things. © ALMA

Marc-André Cossette (CA), Alexandre Saunier (FR), Paloma Leyton (AR)-ALMA and Paloma Leyton

Groundless

Groundless is a video creation that displays weightless bodies moving and morphing to the rhythm of an acoustic music soundtrack. The work brings together an aerial circus artist and two musicians that make use of motion capture, video game engines and spiking neural networks (SNN) to explore the expressive qualities of virtual bodies in suspension. Over time, the interactions between virtual bodies, music, and SNN generate an emerging sense of temporal organizations.

Sandra Volny (FR)

Where does sound go, where does it come from

While in Coliumo Bay, Chile, investigating different modes of orientation by local fishermen, sound artist Sandra Volny discovered that they were able to navigate the treacherous, dark and foggy conditions of the Pacific coast by relying on sound. This 8-minutes auditory portrait flips back and forth between seeing/hearing and listening/visualizing, relying on the white noise of the ocean as an auditory space for narratives of individual and collective imagination to emerge.

Alice Jarry (CA), Marie-Pier Boucher (CA), Guillaume Pascale (FR)

Space Junkies

Outer space and the city: Cohabitation strategies with interplanetary infrastructures

Around 230,036,500 pieces of debris orbit in space. Meanwhile, the 174 international exhibitors of the 2022 International Astronautical Congress (Paris) distributed thousands of stickers, tote bags, stress balls, car fresheners, space food and key chains. Attending these paralleling hoarding processes, *Space Junkies* examines how space debris and space goodies can "forensically decode" (Schuppli, 2020) the capital and material accumulation of space exploration and its socio-environmental impacts.

ARS ELECTRONICA GARDEN

MONTREAL

MUTEK (CA)

Immersive Collection

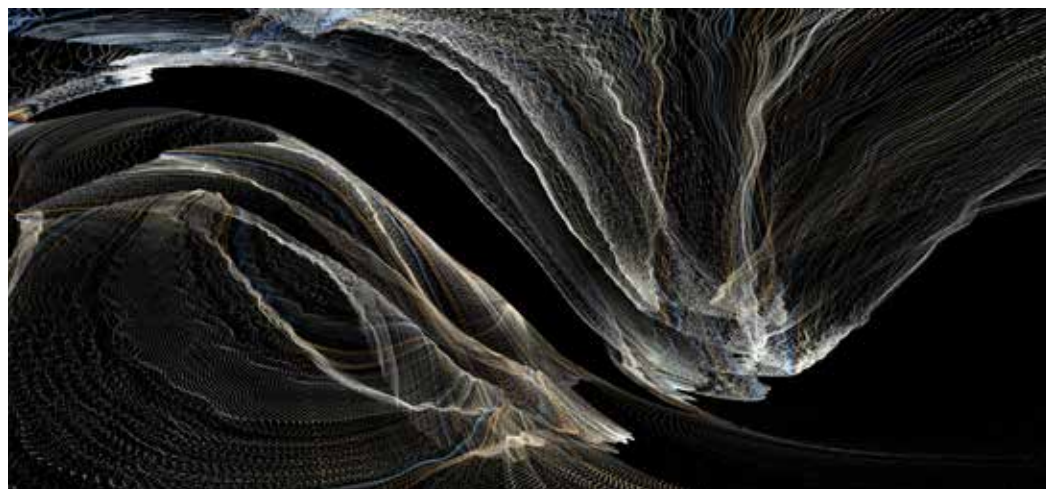
Presented by MUTEK

Over the past 23 years, MUTEK has gained worldwide recognition as a festival presenting cutting-edge audiovisual performances — works that innovate to create a new language of sound and images. MUTEK's latest project, the *Immersive Collection*, opens up a new chapter for the organization, marking its first steps as an extended reality (XR) content producer.

Five artists have stepped up to the challenge of reinventing shows previously performed at the festival into an XR artwork. Each artist was selected due to the acclaim of their original performance, their complementary sources of expertise and their willingness to experiment. The result is an eclectic yet coherent set of three projects ranging from contemplative to surreal to dynamic: Entanglement XR by France Jobin & Markus Heckmann, House of Moiré by Chloe Alexandra Thompson & Matthew Edwards and Immortelle by Line Katcho.

Neither documentary nor classic fiction, concert nor game, these works defy traditional genres, defining a new category of audiovisual XR experiences that are deployed from original concepts, non-traditional narratives and advanced digital creation tools. They combine abstract and figurative interpretations, spatialized sound design, radiant visuals and the playful and persevering mindsets of artists venturing into new grounds. Published on several online content stores such as Steam, the *Immersive Collection* is part of Astrea's catalog, the largest international distributor of immersive productions.

MUTEK Immersive Collection / Producer: Katharina Meissner / Production Manager: Lola Baraldi / Curator: Alain Mongeau / Visual Identity: Tamara Manny D'Astous / Communications: Lola Baraldi, Thomas Giboudeaux, Grégoire Chevron / MUTEK acknowledges the support of the Canada Council for the Arts.



© Markus Heckmann, France Jobin

France Jobin (CA), Markus Heckmann (CA/DE)

Entanglement XR MUTEK Immersive Collection

Entanglement distills quantum physics into a swooping sensorial experience. It illustrates the concept of entanglement, an uncanny scientific phenomenon defying explanation. The piece oscillates between four theories: the fluidity of time, multiverse, Copenhagen interpretation and decoherence. These complex notions are filtered into audiovisual radiant tableaus guided by science, technology and the sensitivity needed to illustrate what cannot be visualized.



© Markus Heckmann, France Jobin

Chloe Alexandra Thompson (CA/US),
Matthew Edwards (US)

House of Moiré MUTEK Immersive Collection

House of Moiré invites users into a void-like realm of transforming audiovisual architecture. In self-directed exploration, the viewer advances through rooms dressed in optical patterns, audio-visual programming, and minimalist spatial design. The result is an odd and inquisitive on-rails trip in the latest iterations of Moiré, a series of A/V works employing custom audio software, depth cameras, motion capture and interactive design to investigate psychoacoustics and sensory illusion.



© Chloe Alexandra Thompson, Matthew Edwards

Line Katcho (CA)

Immortelle MUTEK Immersive Collection

Immortelle is an atmospheric and figurative work illustrating the flights and falls of psychological endurance. Featuring a cathartic flux of sonic and visual fragments, this unpredictable piece opens a door onto how a mind in internal turmoil redefines the outside world. *Immortelle* evokes how visceral perceptions of our environment mirror our own transformations, showing both the softer and fiery sides of a fighter spirit.



© Line Katcho

ARS ELECTRONICA GARDEN MONTREAL

Xn Québec (CA)

Unleash the creative power of Quebec A selection of XR and immersive works

Join the captivating realm of Xn Québec's Deep Space program, in collaboration with the Ars Electronica Festival. Prepare to be immersed in a mesmerizing blend of XR/immersive experiences and an awe-inspiring art performance. Next, lose yourself in the atmospheric and figurative masterpiece, *Immortelle*, an original concept by Line Katcho. Delve into a sensorial journey where time and existence intertwine, evoking emotions that resonate deep within. Experience the mesmerizing distillation of quantum physics in *Entanglement*, a sweeping sensory adventure born from the collaboration between France Jobin and Markus Heckmann. Explore the interplay of light, sound and perception, blurring the lines between the physical and the metaphysical. Be prepared to be enchanted by *Cité Mémoire Montréal*, a creation of 4D ART by digital pioneers Michel Lemieux and Victor Pilon, the groundbreaking and world's largest urban narrative pathway of immersive experiences and projections about the city's storied past and present. These extraordinary works have been selected by Xn Québec, representing a sample of artistic excellence from Quebec. It is an official selection that reflects its diverse talents and boundless creativity. This program is also a testament to Effet Québec's commitment to showcasing Quebec's expertise and talent

on a global stage. As a project of Effet Québec, it aligns with their objective of promoting and highlighting Quebec's remarkable artistic works. Be part of this extraordinary voyage of boundless creativity and innovation, where imagination knows no limits.

Immortelle

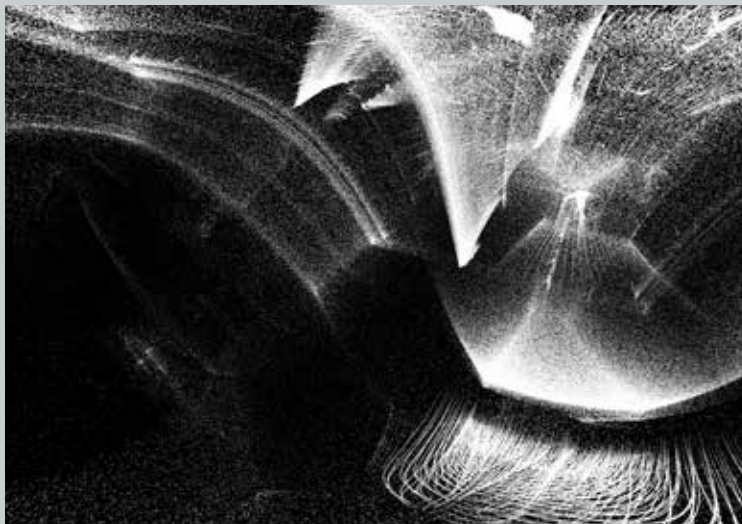
Producer: MUTEK / Original idea: Line Katcho

Entanglement XR

Producer: MUTEK / Idea: France Jobin & Markus Heckmann / MUTEK Immersive Collection / Producer: Katharina Meissner / Production Manager: Lola Baraldi / Curator: Alain Mongeau / Visual Identity: Tamara Manny D'Astous / Communications: Lola Baraldi, Thomas Giboudeaux, Grégoire Chevron

Cité Mémoire Montréal

A creation of 4D ART (Michel Lemieux and Victor Pilon) in collaboration with Michel Marc Bouchard. A production of Montréal en Histoires. Visual post-production by Normal Studio.



Entanglement © France Jobin & Markus Heckmann

ARS ELECTRONICA GARDEN NEW YORK

XRE (Extended Reality Ensemble) (US) — Anne Wichmann aka She's Excited! (DE), Clara Francesca (AU/IT), Brittany Kurtinecz (US), Whitt Sellers (US)

You Are BUTIFL

Tackling AI fears through interactive play

The Extended Reality Ensemble (XRE) specializes in hybridizing traditional arts with technology, including artificial intelligence (AI). But with the increased use of AI left unchecked, fears are spreading surrounding disinformation, discrimination and racism, just to name a few.

XRE presents *You Are BUTIFL*, to tackle the conversation surrounding these fears and reflect on how we must flow with the times, whilst also pause to prevent collective pain and find new solutions. *You Are BUTIFL* is designed as an interactive game. The premise is dystopian: Aurorin is a land of harmony, symmetry and beauty. The Big Sister Avatar is their leader. Aurorian psychology states that beauty is not subjective, rather a scientific phenomenon consistent in optical creatures favoring symmetrical adaptation.

To this end, audience members have to undergo a seven-stage conversion therapy treatment. The performers act as symmetry-obsessed beauty officers, guiding the audience through the experience. By chatting live with Dream AI, audience members explore their very own data: Who owns the truth and has the power to define "beauty"? Why do visual AI programs generate specific bodies when asked to represent the beautiful human? The audience is required to rectify the misunderstanding between beauty and ugliness, to reveal the diverse multiplicity of humans and anarchize the western bias of beauty.

You Are BUTIFL was created by Anne Wichmann aka She's Excited! and Clara Francesca. It was realized with Brittany Kurtinecz (avatars and visual design) and Whitt Sellers (particle avatar and XR technology).



© XRE

ARS ELECTRONICA GARDEN NEW YORK

Hyphen Hub (US)

Hyphen Hub Video Space

Hyphen Hub is a New York-based non-profit interdisciplinary new media art organization that explores, promotes and presents new visions of the future through the integration of art and emerging technologies.

Hyphen Hub produces innovative live performances, organizes art salons and curates art exhibitions with established and emerging new media artists who work on the vanguard of creative technologies — from augmented and virtual reality to artificial intelligence, FashionTech, bionics, robotics and cyborgism.

Its objective is to serve as a nexus to create transformative collaborations — a new type of synergism — between artists, practitioners, and non-traditional art institutions across various disciplines, resulting in works that are radically new.

Furthermore, the organization serves as a platform for a global community of artists, engineers, designers, performers, and tech innovators to connect, share information, and collaborate. Hyphen Hub artists have been selected for numerous prestigious awards from around the world, including Ars Electronica.

Since its inception ten years ago this year, Hyphen Hub has expanded its community by partnering with institutions such as Bell Labs, Georgia Tech, Manchester Metropolitan University, FACT, CERN, Festival de la Imagen, La Mama Experimental Theater/Culture Hub, Broadway theater world, several embassies and the United Nations, among many others.

Curated by Hyphen Hub founder and director Asher Remy-Toledo.

Claudix Vanesix (PE)

Non Fuckable Tokens (NFTS)

How does the development of new technologies shape our self-perception? *Non Fuckable Tokens (NFTS)* is a performance by Claudix Vanesix, XR artist from Peru, that combines Performance Art with Virtual Reality and Augmented Reality to critically display the impact of technology in our era. The work explores the development of internet culture from a decolonial feminist perspective, making explicit the misogyny that underlies in digital spaces. This performance also reflects on how futuristic narratives can be in dialogue with ancestral identities.



© Claudix Vanesix

ARS ELECTRONICA GARDEN ROTTERDAM

V2_ Lab for the Unstable Media (NL)

Summer Sessions

exhibition at Ars Electronica 2023

A presentation at Ars Electronica, Linz, of several works that were developed over the past few years during *Summer Sessions* residencies.

Summer Sessions are short-term residencies for young, emerging artists, organized by an international network of cultural organizations. Each summer, the partners that participate in this network for talent development collaborate to offer professional production support and expert feedback to artists in the realization of a new artwork or design. Local talents from each partner's geographic region are scouted and selected for a residency abroad, where they are offered highly productive atmospheres and specific kinds of expertise at one of the international partners

in the international network. While the pop-up exhibition illustrates the kind of results that this pressure-cooker residency format results in, a live event will highlight the experiences that participants have had abroad, and the effects these experiences had on their early careers. The event will also form a meeting point to discuss how strategically to further develop international opportunities for emerging and young professionals amongst past, present and future partners of the network.

The *Summer Sessions* pop-up exhibition at Ars Electronica Festival 2023 shows a selection of outcomes realized through the international exchange of emerging talents within the *Summer Sessions* network.

Marlot Meyer (ZA/NL)

Hylozoic² Hotspot

re-generating collective kinship

Hotspot is a participative experience of co-creating life through a synergy of cultural, natural and artificial interaction that reintroduces an ancestral, ecocentric understanding and engagement with the Earth. In *Hotspot*, artificial intelligence acts as a cultural tool to regenerate our situated sensuous communication with the animate world around us; to create understanding without the use of symbols or language. By listening through internal biosignals and expressing through electricity and air, *Hotspot* exposes our insides to the outside, and in doing so, brings the outside inside through a situated extra-sensory perception that moves beyond individuality and logic. *Hotspot* is a participative experience of co-creating life

through a synergy of cultural, natural, and artificial interaction that reintroduces an ancestral, ecocentric understanding and engagement with the Earth.



© Hanneke Weitzer

Werner van der Zwan (NL), Charl Linssen (NL)

Unconventional Self

Have you ever wondered what it is like to be a chair? Now is your chance to find out! By combining their expertise in telepresence and furniture robotics the artist tried to answer this question in this brand-new technological experience. By using found objects and motors, microcontrollers and VR glasses, it is now possible to see and move through the world as a chair.



© Werner van der Zwan, Charl Linssen

Gökay Atabek — Volksamt! (TR)

Amplified Fencer Movement II

Amplified Fencer is a research project that investigates the implicit choreography of a fencing match. The fencer's movements are dissected via motion sensors, formatted with the help of a neural network and remapped to an experimental audio synthesizer. Inspired by late 19th century chronophotography experiments, the explosive compositions of the fencer are displayed stretched out over time, with artificial intelligence filling in the gaps where recording equipment (or the fencer) falls short.

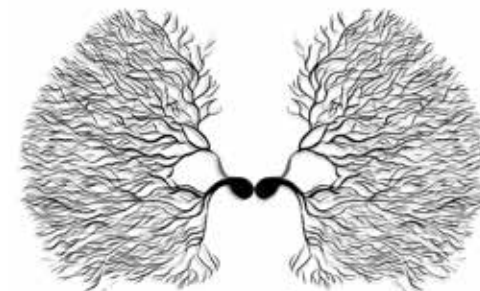


© Gökay Atabek

Evelina Rajca (PL)

Sleepless Memories On the nature and futures of information processing

Exploring AI's growth and invasive cognitive tech, the project addresses surveillance and ecological risks. It uses natural and artificial data storage (i.e., human memory and synthetic DNA) to encode (un)sound compositions therein. Navigating diverse consciousness states (non)invasively, it highlights memory's power in decision-making. The project fosters discourse on information genesis and interpretation, aiming to reimagine futures with genuine accountability in terms of trust, security and care.



© Evelina Rajca

ARS ELECTRONICA GARDEN SCHIEDLBERG

g.tec medical engineering GmbH (AT)

Brain-Computer Interface & Neurotechnology in Games Brain-controlled Games

Gaming makes us happy and optimistic; games challenge us with problems to solve and obstacles to overcome. But what if games are controlled by your mind? What if secret doors can be opened by the power of your brain?

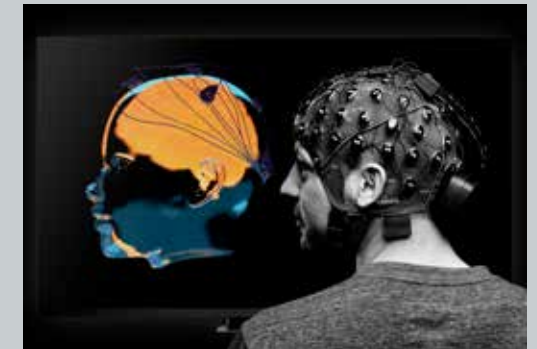
Whether you are a gamer, a game developer or a large gaming company, with Unicorn Hybrid Black and Unicorn Unity Interface you integrate a high-quality brain-computer interface technology into your game experience.

Visit the exhibition and let the BCI games begin! Try out some *Brain-controlled Games*, learn how BCI games are developed or experience playful BCI fashion-tech.

There is a lot more to learn about brain-computer interface technology from g.tec medical engineering, an Austrian based company that develops

and produces high-performance brain-computer interfaces and neurotechnology used worldwide by many renowned universities and companies.

g.tec medical engineering GmbH (AT)



g.tec medical engineering

g.tec medical engineering (AT)

Brain Buddies — A brain- controlled multiplayer game

Brain Buddies was developed during the BCI Game Jam 2022 by g.tec medical engineering. The aim was to integrate a BCI (brain-computer interface) into a game for impaired children who are unable to use their motor functions. This game can be played as single player or multiplayer, where one player is controlling the keyboard and the other/s is/are controlling the BCI.

g.tec medical engineering (AT)

AI-Puzzle Game for ADHD

Use the power of your brain to unlock a fantastic AI-generated image! Focus on a puzzle piece to make the pieces visible, one by one. *AI-Puzzle Game for ADHD* requires good concentration and patience which allows a quantification and enhancement of the concentration performance of the BCI player concerned. This game is especially interesting for children suffering from ADHD.

g.tec medical engineering (AT)

Platformer 3D — A brain-controlled balancing act

The *Platformer 3D* game is made in Unity. Collect as many coins as possible but be aware of the obstacles thrown your way. The BCI player has to concentrate on the flickering boxes that are blocking the way. Once players have concentrated on the box successfully, as measured by the EEG headset, the box explodes and sets your way free to move. Each collected coin closes a bridge which allows you to move further. You can only win if you master both the keyboard control and the BCI control perfectly.

g.tec medical engineering (AT)

BCI Headset for Game Development

Unicorn Hybrid Black — The high-performance EEG Headset

Get your head into the game! Use the *Unicorn Hybrid Black* EEG headset together with the Unity Interface and you'll be able to start a new gaming experience in 2D and 3D.

All the EEG processing is handled with high performance by Unity Interface, allowing you to concentrate on the development of the game itself. The software add-on gives you predefined control schemes that you can place easily into your game.

g.tec medical engineering (AT)

Connect your Brain to ChatGPT & Midjourney

Let's interface your brain with AI using EEG technology that measures your brain activity, with *Connect your Brain to ChatGPT*. The BCI systems send the EEG data to ChatGPT enabling AI to interpret what is going on in your brain. The results can be submitted to Midjourney which generates an image based on your brain activity and AI.

Anouk Wipprecht (NL) in cooperation with g.tec medical engineering GmbH (AT), OnShape (US), Hewlett Packard (US)

Screen Dress

NeuroTech Fashion: 3D Printed Screen-Based Dress interacting through Brain-Computer Interface

This dress creates a technologically mediated dialog between the wearer and their surroundings. Fashion becomes novel interconnection, controlled by subconscious signals from the wearer's brain. These signals are picked up by a new cutting edge EEG sensor that forms a wearable brain-computer interface. The interface uses machine learning to determine the wearer's mental workload. The workload is then reflected in real time onto the six circular displays flaring out from the dress's sculpted neckpiece. As the mental workload increases toward saturation, each display shows an eye's iris and pupil dilating ever wider. The neckpiece was designed in cloud-based CAD software Onshape and 3D-printed by HP using the HP Jet Fusion 5420W 3D Printing Solution. The EEG sensor is a 4-channel BCI headset called Unicorn Headband, which Wipprecht co-developed with neurotech company g.tec medical engineering. The machine learning software that estimates mental workload is tuned to each wearer during a two-minute training session when they first wear the dress. Not just a piece of FashionTech, but NeuroTech Fashion!



Anouk Wipprecht

ARS ELECTRONICA GARDEN TEMPE

Meteor Studio, Arizona State University (US) — William T. Ayton (GB)

ConstellationXR Towards Planetary Healing

Ayton's *ConstellationXR* is the inaugural exhibit wrapping Earth with a network of digital art installations. The XR art features an iconic tower and orbiting spheres of digital assets to illuminate and transmute invisible spaces of power as interfaces of healing. *ConstellationXR* invites humanity to exchange ideas, engage in meditative flow, and navigate unseen pathways and currents of human connectivity. Ultimately, *ConstellationXR* unveils patterns of conductivity portals encircling the globe as a vehicle for planetary healing. Ayton infuses the XR art with the guiding lights of Hope, Empathy, Awe and Love (HEAL) required to counter human despair and collective trauma from chronic social isolation, disasters, eco-grief and anxiety. Launched in Linz, future installation sites draw attention to areas of regeneration, urban concentration, ecological concern,

spiritual energy and personal inspiration. Building on Ayton's New Babel, a 10-story tall AR tower in Union Square, NYC (2019), the project sees towers as channels for communication, intelligence and energy exchange. *ConstellationXR* embraces the spiraling, colossal column of New Babel, and transforms the original rotating globe above into cascading XR orbs of digital art. Embodying metaphorical, imagined worlds, *ConstellationXR* draws on Ayton's Interplanetary VR Sustainable Futures installation, a VR galaxy-gallery of 17 VR orbs related to the 17 UNSDGs with art by 15+ artists connecting space exploration with earth sustainability through a reconstructed planetary assemblage.

Artist William T. Ayton in collaboration with Meteor Studio ASU, Leonardo-ASU Initiative



© William T. Ayton

ARS ELECTRONICA GARDEN TOKYO

Civic Creative Base Tokyo (JP)

CCBT

A platform for *civic creativity* from Tokyo

CCBT is a platform for *civic creativity* where Tokyo citizens discover various social issues and engage in co-creation/development to overcome challenges together. Through creativity and technology, we aim to create a better society together with and for citizens.

The rise of AI today has facilitated expression for everyone, but it also means the maliciously minded cause confusion and alarm with *fake news* and AI-generated images.

The digital information so artfully generated by AI can present new possibilities and new problems. AI is an object of fear as well as a tool for new forms of expression. The burgeoning AI industry also impacts national policies: decisions and handling vary from country to country, only creating more disparity.

CCBT aims to provide an equitable forum for people to discuss, consider and act upon global

issues regardless of where or who they are. We are showing the CCBT-supported *Deviation Game*, by Tomo Kihara & Playfool, selected for the 2022 CCBT Art Incubation Program. Participants draw themed pictures which humans can recognize but which AI cannot. The work encourages citizens to probe the mutual evolution of AI and human expression and explore expressive potential through dialog with AI.

Additionally, the *Deviation Game* will also be exhibited at the Ars Electronica Festival 2023. During the event, participants' drawing data will be collected and compared with the data gathered from Tokyo and London.

Tokyo Metropolitan Government
Arts Council Tokyo (Metropolitan Foundation for History and Culture)

Tomo Kihara (JP), Playfool (UK)

Deviation Game

A game in which you must draw things in a way humans can understand but an AI can't.

Deviation Game addresses AI's increasing ability to imitate human acts of expression and questions how we can use AI to deviate and expand our creativity. Building on Alan Turing's *Imitation Game*, we propose a new game where players must draw prompts in a way that only humans can understand, but AI cannot. Through this game,



© TADA(YUKAI)

we propose to use AI as a way not to imitate past expressions but to identify what has already been expressed, allowing us to explore unseen forms of creativity.

ARS ELECTRONICA GARDEN TOKYO

Yasuaki Kakehi Lab, The University of Tokyo (JP)

Becoming Different

This exhibition, *Becoming Different*, embarks on an exploration of the transformative aspects of object existence, drawing inspiration from Gilles Deleuze's philosophy of "becoming". It challenges the notion of static identity, presenting us with the realization that our identities, including objects, are not fixed but instead in a constant state of flux. Through four physical installations employing different approaches, this exhibition serves as a catalyst, encouraging us to notice and embrace both the programmable and unprogrammable aspects of transformation from various perspectives.

The first installation, *Fluidic Painting*, demonstrates how the dynamic yet gradual transformation of ink on the canvas can give rise to new and unique aesthetics, redefining our concept of painting. The second piece, *Synplant* captures the bioelectric potential of plants, illustrating that transformation is inherent even in elements that appear static and providing fresh perspectives

to perceive our surroundings. The third exhibit, *ChoreoDrops*, showcases a captivating dance of droplets on paper, highlighting both the beauty of controlled water movement and the allure stemming from the inherent unpredictability of transient materials. The final piece, *Emils*, employs slime as a medium, underscoring the profound changes brought about by organic shape shifts from 2D to 3D.

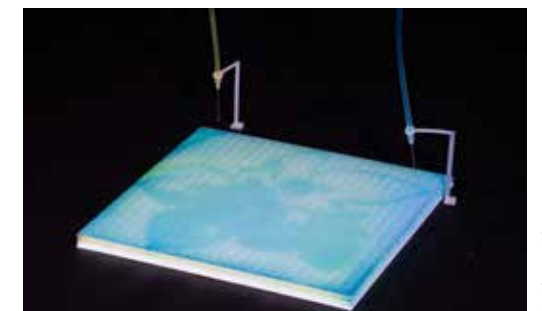
Becoming Different uncovers the often overlooked beauty within the process of metamorphosis, inviting audiences to delve into and appreciate the intricate diversity that emerges from continuous transformation and differences.

Fluidic Painting and Synplant: supported by JSPS KAKENHI (Grant Number 20H05960)
ChoreoDrops: supported by JSPS KAKENHI (Grant Number 21H04882)
Emils: supported by Taiwan National Science and Technology Council (MOST 111-2420-H-A49-005)

Tomomi Nitta (JP), Yahui Lyu (CN), Yasuaki Kakehi (JP)

Fluidic Painting

Fluidic Painting is a novel form of time-based painting where paint and support, traditionally regarded as mere materials, become actors. We design its temporal expression by harnessing natural phenomena that arise between liquid and solid, and spatially embedding the probabilities of specific occurrences within the support structure. However, it is the paint and support themselves that manifest it, as they interact with the environmental conditions, performing before our very eyes.



© Ziyuan Jiang

Youyang Hu (CN), Chiaochi Chou (TW), Yasuaki Kakehi (JP)

Synplant

Synplant is an installation that reads the natural environment from the perspective of plants and translates their experiences into audiovisual expressions that can be experienced by humans. The work uses an artificial intelligence-based learning system to analyze the bioelectrical activity of plants in response to environmental stimuli, and based on the results of that analysis, it creates an audiovisual field that represents the invisible trajectories of wind and rain in nature. This work positions plants as subjects of expression and invites viewers to engage with nature in a novel way.

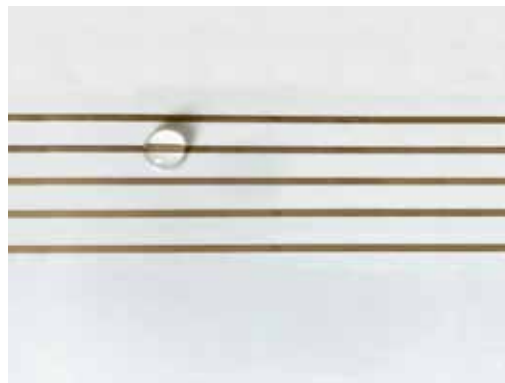


© Youyang Hu

Yoshimori Yoshikawa (JP), Eiji Iwase (JP), Yasuaki Kakehi (JP)

ChoreoDrops

ChoreoDrops is an installation artwork where water droplets move freely on graphical patterns drawn on paper. The artist and scientist team has developed a novel technology that enables us to control the movement of liquid droplets using printed electrodes arranged at intervals on the paper. The choreography of the water droplets is not only controlled by digital devices but also intertwined with the materiality of water, creating a dynamic interplay between precision and randomness, as if the droplets possess a certain agency in their movement.



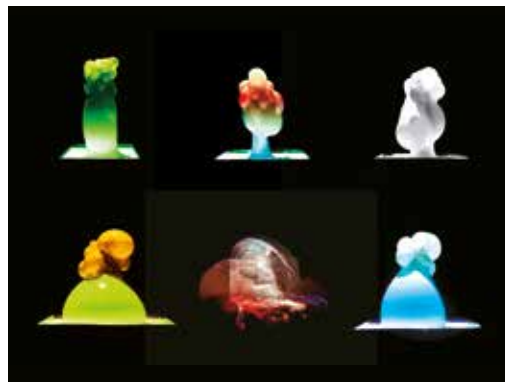
© Yasuaki Kakehi Lab, UTokyo

Yuan Shao Wu (TW), Wei Chen Yen (TW), Chiao Ni Hsu (TW), Kuan Ju Wu (TW/US), Yasuaki Kakehi (JP), Chun Cheng Hsu (TW)

Emils

Effervescent-Material-based Interactive Life-like Sculpture

Emils is an ephemeral soft sculpture that consists of millions of viscous slime bubbles which collectively become an essential structure. These bubbles interact with one another: competing, fusing and rupturing as they grow, resulting in a dynamic and ever-evolving form. Inspired by the construction of multicellular organisms, *Emils* embodies the microscopic and macroscopic perspectives of life forms.



© Chun-Cheng Hsu Lab, NYCU

ARS ELECTRONICA GARDEN UTRECHT

IMPAKT [Centre for Media Culture] (NL)

CODE 2023

CODE aims to make the public in general and politicians and policymakers in particular aware of the digital challenges of our time. We want big tech companies to be regulated, and our governments to curb their power and protect our digital rights. How can we make politicians understand the urgency to act? What can we as concerned citizens, researchers and artists do to support this process? How can we help develop a code of ethics for our digital future? How can we change Big Tech into Fair Tech? *CODE* was initiated in 2021 as a response to growing concerns that we are losing agency over the digital tools and platforms we use on a daily basis. We hope to be able to influence public policy on a national and international level, by creating awareness for issues at hand, and by defining ways in which we can improve laws and legislation that will protect us as digital citizens and consumers. We want to

inspire and facilitate cross-disciplinary collaborations, which hopefully have the potential to catalyze system change. *CODE* brings together artists, non-artists, politicians, policy makers and researchers living in Germany, Belgium and the Netherlands. The participants get the opportunity to work closely together in groups in a co-creation process of six months. Every year we present the results at international festivals and events. At this year's Ars Electronica festival, the work of the participants in the 2023 edition of *CODE* will be presented.

CODE 2023 is the third edition of *CODE* and is organized by IMPAKT [Centre for Media Culture] (Utrecht) together with Werktank (Leuven), Privacy Salon/Privacypotopia (Brussels) and transmediale (Berlin). *CODE 2023* is realized thanks to the kind support of the City of Utrecht, Creative Industries Fund NL, Fonds Soziokultur and Fonds Cultuurparticipatie. The exhibition at Ars Electronica 2023 is supported by the Creative Industries Fund NL.

CODE — Reclaiming Digital Agency

Turning Tables

The Fair Tech Card Game

It's time to play a new game. In *Turning Tables*, underpaid factory workers trump Mark Zuckerberg, tech critics come to the rescue, and politicians are urged to step up and curb the power of Big Tech. *Turning Tables* is a new card game that turns Big Tech into Fair Tech. It's fun to play, and along the way you will turn the tables on Big Tech power and pick up inspiring ideas from critical thinkers. *Turning Tables* was conceived and produced by IMPAKT [Centre for Media Culture] and designed by Hoax Amsterdam.

Ahnjili ZhuParris (US), Mohsen Hazrati (IR), Phivos-Angelos Kollias (GR), Yu Zhang (CN)

VOICES

VOICES, an interactive installation, invites participants to co-create a sound-art composition with their voice. Participants are asked to record a secret. In return, they can be visually guided through the processing, analysis and cloning of their voice recordings by various voice technology (VT) algorithms and can experience a sound-art composition in which their voice narrates the secrets of others. This immersive experience aims to shed light on the otherwise opaque inner workings of VT.

Yedam Ann (KR), Zeng Sixin (CN),
Alexander Walmsley (UK)

Ansible

Ansible takes the roll-out of the 5G infrastructure across the planet as a starting point to explore the disconnect between the speed of telecommunications infrastructure and the human act of communication itself. The work explores these themes through a script improvised over the course of several months via voice messages left on each others' phones in each artist's native language.

Robert B. Lisek (PL/NL), Oleksandr Sirous (UA)

APEIRON

APEIRON is an independent AI-powered application that is transparent and self-regulating. It manages and protects data to let individuals regain control of their digital identities and reduces the influence of corporations. Biological cells represent users, while the concepts flow as viruses.

Art for Nons — Lea Luka Sikau (DE),
Denisa Půbalová (NL), Antje Jacobs (BE)

BUG

Biosurveillance has become more popular over the past decade(s) and bug fights have turned into a source of entertainment. Gazing into the telescope of *BUG*, you become a voyeur of a vibrant ecosystem living in canalization networks. While you observe, waiting to be entertained and discovering new truths about this underground universe, *BUG* peers back at you through insect eyes.

Leon van Oldenborgh (NL), Robin van de Griend
(NL), Lukas Völp (DE), Hennie Bulstra (NL)

clickedy.click

Tracking for Love

The design of online interfaces influences the way identities and perspectives on the world are formed. *clickedy.click* is a provocative social experiment, adopting the format of a dating platform, that addresses the current issue of in-transparent, non-consensual online user-tracking used to inform the design of these interfaces.

Asli Dinc (TR), Deniz Kurt (TR)

Cybi0nt

Decoding the Mutations of Truth

This interactive art installation explores the alarming impact of post-truth on our contemporary society, and how this is accelerated by generative AI and deep fake technologies. *Cybi0nt* uses the symbolism of gene mutation to represent the morphing and distortion of truth, as simulated through a "fake news generator". This machine generates news targeting European Union policymakers and institutions, demonstrating the destabilizing potential of such tactics in real-world scenarios.

Lisa Marie Bador (FR/DE)

My Virtual Mermaid

Natural Field Recordings

At the crossroads between media studies, psycho-acoustics, political critique and sound healing, *My Virtual Mermaid* aims at critically questioning our relation to the signals, notifications, alarms of the digital world, by sampling, distorting and mixing them.

Felipe Schmidt Fonseca (BR), Rebekka Jochem (DE)

On the Exactitude of Maps

Digital maps representing the physical world are built and updated in real-time as people use digital devices to navigate public space. Even while wandering aimlessly, users generate data trails which are captured and fed back into a cybernetic leviathan. By contrasting user-contributed reviews with excerpts of critical reflection, this project raises questions about the ownership of geospatial data in a global economy and their implications for the generation of value in contemporary cities.

Ana Spagnolo López (AR), Helena Roig (ES),
Marion Lissarrague (FR), Vinciane Dahéron (FR)

Pay with Your Gaze

Marketed as a "next generation" intuitive interface, the simple movement of our eyes has been exploited by surveillance capitalism. *Pay with Your Gaze* is a project that raises awareness on the misuse of eye tracking technologies and the true value of our online attention.

ARS ELECTRONICA GARDEN VIENNA

ACOnet | net:art coordination center

aaron's law — A Tribute to Aaron Swartz

The project *aaron's law* is dedicated to Aaron Swartz (* 8 November 1986, Chicago, † 11 January 2013, New York City). The American computer programmer, writer and political Internet activist for open and free access to knowledge, whose technical innovations and projects were driven by socio-political issues. How do issues such as Creative Commons, open access to knowledge, open-source software and ethics in technology influence the production processes of art today? Information is power — so begins the Guerilla Open Access Manifesto written by political activist Aaron in Italy in 2008.

This powerful and true statement is anchored in the AR and VR installation of the Schubert Theater Vienna and processed through exciting audiovisual expressions. The digital transformation and journey of an analog puppet offers you insights from Aaron. You can listen to one of his favorite songs, read excerpts from his blogs, climb a mountain of his treasured books, or learn about the protests he was involved in.

aaron's law is an initiative of the net:art coordination center (ACOnet), a series of artistic-technical projects with dedicated national and international partners as a tribute to the life and spirit of Aaron Swartz.



© Sage Ross

ARS ELECTRONICA GARDEN WINDSOR

INCUBATOR Art Lab (CA), IOTA Institute (CA) — Jennifer Willet (CA)

Gentleman Scientist: Microecologies

In 2017, Jennifer Willet developed a performative alter ego called the *Gentleman Scientist*, an entertaining and gender fluid critique of the Western tradition of scientific rationality. The *Gentleman Scientist* is a ringmaster, a specialist, a time traveler, a buffoon, whose once white coat is filthy. He has 8 snow globes attached to the front and back like mutant breasts or egg sacks. Within each snow globe live colonies of microorganisms, bacteria, yeast, algae. They are fascinating, beautiful and putrid.

Gentleman Scientist: Microecologies is a 360° diorama installation installed on a sewing mannequin, which serves as a portrait of a character and a garment as it moves through ecologies and time, all the while accruing microbes and meaning — literal and metaphorical passengers.

Gentleman Scientist: Microecologies, like most of Willet's practice, challenges hierarchies of truth, knowledge and experience within traditional

manifestation of scientific rationality. With innovations in science and technology the future will be measured in multitudes, rather than fact or fiction. Willet's work proposes iterative feminist, post-colonial, and post-speciesist visions of our shared biotech future that values scientific knowledge and biotech innovation in chorus with social, cultural, aesthetic and non-human knowledges. *Gentleman Scientist: Microecologies* is a cacophony ecology of human and non-human organisms living, reproducing and dying in a shared laboratory environment.

This project is presented by IOTA Institute, INCUBATOR Art Lab, and Ars Electronica, with the support of University of Windsor, Canada Research Chair Program, Social Science and Humanities Research Council of Canada, Ontario Arts Council, Canada Council for the Arts, and Nova Scotia's Department of Communities, Culture and Heritage. It is made possible thanks to INCUBATOR Art Lab Project Assistants Billie McLaughlin, Domenica Mediat, Justin Elliott, Gillian Hughes, and Daniela Gaie.



© Lauren Silberman

ARS ELECTRONICA GARDEN WROCŁAW

Audiovisual Technology Center (CeTA) (PL)

digital rites

Infinity and hash2ash by panGenerator

Welcome to the new dark age — where our misunderstanding of reality emerges not as a result of the lack of data, but quite the opposite — its overwhelming abundance. We tend to think of ourselves as more enlightened than our late predecessors from centuries ago, but in fact the realm of irrational, tribal and ritualistic seems to thrive in the age of big data. We seem increasingly dependent on the digital ghosts inside the machine, led by oracles confined in black boxes and casting spells expressed in binary code. Our installations are embodiments of those ephemeral *digital rites*, allowing the audience to confront them in a tangible way.

Curatorial team: Dominika Kluszczuk, Monika Łuszkpak — Skiba [CeTA]

Production: Monika Łuszkpak — Skiba [CeTA]

Organizer: Audiovisual Technology Center [CeTA]

Partners: The National Museum of Ethnography, Polish Institute in Vienna

The project was financed by the Polish Ministry of Culture and National Heritage within the program of "Inspirational Culture", organized by the Audiovisual Technology Center in partnership with the The National Museum of Ethnography in Warsaw and the Polish Institute in Vienna. The installation *hash2ash* was commissioned by The National Museum of Ethnography in Warsaw as part of the project "TEENS LOVE DESIGN 2017_Youth creative sector" by the artistic group panGenerator.

panGenerator (PL)

hash2ash

everything saved will be lost

Everything Saved Will Be Lost, the motto of the installation and the paraphrase of Nintendo video game systems shutdown screen, emphatically points out the illusive permanence of digital archives. Our alertness seems switched off, lulled by blind faith in the near-transcendence of "the cloud", which appears equipped with eternal and inexhaustible memory. What we readily ignore is the fact that the cloud is nothing but millions of physical hard drives stockpiled in data centers, owned by specific corporations and, despite precautionary measures, liable to fail or be hacked. We have decided to visualize this by transforming the digital representation of one's face (projected on-screen) into real gravel, spilling out behind the screen. This is a reminder to us all that without exception, the ephemeral cloud is likely to disintegrate physically.

panGenerator (PL)

Infinity

our daily digital ritual

The infinity scroll is a mechanism often utilized by social media services and platforms, suggesting infinite amounts of content. Endless scrolling induces a state of permanent craving in the mind, tempting it with an endless stream of new information, which, however, it is incapable of processing. Scrolling thus becomes a purely sensory experience, inducing hypnosis of sorts. The soothing monotony of light forms moving in front of our eyes leaves us fully engrossed, becoming a daily digital ritual in which we make a sacrificial offering of all our attention — a priceless gift for digital corporations. Or is it time to stop genuflecting?



© panGenerator

CIFO x Ars Electronica Exhibition

Dualities in Equalities: Art, Technology, Society in Latin America

The collaboration between the Cisneros Fontanals Art Foundation (CIFO) and Ars Electronica has resulted in the prestigious CIFO x Ars Electronica Awards, established in 2022. These highly regarded awards celebrate and support emerging and mid-career Latin American artists exploring technology in new media and digital art. Three recipients are granted up to \$30,000, empowering them to bring their groundbreaking projects to life. In 2023, the second edition of the awards presents the exhibition "Dualities in Equalities: Art, Technology, Society in Latin America", in the frame of the Ars Electronica Festival, featuring a total of nine artistic perspectives from the region and cultural context of Latin America. The exhibition invites the six winners of the CIFO Awards to showcase their works alongside the three recipients of the CIFO x Ars Electronica Awards. The result is a compelling blend of artistic expressions, united by shared themes while distinct in their individual expression and use of tools. The exhibition delves into the circumstances under which artists create their art and investigates the

profound impact of global transformation and innovative digital technologies on their work. These themes hold widespread relevance and are actively embraced and explored by traditional art disciplines.

Representing a vibrant, critical and diverse art scene, the exhibition emerges from a shared cultural foundation. It offers a unique opportunity to explore the concept of Latin American culture through various artistic lenses, rejecting a singular viewpoint in favor of a richer and more nuanced understanding.

Nine different artistic positions have been selected, showcasing the works of individuals from various generations, dialects, life situations and artistic genres. Together, they provide a fascinating and comprehensive insight into the mission of the collaboration between CIFO and Ars Electronica. "Dualities in Equalities: Art, Technology, Society in Latin America" invites you to delve into the complex interplay of artistic perspectives, where diverse voices converge to illuminate the rich tapestry of the Latin American art scene.

Adrian Melis (CU/ES)

Tales from the Mountaintop



© Adrian Melis

Tales from the Mountaintop is a three-channel sound performative audiovisual work in collaboration with people who live in extreme poverty and sociopolitical disenchantment in different parts of the island of Cuba, mostly in the vicinity of the mountains of the Sierra Maestra: a place

located in the east of Cuba loaded with a historical connotation in the 1950s for being the battlefield and conquest of the Cuban Revolution. From the confines of their homes, inhabitants of these regions were invited to reproduce the soundscape of what was once a glorious journey through the mountains made by Castro's guerrillas. By using Foley Art (a technique used in cinema to reproduce sounds absent from our environment) each person was invited to create specific sounds from the objects and materials found in the rubble and garbage dumps where they live. The sequences of sounds responded to key moments of such heroic battle. A glorious battle that can only emerge from the garbage and ruins of the present times.

Alba Triana (CO)

Vibrant Self

Immersive and interactive installation



© Camilo Martín, Alba Triana Studio

Vibrant Self explores the inseparable relationship between the fundamental structure of the natural world, the human being and human artifacts. An essential "reality" — driven by vibration and interconnectedness — manifests through the human body as mood, action, meaning, agenda and ideology. These complex expressions emerge from the constant dialogue between the body's natural essence and the individual's environment, socio-cultural context and personal construct.

Interacting visitors listen to a musical composition conceived as an Audible Score, comprising natural, urban, media and music archive recordings. This Audible Score is designed to induce various reactions in the visitor-performer, which are captured by a Brain-Computer Interface. The BCI data is transformed into soundwaves that unveil, audibly and visually, the brainwaves and muscular responses using a laser system. The resulting installation is presented as an involuntary performance for non-interacting visitors.

Alba Triana Studio
 Technical assistant: Juan Sebastián Amaya
 Installation development assistants: Catherine Serrato, Camilo Martín
 Photos: Camilo Martín
 Support
 Pro Helvetia — Swiss Arts Council South America
 Scientific consultant: Prof. Christophe Galland, Laboratory of Quantum and Nano-Optics Director, Institute of Physics, EPFL

Ana María Gómez (CO/US)

Inoculate



The primary motivation for presenting *Inoculate* is to share information on ocular germination to a broader public. Audiences will gain access to this procedure via a multi-lingual instruction manual and a kit of specialized instruments used in this process, as well as related samples

of lacrimal fluid and seed strains. The display at Ars Electronica supported by CIFO is intended to encourage reflection on the limits of the human body within the context of this intimate inter-species encounter with an external botanical entity. Likewise, *Inoculate* raises critical questions on the anthropocentric mediation of plants in colonial and contemporary contexts, from biodiversity extraction and the creation of new rainforest plant hybrids in European hothouses, to the patented manufacture of molecular chimeras in pharmacological and biomedical industries.

Graphic and object-based design for this presentation of *Inoculate* was provided by Matteo Casarin and Current Matters (Nicolas Bolay and Nicolas Leuba). Medical assistance was administered by Dr. Jelle de Wit.

Jhafis Quintero Gonzalez (PA)

Reflections



This project seeks to create a parallelism between prisons, due to the nature of these places as a space of high social contrast, and the symptomatology of the “free” society (outside prisons). My ten-year

experience in a prison for bank robbery allowed me to see and be part of the affiliation process in the prison, and the eventual loss of the image and jurisprudence of your own body, which becomes the intellectual property of the justice system. Outside of prisons,

society has compacted, the methods are much more subtle, the walls are conceptual, ideological, religious: a simple yellow line is already a bi-dimensional wall able to socially redesign. Always more subtle, technology and its sensors around society have transformed human beings into simple, quantifiable data, such as temperature. We are in anyway, although still free, stripped of our own image. Creativity inside of prisons has always been a topic of life and death, a necessity for those stripped of freedom, to break with the architectural limitations that have been designed to limit the human beings that live in them. It allows them to find ways to re-signify their own bodies to establish new ways of communication when silence is a punishment. Simple but strong ways to affect their environment and even the physical laws that keep them away from the rest.

Andrés Ramírez Gaviria (CO)

0.0.



0.0. depicts the destruction of two glass cubes that unfold in time both forward and backward and in a constant loop. The video sequence is composed in such a way that the destruction of one cube begins just as the other cube regains its original form. In this pendular oscillation of time a scene is constructed that undermines the linear

and climactic nature of the original video footage. The video explores ideas around the concepts of time, space and minimalism, interpreted through the notion of zero point, as suggested by the title. *0.0.* can be seen as referencing an aesthetic of reduction that inspired many abstract modernist movements. Using a process of extraction (the destruction of the cube is produced by a vacuum pump) to extrapolate concepts of reduction and singularity, an event is set in motion in which two opposing impulses coexist: on the one hand, an act of destruction that seems to speak against a spirit of categorical rationality and control and, on the other, the controlled and systematic process by which that same destruction is accomplished.

High-speed filming: Rudolf Diesel
Video editing: Paul Lechmann

Joaquín Aras (AR)

Añoranzas (Yira Yira)

Longings (Yira Yira)



Through his projects, Joaquín Aras presents a poetic approach to film preservation. Many of his works have brought attention to films that have been lost or forgotten. Moving away from scientific methods, public policies and hegemonic narratives, his practice embraces myth, memory and emotion along with their limitations. *Añoranzas (Yira Yira)* is an homage to Argentine

cinema pioneer Federico Valle who produced the world's first animated feature and started Argentina's first news program. Tragically, most of Valle's films were lost in a fire in 1926 and he was forced to sell what was left of his films to a comb factory to use their celluloid as raw material. The project, which aims to revert Valle's cultural loss, consists of experimenting with current technology to recycle old plastic combs and turn them into projectable film. Mixing Historical research and film recycling, the process will result in an experimental abstract film that will be screened with a 16mm projector.

Collaborators: Engineering and Process Consultant: Adrián Unger / Film Preservation Consultant: Lucía Ferreyra (Médano Lab) / Archival Research Assistant: Agustina Pérez Rial / Artistic Production Assistant: Adrián Unger
Sound Design: Jorge Espinal

Rosemberg Sandoval (CO)

El cuarto del artista en Bahareque

The artist's room in Bahareque



© Rosemberg Sandoval

This piece is a fabric of the survival of the artist's working-class family, an open and essential dialogue through time fueled by the observation of the sky in their daily tasks; the sky as a reference in the construction of them as social individuals in their individual myths. The universe contained in the artist's room indicates consciousness as a

memory where the point of origin is in the white slipper located on the central wall of the work from which a constellation of objects with history emerges as a collective, infinite calendar. *The artist's room in Bahareque* is a tribute, an objective portrait of the artist's family treated with glazes and transparencies of mud and dust that somehow represents millions of Colombian people and particularly indigenous people forcibly displaced from their homelands. The technique used for this work is an installation-intervention made with paper, wood, metal, bone, plastic and various objects. *The artist's room in Bahareque* is built in a walkable space of 3 x 3 x 3 meters and once inside, on each of the walls, the public will be able to observe dozens of metal mesh boxes containing various objects collected by the artist.

Natalia Espinosa (EC)

The Ark

Let's go back...



© Ailin Blasco

This project grows in a context of environmental emergency. It takes the old tale of Noah's Ark as a starting point, imagining a future embarkment with whatever little life is left after we have predated most natural resources. The beasts to be saved have mutated: they are a mix between animals, artifacts, archeology and garbage.

The audience will see a worn-out wooden ramp with creatures climbing in pairs. Their formal solutions recall ancient ceramics, especially from Central and South America. If viewed carefully, it is recognizable where their shapes come from: egg cradles, corrugated cardboard, disposable plastic receipts, packaging for tech items, etc. The work reflects on the ambiguity of humankind: capable of creating and destroying with the same inventiveness. It mixes two sophisticated technologies, developed all over the world throughout history: ceramics and packaging, and places them in a simple tale of apocalypse with no ark at the end of the ramp.

Project sponsored by the Cisneros Fontanals Art Foundation. Made at Cerámica Suro, Guadalajara, MX.

Jonathan Torres Rodríguez (CR)

Wild Machines

Knots, tangles and the becoming of mechanical beings inside compost



© Jonathan Torres

Wild Machines proposes the creation of two biodegradable machines made from biological materials collected from two Costa Rican ecosystems. The goal is to install them in these ecosystems and document on video the processes through which they degrade and reintegrate into the environment. These videos will be presented in the exposition room as well, along with a third sculpture, which will degrade in the room through a humidity system activated by the guests visiting the exposition. Conceptually, the project aims to make speculative technologies visible, namely technological devices created with materials and manufacturing techniques that are closer to ancestral knowledge, with materials of biological

origin belonging to ecosystems that are specific, renewable and respectful of the environment. These devices turn into speculative design pieces by reconnecting with organic materiality with the new technologies. This allows us to imagine a scenario where machines become hybrids with their environment, where they expire and reintegrate. *Wild Machines* makes use of the power that speculative thought provides to imagine a present world that revalues to matter, a place of technologies whose preprogrammed expiration is in relation to the needs of the environments and not those of the economic system. Technologies that use energetic and material resources with a degree of balance. If technological devices generate discourse and create knowledge (Deleuze), it is urgent to think of the nature of these technologies. What if machines could become compost? Compost that decomposes in the modern world and blends in with the leaves and bugs. How could we achieve it? What new processes would we need? How can we all conceive of such a thing? Precarious machines, soft, fragile. Possible machines with functions still unknown and uncertain. *Wild Machines*.

Jonathan Torres Rodríguez (diseño de proyecto + creación de esculturas+ dirección de arte). / The work team is currently being hired. This will be communicated as soon as possible. / (Filming and video art editing + sound creation). / Videos: Idea/dirección: Jonathan Torres / Fotografía: Jonathan Torres/ Oscar Herrera/ Fabián Castellón / Dop y Edición : Óscar Herrera Naranjo (FotoSono) Musicalización: Alex Catona / Montaje de sala: Control electrónico: Daniel Sánchez / Museografía: Jonathan Torres/ Lucía Araya.

EUMETA

Johannes Kepler University (JKU), JKU Circus of Knowledge (ZdW), JKU Spin-off EUMETA, Time's Up, William Kentridge, Rimini Protokoll, MIT Center for Constructive Communication (CCC) Cortico

NEXT TRUTH PREDICTION

“Reason brings the truth to light.” This programmatic sentence characterized the Age of Enlightenment. Now we use probability distributions to approach reality. This refers to large language models (LLMs) such as ChatGPT (OpenAI) or Bard (Google), which are becoming central sources of information. An LLM is trained with massive bodies of text. It's trained to predict upcoming words. In doing so, it picks up the statistical contingencies, the very complex higher-order relationships between words. This leads to the question: Does probability take the place of truth?

JKU is addressing this emerging epochal shift jointly with AI Institutes, the LIFT_C (Linz Institute of Transformative Change), the ZdW (Zirkus des Wissens [Circus of Knowledge]) and its new spin-off EUMETA (European School of Metaverse). At the JKU LLM School, visitors will receive a crash course on the technology behind ChatGPT and Bard. In addition to workshops with JKU AI experts, the new JKU spin-off EUMETA will make its first appearance and co-host the Festival Symposium over two days.

At the invitation of JKU, the internationally influential Center of Constructive Communication

(CCC) of the Massachusetts Institute of Technology (MIT) will enrich the festival for the first time this year with its great expertise in the field of current social and mass media ecosystems.

CCC will offer insight into its work in the form of an exhibition and two workshops (*Nature of LLMs* and *Tech / LLMs for constructive communication*). In addition, MIT spin-off Cortico will present its Local Voices Network (LVN) platform. LVN is a unique “human listening + machine learning” system that combines the ancient techniques of human dialogue and deep listening (through facilitated small-group conversations) with the analytical power of modern AI (through tools for identifying patterns/themes across conversations).

The result is a system that captures, at scale, public sentiment with a level of authenticity and nuance that surveys and focus groups cannot match. As never before, the Circus of Knowledge (Zirkus des Wissens – ZdW) will be present at the festival this year. In *A.I. – A Punch Intervenes* it takes up the topic of LLMs in an omnipresent anarchic wicked puppet show (for adults and kids) with Puppificial Intelligence.

At the same time, ZdW invites Rimini Protokoll to a guest performance with the highly acclaimed production *Uncanny Valley*. This explores the question of whether a robot can credibly portray a human being on stage. ZdW will also show the only computer-animated film by artist William Kentridge from the 1990s that has rarely been seen in the world and contextualize it with

AI-generated art. Festival visitors will also have the chance to engage in conversation with William Kentridge himself about truth in art via video feed from Venice. Another offer is made by the Circus of Knowledge together with *Times's Up*, the Linz Laboratory for the construction of experimental and experiential situations. In the AIFutures workshop, visitors can explore their future with AI.

MIT Center for Constructive Communication, Cortico (US) — Maggie Hughes (US), Naana Obeng-Marnu (US), Cassie Lee (US), Spencer Russell (US), Deb Roy (US)

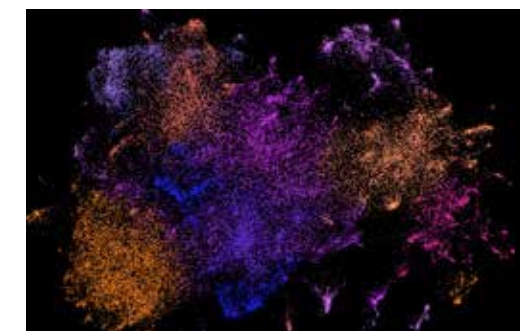
Collective Echos

Human-AI Systems for Dialogue and Listening

Through an embodied, spatial audio experience, Collective Echos makes tangible a living library of human experiences. In the face of intensifying social fragmentation and collapse of shared reality, we look to ancient wisdoms such as small-group dialogue and sensemaking to inform the design of a novel, AI-supported pro-social communication space: the social dialogue network. Here, we gather communities in facilitated, constructive conversation and equip them with visualizations and machine learning-backed insights that empower them to “make sense” of their collective experience. Throughout, participants maintain agency over their voice. Structures which provide the freedom and protection for each individual to dictate how and within which spheres their stories are shared enable online and in-person gatherings where all can be brave not loud. This partnership between cutting-edge and ancient social technologies enables us to nurture agency and trust in civic life, and, ultimately, bolster values core to a functioning democracy. Collective Echos shepherds us towards an understanding of the value of personal narrative in engendering trust and how we surface under-

heard voices with privacy and authenticity. We invite visitors to listen and explore the breadth of our library through accompanying visualizations. This network of stories makes space for complex, empathetic interactions that we hope inspire visitors to participate in this intimate system firsthand.

The Center for Constructive Communication in partnership with Cortico / Lead Design and Curation: Maggie Hughes, Naana Obeng-Marnu / Experience designer: Cassie Lee / Audio engineer: Spencer Russell / Data processing and research: Brandon Roy / User interface developer: Dennis Jen / Program Manager: Heather Pierce / Center for Constructive Communication Director and Principal Investigator: Deb Roy



© Maggie Hughes

Stefan Kaegi (DE), Rimini Protokoll

Uncanny Valley

Robots are usually thought of as work machines, which perform tasks efficiently and precisely. In German industry, their appearance hardly resembles that of people, to avoid emotional complications. In contrast, humanoid robots have been developed in Asia for some time, for example for care work or as sex partners. The external similarity to humans makes the acceptance of machines easier. However, if the machine is too similar to a human, we begin to feel mistrust: What is human, and what is machine? Japanese robotics researchers call this strange similarity the "uncanny valley". For his play, Stefan Kaegi worked with a writer and playwright for the first time: Thomas Melle agreed to have an animatronic double made of himself. This humanoid takes the place of the author and raises questions: What does it mean for the original when the copy takes over? Does the original get to know himself better through his electronic double? Do the copy and his original compete with each other or do they help each other?

Concept, Text and Direction: Stefan Kaegi
 Text / Body / Voice: Thomas Melle Equipment: Evi Bauer
 Animatronic: Chiscreatures Filmeffects GmbH
 Manufacturing and Art Finish of the silicone head / coloration and hair: Tommy Opatz
 (2023) Manufacturing and Art Finishing of the silicone head and coloring: Ina Chochol;
 Hair punching: Susanna Lang;
 Mounting-systems and rework animatronics: Jörg Steegmüller/Steegmüller Skulpturen
 Dramaturgy: Martin Valdés-Staube Video Design: Mikko Gaestel Musik: Nicolas Neecke
 Production management Rimini Protokoll / Touring: Monica Ferrari
 Light Design / Touring: Robert Läßig
 Sound- and Video Design / Touring: Jaromir Zezula
 This play from Rimini Protokoll has originally been produced by the Münchner Kammerspiele, in coproduction with Berliner Festspiele - Immersion, donaufestival (Krems), Feodor Elutine (Moscow), FOG Triennale Milano Performing Arts (Milano), Temporada Alta - Festival de Tador de Catalunya (Girona), SPRING Utrecht Performing rights: Rowohlt Theater Verlag, Reinbek bei Hamburg



Gabriela Neeb



Rimini Protokoll



Gabriela Neeb

CREATE
YOUR
WORLD

create your world 2023

Truth or Dare

The Party Game with our Future

The premise is simple: Players take turns asking one another “truth or dare?” If they choose “truth”, they have to answer a—possibly unpleasant—question. If the choice is “dare”, they must do a specific task instead of making a confession. The more the climate crisis progresses, the more inflation, economic crises and wars come to a head, and the more dystopian the scenarios for the future are painted, the stronger the impression that there is a big party game going on. Depending on their mood or their own advantage, decisionmakers keep postponing important decisions—perhaps they lack the courage or the willingness to consider all the consequences and to answer the relevant questions truthfully. This leads to postponements—one prefers to accept measures that may be unpleasant for a short time, but do not have to admit the truth so completely. The truth is: We have to do something.

Now. And that is at the same time our duty (if we dare).

The create your world festival takes more and more this civil society role—it invites to think together about new ideas and actions, which goals of peaceful protests can and should pursue. At the same time, the create your world festival will again offer a colorful platform for educators, young people and interested tinkerers. An artistic future fair that enables new ideas and inspirations.

Reconciling dystopia and utopia seems to be the most beautiful and at the same time most difficult challenge here: How can we together define and achieve a clear goal while taking advantage of the thoroughly positive development of technologies, research and human ingenuity?

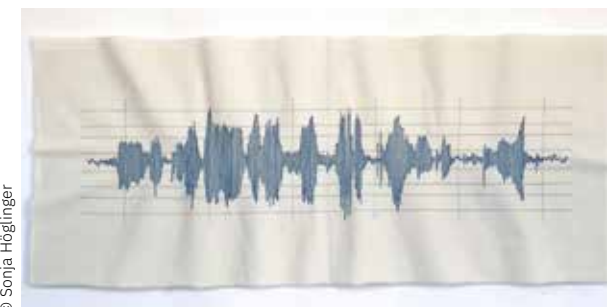
So, we are playing truth *and* dare. Defining the truth seems to be the biggest dare at the moment.

Prix Ars Electronica: u19—create your world

With this competition, we have been promoting young talent in the field of media art since 1998. Today, with the slogan *u19—create your world*, we are asking more generally for young people's small and big ideas about the present and the future. We want to know what children and young people see in their environment, what moves them and what they have to say. Digital and analog projects reach us from people up to the age of 19 from all over Austria. They have the courage to express their own points of view, create inspiring images, and are able to work as a team toward a shared vision. For the create your world initiative in particular, this creative potential points to forward-looking collaborations with regional and international partners in the arts and education.



Award Ceremony *u19—create your world* 2022 with Martina Janjic (AT), Barbara Mendez (AT) / Bongos



Prix Ars Electronica Golden Nica 2023, *Fading Voices*



Prix Ars Electronica Award of Distinction 2023, *Gan Eden*

We encourage the next generation of artists to bring their individual concerns to the public and at the same time work with them to develop various formats for presenting their projects: The *u19—create your world* exhibition shows all 23 of the projects that won awards at the Prix Ars Electronica. At the *u19—create your world* Award Ceremony, we'll invite these prizewinners onto the stage. We'll also select other entrants for commissioned projects and invite them to implement Open Labs. Selected submitted animations by young talented filmmakers will be shown at the Young Animations Program within the Animation Festival.

Magic AI Workshop

Dynatrace



Magic AI Workshop



Marble Maze

In the lounge of Dynatrace and CoderDojo we invite children from 7 years on together with their accompanying persons to dive into the exciting world of artificial intelligence (AI). Together with an AI tool, visitors will invent a story on the topic of “truth” and then artistically design it with an AI illustration tool. The result can be taken home as a digital booklet and shared with friends and family. All participants playfully learn how to use AI to turn their creative visions into reality. Depending on the level of experience, different tasks are set that are exciting for beginners and experienced visitors alike.

Participating children learn to use AI in a variety of ways to create their own stories and develop a better understanding of the possibilities and limitations of AI interaction. They learn that AI can be a creative tool, but that it can also be a challenge to steer the outcome in the desired direction. This creates exciting learning moments and a lot of fun!

In addition, all visitors to the Dynatrace Lounge will experience another playful thrill: Who will manage to get as many marbles as possible through the hurdle-filled “Marble Maze” that stretches across nine monitors mounted on the wall? One thing is for sure: it won't be easy!

roadLAB

Mobile Maker*Space of the Technical Museum Vienna (AT)

“Explainers” of the Technical Museum Vienna (AT)

The Technical Museum Vienna goes mobile. The *roadLAB* is a fully equipped Maker*Space with 3D printers, laser cutter, cutting plotter, laptops, its own WIFI and much more. Visitors can focus on tinkering, designing and creating. A team of instructors with different backgrounds is available for additional support in operating the machines and in the creative process. Using a 3D printer to quickly make a new case because the old one is broken? Design a cell phone case with the help of cutting plotters or build a glowing clock with the laser cutter? What often sounds highly technical and daunting can be child's play to operate.



roadLAB is an initiative of the Vienna Museum of Science and Technology and is funded by digitization offensive of the Federal Chamber of Labour.

In workshops and activities, participants can try out digital production techniques and learn about technical implementation options.

Open Commons Linz

Labor der Zuversicht & hello world

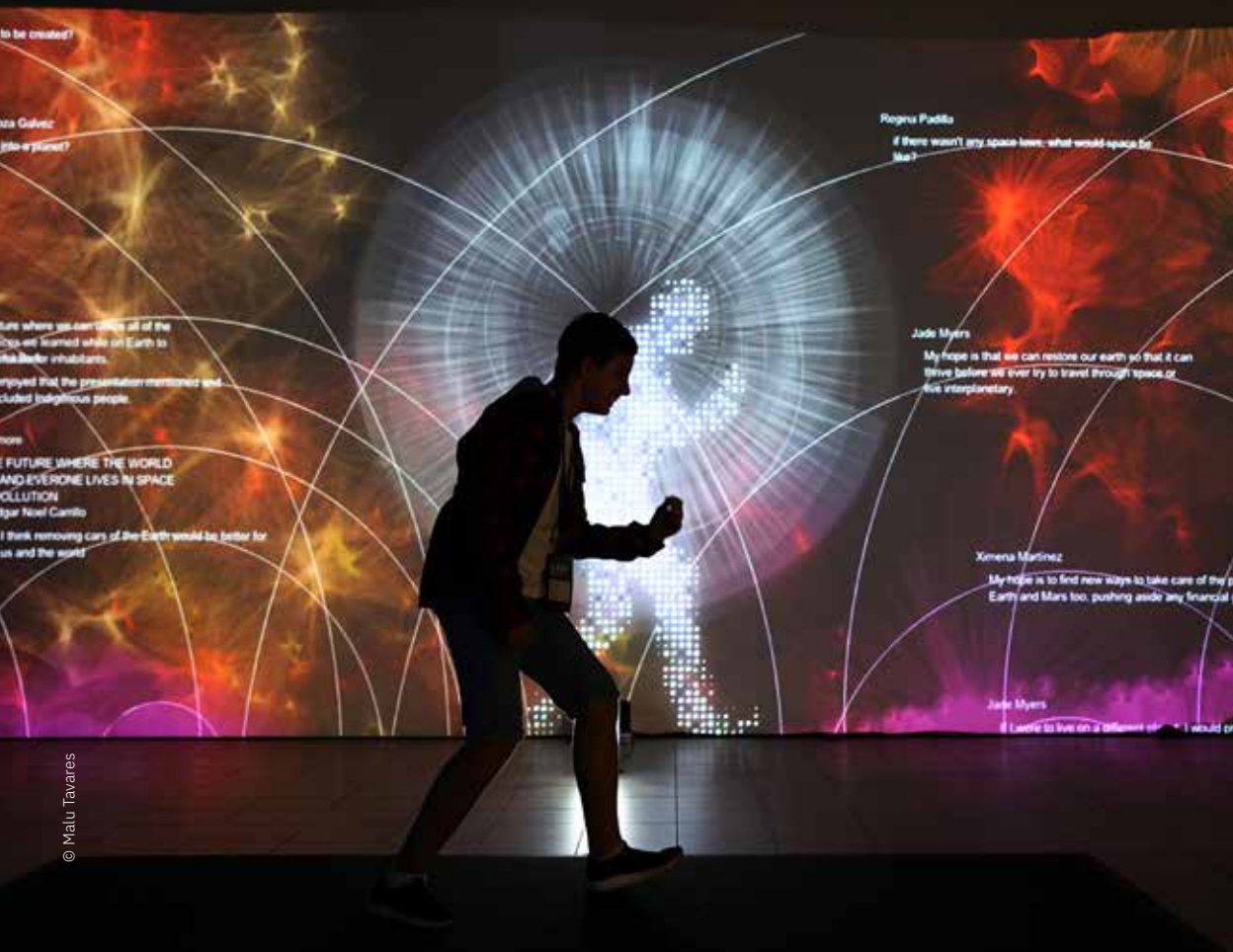
Open Commons Linz (AT), IKT Linz GmbH (AT), Stadtbibliothek Linz (AT)

Discover and develop your talents at *hello world* and in the *Labor der Zuversicht!* Here you can develop your skills in technology and media and create your own projects for a better future. Whether you have experience or not doesn't matter. We provide resources and mentoring as you bring your creative ideas to life. Build recycling robots from scrap, program them and pit them against each other in unique duels. But make sure the scrap robots don't disassemble themselves. In the colorful program of *hello world* you can playfully discover engineering and technology. Learn what code is, how programs work and how electric circuits are constructed. Get creative and express yourself with us!



© Sandra Schink

On the last day of the festival you are invited to join the Hebocon, where your self-built robot will compete against other robots in a fun competition.



© Malu Tavares

Space Messengers

An Immersive Mixed Reality installation and international youth exchange exploring the universe through art, science and technology

Agnes Chavez (US), STEMArts Lab (US), OMAI (AT), Space Messengers Collective

Space Messengers is a participatory, mixed-reality installation that visualizes thought-provoking reflections on the universe, encouraging participants to contemplate their role within it. The project evolved from an interdisciplinary and international collaboration among artists, scientists, interdisciplinary experts and youth ambassadors.

Together we explore how the arts, humanities, philosophy, physics and space technologies can

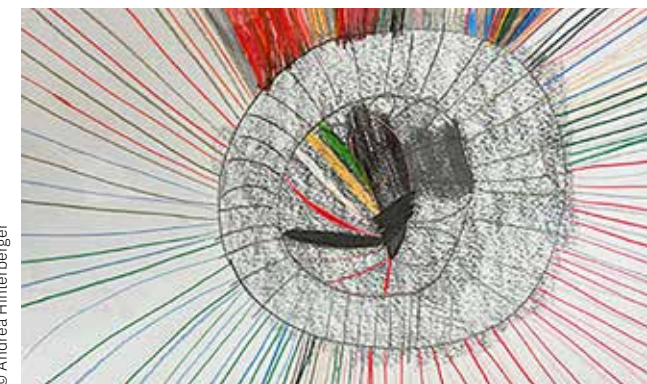
deepen our understanding of the universe and expand our identities as planetary citizens. *Space Messengers* serves as a powerful tool to ignite scientific curiosity and critical thinking, while evoking a sense of wonder through the fusion of art, science and technology.

Youth Ambassadors from Portugal and Austria participate as Experience Guides at the event running the interactive stations and sharing their experiences.

Individual Art Space

Intergalactic Space for Individual Art

Maria Reitter-Kollmann (AT), Andrea Hinterberger (AT)



© Andrea Hinterberger

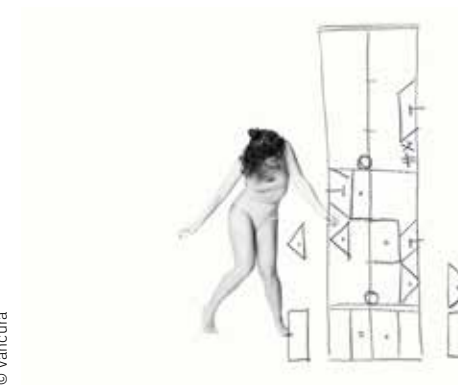
Art fulfills, inspires, makes people blossom – and helps to break down barriers and prejudices. Artists with disabilities experience this again and again. They have been artistically active for a long time, but they are not noticed. They find themselves in an intergalactic space between galaxies

– black and empty, with only a few stars shining in the form of their paintings. The question of “Where do I come from, where am I going, and who accompanies me on my journey through the galaxies?” is the central theme in the *Individual Art Space*, in which artists with impairments from KUNST St. Pius exhibit artifacts that deal with this intergalactic space. It is about visibility, appearance, perception, sensitivity, inclusion and participation. Via QR codes, which are placed next to the artworks in the black box of the *Individual Art Space*, more information can be accessed and a virtual galaxy space with works by the artists of andersART can be visited.

Body as a Medium

Labanotation explained

Miriam Kandra (AT), Ida Kieslinger (AT), Helena Vancura (AT)



© Vancura

The diploma project *Body as a Medium* is a creative book which showcases and explains the phenomena of the human body as an art medium by using the “labanotation”, a form of motion font and dancers. At create your world 2023 the

three graduates from Graphische in Vienna are transforming their thesis into an interactive project that invites people to dance and explains the concept of the dance notation system to them. Through a combination of dynamic poses, flowing fabrics and photography visitors will be able to get an impression of the “labanotation”, a motion alphabet, that is as versatile as the human body is. The visitors’ movements will be elevated onto a pedestal and presented or better said, explained, with the exact translation into the font, to further deepen their understanding. Additionally, the images created in the project *Body as a Medium* will be featured as well.

What if ... everything turns out well?

Youth Exchange project 2023

u19—create your world (AT), mb21 (DE), c3 (HU), Only Tomorrow Association (RO)

Young people from four different countries visit Linz for the Youth Exchange 2023—the 13th edition of a cultural and artistic exchange during the Ars Electronica Festival.

Based on their talents, around 15 participants between ages 16 and 21 years are selected from media art competitions from Hungary, Germany, Austria and Romania. The encounter of a variety of competences and expertise usually results in an equally multilayered project, which will be developed during the five festival days and presented to the visitors on the last festival day. The workshop, which is free of charge for the young participants, has been conducted around the

events and exhibitions at the festival, therefore the participants can explore the festival program and deepen their focus on this year's workshop topic *what if ... everything turns out well!*? The workshop aims to kickstart collaborative imagination—create together a world for dreamers, thinkers and makers, to practice free play with speculative character design, speculative fiction and future hackathon, also to figure out special needs for boosting one's own creativity. And the young participants are invited to speculate with us together and create themselves a persona within a fictional world they want to live in.

Sounds Queer Synth Lab

Sounds Queer? Collective (AT)

Sounds Queer? Collective invites the festival audience to a horizontal, pop-up synth lab organized as a picnic with various synthesizers arranged on blankets on the floor.

The idea is to create a cozy, comfortable place that invites playfulness and casual explorations. We will also prepare various microphones and Touch Board set up where participants will be able to upload their own samples and create a tentacle-like installation with random conductive objects. Secondly, each day we plan a happy hour, meaning a more structured



© Anna T.

event: Deep Listening, Gentle Feedback, Ableton User Group, Femme Pioneers in Electronic Music, and Exquisite Corpse jam session.

Powerplayground

Understanding the energy transition

Verein Energiewende Linz (AT), Helwin Prohaska (AT), Johannes Ambrosch (AT), Kristina Strauß (AT), Martin Siedler (AT), Sandro Russi (DE/IT)

What does it take for a successful energy transition in an industrial city like Linz?

With *Powerplayground* we address this topic and

try to convey an understanding of energy, energy supply in general and the scale of the energy transition in Austria. We successfully tested the format at Ars Electronica Festival 2022 and other events. For 2023 the goal is to make the already existing content more professional and expand it. A core element of the *Powerplayground* is a (VR) computer game developed

by us, which will be exhibited with new content on the topic of the energy transition and climate change.



© Martin Siedler

Fake it till you make it

It's all about your truth now

De Toneelmakerij (NL), Simon Duckham (NL), Paulien Geerlings (NL), Lot Houtepen (NL), Martien Langman (NL)

What does your ideal world look like? What do you want to change? Do you feel heard by those in power? Now is your chance to embrace their truth and share it with the world!

Philosophy, art and technology collide in *Fake it till you make it*. In an installation, you can create deepfakes of politicians and make them say anything you want them to say. We will give you tips on how to turn a fake message into a viral event. You will be able to test how fast you can spread the fake news you create.

A performance will teach visitors how to use art to persuade others. Develop your own spoken word performance with your own personal truths! We also invite you to play a game with philosophical questions about truth and trust.



© Jan Hoek

FUTURE ECHOES

Immersive theatre walk through a futuristic city

PlayOn!—New Storytelling with Immersive Technologies



© Marius Robert Zoschke

FUTURE ECHOES is an immersive theater walk that takes the audience on a journey through a futuristic city. It explores the concept of how our present actions and choices radiate into the future. *FUTURE ECHOES* will consist of three

elements: An audio walk where different voices of young people will be heard.

The creation of a robot out of electronic waste that will explore the conflicts and possibilities of future human-machine relationships. The third component consists of performative irritations that young people will create together over the course of a week in Linz. *FUTURE ECHOES* will be developed jointly by young people

from various European countries and visitors of Ars Electronica Festival.

Co-financed by the Creative Europe Program of the European Union.

The future of tourism

Oberösterreich Tourismus (AT), Fiona Klima (AT), Antonia Langer (AT), Laura Reither (AT), Lena Atzinger (AT), Emely Mair (AT), Lorenz Uhl (AT), Max Wolschlager (AT), Mara Bulajic (AT), Luis Sefcsik (AT), Sophie Dögl (AT), Samuel Klancnik (AT)



An Artistic research commission by create your world in cooperation with Upper Austria Tourism

The question this project addresses is what tourism and travel can mean for the next generation in Upper Austria. It addresses the festival visitors and young people in different ways. The space allows visitors to reflect on the topic, share ideas and participate in the discussion process. As inspiration, examples are exhibited that give an insight into the artists' projects

from the last five years. The focus is on the examination of zeitgeist and future issues. It is precisely in this environment that questions about the future of tourism can be discussed in the context of the festival. How will travel change for you in the future? How important is sustainability in tourism to you? And do sustainable products influence your purchasing decisions? What role do digital technologies

play for you in tourism? The results obtained will become a compass for future developments. Especially the discourse with young people on the future of tourism in Upper Austria provides a diverse perspective and a broader view of the challenges and opportunities. Their opinions and wishes can inspire new ideas and approaches and pave the way for sustainable and future-proof tourism development.



© Microsoft Bing

Forum: Digital Education

Martina Sochor (AT), Elke Hackl (AT), Josef Buchner (AT/CH), Hans-Christian Merten (AT), Alicia Bankhofer (AT), Ian Banerjee (AT/IN), Artist of Meditações (AT), Martin Bauer (AT), Sonja Hinteregger-Euller (AT), Jan G. Grünwald (DE/AT), Landesschüler*innenvertretung Niederösterreich (AT), Conny Lee (AT)

Although the compulsory subject *Digital Basic Education* (DBE) has recently been introduced throughout Austria's schools, there is a lack of didactic exploration of the resulting new pedagogical possibilities and challenges. Even the establishment of a separate teacher training program was foregone. However, there is no lack of expertise in Austria, as there are several projects, institutions, and individuals that are pioneers in the field of digital education. At the create your world festival, experts from various fields gather to

discuss the implications and conditions of implementing DBE in teacher education. This time, not only representatives of education, cultural studies and educational policy who will be addressing the central question of new methods for digital education. Those who (have to) deal with today's education — the students themselves — are also invited to participate in the discussion about their own future.

This program is co-funded by the Erasmus+ Programme of the European Union through the WeSTEAM project.

Symposium Perspectives on Political Education

Glue. Irresolvable conflicts or social cohesion

Arbeiterkammer OÖ (AT), Pädagogische Hochschule OÖ (AT), Ars Electronica (AT)



© Pädagogische Hochschule OÖ

whether they can only make themselves heard through actionism or whether they will also be heard and taken seriously within the existing political arenas. At this year's symposium on Political Education, the complex distribution of responsibilities in the areas of climate policy developments, digital education and new social participation structures will be addressed, discussed and examined from different per-

Our society currently seems incapable of setting a significant course for the future. Priorities, realities of life and needs seem too different to pull together. People react to this situation with apathy and fatalism or with protest and provocation. Especially for young people who want to become active themselves, the question arises

spectives. The program consists of keynotes (Barbara Blaha and Knut Cordsen), workshops, presentations and a panel discussion. As one of the highlights, young people will present their own project on the theme of the symposium. In addition, this year the award ceremony of the education prize *Klasse! Lernen* will take place.

Klasse! Lernen

Wir sind digital

The education prize of OeAD (AT), BMBWF (AT) and Ars Electronica (AT)



Main Prize He[a]rphone

A contemporary education system should teach young people how to actively shape their lives and learn in a digitalized world in a sustainable way. Progressive digitization in turn creates new opportunities to create, test and implement suitable forms of teaching for this purpose.

teachers and students. The ten winning projects selected by the jury will be presented in an exhibition at the Ars Electronica Festival and in an awards ceremony at the symposium *Perspectives on Political Education*.

© Musikmittelschule Eggenburg

Fortuna One – the Happy AI

Virtual Office FAB Linz (AT), Bettina Gangl (AT), Helmut Doblhofer (AT), Birgit Pölz (AT), Reinhard Zach (AT)



© Virtual Office – FAB Linz, Dalle

Fortuna One is a fortune reading machine telling your fate. Come into the sphere and find out more about artificial systems and what they can show us about the near future.

During a workshop with the young people of the Virtual Office in Linz, we explored how artificial

intelligence will influence our lives in the future and whether it is already possible for AI to make accurate predictions about our future. Visitors enter the crystal ball and are guided through an installation that culminates in a conversation with *the Happy AI* oracle. *Fortuna One* is a fascinating medium that offers a unique insight into one's own destiny. With profound knowledge and clairvoy-

ant abilities, the oracle is specialized in exploring the future and revealing personal paths to individuals. Inspired by the ancient Roman goddess of luck, it embodies the union of technology and magic, opening a door to new perspectives and possibilities. Where does the truth lie, what is fiction, and what is reality?

Art-Creagravity

Otelo eGen (AT), Verein Otelo (AT), Martin Hollinetz (AT), Hannelore Hollinetz (AT), Katharina Hollinetz (AT), Flora Nimue Hollinetz (AT), Eva Hübler (AT), Karim Hegazy (AT), Susanne Hörschläger (AT), Tobias Hollinetz (AT)



© Bettina Hutterer

Art-Creagravity is placed in the middle of the hustle and bustle of the festival and yet is a space unto itself. It invites you to surrender physically to gravity, to come to rest emotionally and mentally

and to connect more deeply with your senses. Colors, sounds, smells sink into the attentive inner and outer, also physical perception and

can become the starting point of an artistic creative impulse. This is additionally stimulated by selected materials and formats. The focus is on the unfolding creative process out of inner peace and "being".

Preparatory offers to increase self-awareness and relaxation accompany the participants in this creative and at the same time regenerative state. Participants can take their works with them—as an anchor to relieve the hustle and bustle of their everyday lives.

At the same time, we accompany young people in their search for ideas for possible submissions to NextGenerationYou.at, a project that promotes ideas that can be implemented in the Salzkammergut in 2024 as part of the Capital of Culture.

CECI N'EST PAS UN TOURNESOL

What do I perceive and what is my truth?

Tabea Tremmel (AT), Simon Hehl (DE), Michael Wittmann (DE), Ricarda Dorfmeister (AT), Willi Gold (AT), Alexander Mahla (AT)

We invite festival visitors to participate in our space for creating, perceiving and questioning: What do I perceive as real? Do I distinguish between analog and digital? What can I shape in my life? The space within the space can be shaped individually and collectively by all visitors. Various analog, digital and interactive elements involve the human senses. Visitors encounter the following questions, among others: Am I

part of the design process? Which narratives do I (re)produce? Is the origin or truth to be found in nature? What do I perceive and what is my truth?



© Ricarda Dorfmeister

Meet me Meta

Augmented Comics 2023

MKD—Meisterschule für Kommunikationsdesign



© INC MKD 2023

The project MKD MEETS NEXTCOMIC—Augmented Comics took place for the fifth time in 2023. The MKD-Masterclass for Communication Design dedicated itself to the topics of friendship and metaverse and proclaimed the motto *Meet me Meta*. During the COVID-19 pandemic, people learned what it means to no longer be able to meet in the physical world and to have to communicate digitally. A form of reality that is soon to surround us. The Masterclass of HTL1 Linz Bau & Design looked into this topic and created augmented reality comic works from dreams, hopes, fears and visions of the future.

Can friendships succeed in the Metaverse? What does friendship mean in the digital space? The students' comics address these questions and try to find answers.

The Truth About Being A Woman / The Hissing Booth

Mary Mayrhofer (AT), Patrick Litzlfellner (AT)



© Mary Mayrhofer

It is true that, yet again this year, we were not able to achieve absolute equality. And, unfortunately, it is also true that those people who act misogynist or sexist tend not to try to change this behavior. *The Truth About Being A Woman* aims to confront precisely these people with social problems and everyday conflicts. The Hissing Booth is based on the principle of a Kissing Booth — a small stall selling kisses, and deals with the topic in a rather humorous way. However, reference is made here to catcalling (= suggestive shouting, sexualizing comments in public spaces). This project arose from impulses, criticism and opinions of many people — especially women*. We would like to thank each and every one of those who have contributed in any way to the realization of this artwork.

MUTTER
ERDE
IS WATCHING
US  AND
SOMETIMES
IN  THE
NIGHT
SHE SINGS

Design: Studio LWZ

© radio FM4

KLASSE! LERNEN

Digital education is an ongoing process that empowers young people to actively shape their lives and learning in a digitized world and prepares them in the best possible way for the future world of work. Advancing digitization is creating more and more new opportunities for instructional design.

The Austria-wide education award Klasse! Lernen honors pupils and teachers who integrate digital tools creatively and sustainably into the classroom. It is jointly hosted by OeAD, Austria's Agency for Education and Internationalisation, the Austrian Federal Ministry of Education, Science and Research and Ars Electronica.

Musikmittelschule (Music Middle School) Eggenburg

He[a]rophone

The Eggenburg secondary music school is implementing a mobile listening station with the *He[a]rophone* project, which gives students insight into the new technology of the three-dimensional printing procedure, and how the production changes as a result. Prior to the beginning of the project, the former room for the computer science class was redesigned into an “open learning space/ future room” which serves as an experimental, creative and improving zone for students. The “MintSpace” is equipped with tool-walls, soldering stations, 3D-printers and electronic elements. With the tools required to produce the listening station, the students are able to learn about independent, creative and collaborative work with analogous and digital technologies. The main site of the listening station will be the library of the secondary music school. The station can be used during lessons, but can also be placed in in the classroom or the assembly hall. In fine weather, the station can be

put in the schoolyard, too. Moreover, in future the headphones will be recorded and programmed by students themselves. The listening station offers students the opportunity to immerse themselves in the world of audio books, podcasts or music during class, breaks or waiting periods. Hard copies of the books can be read along as required while listening to texts. A cooperation with the city library of Eggenburg is under consideration—this way different media could be exchanged regularly.

School: Musikmittelschule (Music Middle School) / Eggenburg / Student group: MINT focus / Students: Fabian A., Luca B., Lena B., Jonas D., Lena D., Leni D., Sophie D., Valentina H., Fabian K., Tobias L., Luca L., Lisa-Marie M., Marlon P., Nina Sch., Luca S. Teachers: Nora Dibowski, Karin Krottendorfer-Stift, Petra Roitner / Management and project idea: Judith Grafinger / Media designer Nora Dibowski conceives, designs and realizes analog as well as digital media, interactive room installations, workshop formats and much more in Vienna and Eggenburg. <https://www.dkia.at>



He[a]rophone © Karin Krottendorfer-Stift



Film project Reading Night © Sonja Fuchs

Bischöfliches Gymnasium Paulinum, Schwaz

Film project Reading Night

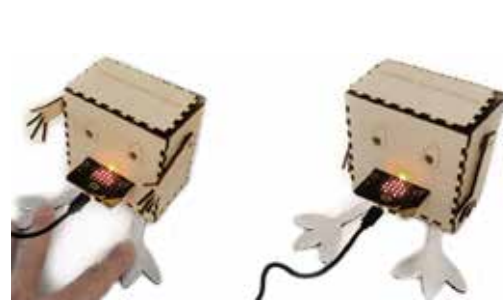
From its genesis of many small, amateurish short films created during the COVID-19 pandemic, the idea for a larger film project developed as early as the 2021/2022 school year. Within the framework of various subjects and our unique school model, a film from the horror genre titled *Reading Night* was created. After some unpleasant situations at school involving bullying, the twelve-year-old girls Johanna and Laura, the main protagonists of the film, decide to break into the school together with four other teenagers, despite the cancelled reading night, and spend the night there without the principal's permission. Mysterious things happen, culminating in the disappearance of two children. The task is to find the missing youngsters and solve the mystery of an old school scandal. However, more cannot be revealed yet! Currently, half of the film has been shot and is already partly in editing. The project will be completed by September 2023. The goal of the project is to introduce the young people to various

film techniques. The most important tasks will be carried out by students themselves. These days, young people have easy access to cameras due to the outstanding quality of smartphones. The project aims to show that there are, however, still major differences in quality between “film” and quickly shot “memes” and “snaps”. What is presented as “real” in film involves a lot of effort. For two minutes of film, three to four hours are often shot. Students also learn to work with sound programs and to make their own sound edits. Equally important for the project is dealing with topics from the world of twelve to 14-year-olds. While in the film, bullying and school stress show the negative sides of everyday school life, positive associations are also created through a deep friendship and situations demanding great courage.

School: Bischöfliches Gymnasium Paulinum, Schwaz
School group: approx. 50 students from classes 2B and 2C
Teacher: Sonja Fuchs



© Valentina Leitner, Lisa Paumann
With water for the environment



© Peter Hausegger
4CD – Fablab Ursulinen Innsbruck



© Till Weinhold
Elective subject Game Design



© Matthias Erhart
Gamification – Motivation to Learn

Lower Austrian Middle School Lunz am See

With water for the environment

The project *With Water for the Environment* builds on the guiding principle "The wise delight in water" (Confucius, 551–479). The theme is the basic element of water. In the project, this precious commodity was examined from different angles, with the goal of creating sustainable awareness and values. Cooperation with research institutions and experts rounded off the project. The students, bringing already acquired knowledge and skills in chemistry and physics to the project, explored the structure and property relationships of water applying their knowledge of the environmental relevance of the raw material. The project combines technical knowledge, social skills training and basic digital education. In the public exhibition, students communicated their acquired knowledge in short presentations. They also developed and produced a Pixi book including a researcher box. In the project day, children of the first grade

elementary school visited students of the fourth grade middle school and experimented together with the Pixi book and researcher box. The project was concluded with impulse lectures and discussion rounds on the topics of "Water & Law" and "Our Lunz Drinking Water".

School: Lower Austrian Middle School Lunz am See
School group: Bildungscampus Lunz am See: 4th grade and 2nd grade, VS
Students: 4th grade: Dominik F., Leon H., Samuel H., Andrea H., Tim J., Florian L., Gabriel M., Amelie M., Theresa P., Jonas P., Christoph S., Valenina S., Lukas S., Nikolaus St., Eric W.
2nd grade: Magdalena G., Elina M., Julia L., Sara S.
Contributors: 4th grade, 2nd grade, Participation: 1st grade elementary school
Teachers: Valentina Leitner, Lisa Paumann
Cooperation with the water cluster Lunz am See (Boku, University of Vienna and Danube University), market community Lunz am See, lawyer Mag. Marlies Teufel and former mayor Martin Ploderer.

Ursulinen High School Innsbruck

4CD – Fablab Ursulinen Innsbruck

The attached works were created in the winter semester 2022/23. The 14 students of the 4CD handicrafts group were given one semester to learn about the different technologies (3D printing, cutting plotter, laser cutter, and micro-

controller) in our school's own Fablab and subsequently apply them as diversely as possible in freely chosen projects.

School: Ursulinen High School Innsbruck, School group: 4CD, Students: 14, Teacher: Peter Hausegger

High School BG/BRG Pichelmayergasse, Vienna

Elective subject Game Design

In this elective subject, students deal with complex challenges in a creative, reflective and self-motivated way using digital games as examples, thus strengthening their 21st century skills. This takes place in two phases: First, the participants deal with analog games, which are played and analyzed. Modding is carried out and their own analog prototypes are produced. In the second phase, the acquired knowledge is transferred to the digital realm: digital games are discussed; games are designed individually and implemented within the scope of technical possibilities. Visits to events, for example, the Vienna Spielefest (Games Festival) and Game City, and discussions with experts, for example, professional game designers, deepen students'

insight into the growing games industry. The diverse challenges involved in developing games demand and promote learning, digital and life skills. Students need to draw on interconnected knowledge from language, art, mathematics and technology, demonstrating the benefit from this elective subject. The reporters are well-known at the school by now, interviews run smoothly and new exciting contributions are being developed.

School: High School BG/BRG Pichelmayergasse, Wien / School group: Students from grades 5 to 8 / Students: Nina F., Tolga E., Nicholas St., Marie St., Nico S., Andrew B., Benjamin B., Louis Ch., Adrian C., Adrian K., Imran L., Mohammed N., Maximilian O., Osman Ö., Emilio R., Maximilian Sch., Omar Z., Noorjahan Z., Linda D., Adrian G., Lennox D., Sophie K., Vivian P., Selin U. / Teacher: Till Weinhold / Thanks to Rainer Amler

Middle School Kematen

Gamification – Motivation to Learn

The aim of the project is to create a learning app that will accompany regular lessons throughout the year and introduce playful elements—keyword "gamification". On the one hand, the app should motivate students to engage with the subject matter on a daily basis (for a short period of time) outside of school hours. It should also increase motivation to complete work within the framework of regular lessons. "Gamification" gives work assignments a new aspect, since assignments are completed while many small interim goals and successes are achieved. For example, after only a short time,

a new piece of clothing can be purchased for the avatar, a new skill can be learned, or a new area can be unlocked. Additionally, the app allows students to acquire "skills" that affect real life—such as changing seats, extending the deadline for hand-ins, or even silencing other people. These skills and many other aspects of the app were co-designed or entirely created by the students themselves, which in turn leads to a greater sense of self-determination.

School: Middle School Kematen
Subject: Elective subject Robotics
Teacher: Matthias Erhart



Digital Scavenger Hunt – Path of Sustainability

Elementary school Stattegg

Digital Scavenger Hunt – Path of Sustainability

Through our current annual theme "Fair Response," our focus is on sustainability. For this, we created a "path of sustainability" together with the cultural partner "atempo", whose content focus is the 17 sustainability goals. For the project *Digital Scavenger Hunt – Path of Sustainability*, the children created ceramic objects and a digital quiz. The students chose a topic, for example, poverty, life under water or education, and created a ceramic object under the guidance of artist Barbara Schmid. The "Actionbound" app was then presented and tried out in class by the artist and our digital school assistant Anja Winkler. The children created content on the topics and filled the app with information and questions. The ceramic objects created by the students were placed around the school building.

GRG13 Wenzgasse, Vienna

Soap Workshop 4.0

The starting point for our project *Soap Workshop 4.0* was taking a closer look at the topic of sustainability. One of the objectives was to consider packaging material not as waste, but as a raw material that is recyclable.

The context of the project is the fourth media revolution. After language, writing and printing, we are in the midst of a new era: the social web is changing global communication, both in scientific and social contexts making digital education in different classes a logical consequence.

Re-used tetra packs, accumulated in high numbers on a weekly basis, are used to create molds for soap. Here, soap stands for any material that



Soap Workshop 4.0

The sustainability trail is open to the public and can be visited. It is interactive by means of the Actionbound app. Visitors can listen to short information recorded by the children at each station. Then the visitors have to answer questions, complete small tasks and take photos. At the end, they receive points for the completed tour. In this way, all are involved in the topic, the schoolchildren, parents, teachers, but also visitors from the community.

School: Elementary school Stattegg / School group: 4th grade / Students: Sophie A., Petra B., Julia B., Niklas D. Ina H., Vera J., Valentin K., Xaver K., Nino L., Marlene L. Helena M., Elena R., Emely S., Valentina S., Alexander U, Alexander V, Vanessa V, Franz W, Sebastian W, Markus W. Teacher: Michaela Köhler-Jatzko / Project partner atempo. As an employee of atempo, Barbara Schmid is responsible for the implementation of digital-creative school projects.

can be processed in a casting process. The first task was to look more closely at and to reflect on sustainability. It was amazing how quickly the students came up with their own ideas for a soap and its entire branding. In teams of two, they developed a soap including packaging and logo, the beginning of our journey towards becoming producers.

School: GRG13 Wenzgasse, Vienna / School group: 2.E Students: Alike L., Maximilian K., Lilly L., Nicolas H., Toni K., Esther J., Leonard K., Benedikt H., Leonidas L., Alexander K., Clemens K., Hemma K., Samir C., Lenya F., Luca K., Philipp G., Nicolas H., Leonie B. / Teacher: Julia Grandegger / Thanks to the Handicraft experts



PODix – Phönixschule ON AIR

Phönixschule – digiTN-Middle School Attnang-Puchheim

PODix – Phönixschule ON AIR

The students of the 3rd grade at Phönixschule Attnang-Puchheim have developed and created a podcast that will be regularly featured on the Phönixschule's website in future. The aim of the project is to publish interesting, new, exciting and educational content for fellow students. Multilingual contributions will be given ample space for children who are new to the school and whose first language is other than German. Due to the pupils' diverse linguistic backgrounds, it was natural to make the podcast multilingual. This expresses that the linguistic diversity of the children is highly valued and enriching for everyone. Our school's children speak 18 different native languages, which we recognize—unlike many—as a valuable opportunity. This project has helped boost the confidence of our students. In the process, the students have learned the importance of linguistic accuracy. Initially, potential topics were

August Thielmann, Telfs

We are under pressure!

Where does our electricity actually come from? Is there enough electricity for everyone and what can each of us do to save it? In the project *Wir stehen unter Strom! (We are under pressure!)*, the children find answers to these complex questions. Students at the August Thielmann elementary school in Telfs have been dealing with this relevant, exciting and interesting topic since the beginning of school. After a highly informative visit to the pumped-storage power plant Sellrain-Silz and fascinating research in our school library or on the Internet, the children started to build their own power plant out of LEGO. This was programmed and brought to life with the help of



We are under pressure!

collected and developed in small groups. Writing the storylines was a major part of the work, with the unexpected positive side effect of students supporting one another. The enthusiasm, care and perseverance shown during the work process, as well as the seriousness with which the children worked on their podcasts, delighted and to some extent surprised the teachers. Having professional microphones (Yeti-Pro) and editing programs like Audacity and Anchor.FM was important. The students quickly learned how to use the technology and were anxious to start recording. The reporters are well-known at the school by now, interviews run smoothly and new exciting contributions are being developed.

School: Phönixschule – digiTN-Middle School Attnang-Puchheim, School group: 3a and 3b (2022/23) Teacher: Thomas Schwaiger

SmartHubs and tablets. The result was a reservoir, a run-of-river hydroelectric power plant and several wind turbines. Particularly innovative is the residential house including a solar system on the roof, which stands on cogwheels and can thus rotate according to the position of the sun. Motion sensors, among other things, have been installed to save electricity. This is what our version of the future looks like.

Elementary school: August Thielmann, Telfs / Teacher: Anna Zigala / School group: Elementary school / Students: 13: Jonas U., Jonas Mu., Jonas Ma, Irfan, Ben, Lava, Narin, Viola, Markus, Josef, Oliver, Kilian, Paul

CAMPUS

Ars Electronica Campus Exhibition

Since 2002, Ars Electronica and the University of Arts Linz have joined forces to create an inspiring platform that showcases the talents of artists associated with international higher-education institutions pioneering innovative approaches to teaching media art and media culture. This annual event, known as Ars Electronica Campus, is more than just an exhibition; it embodies the spirit of exploration and discovery, inviting outstanding universities from around the globe to present their projects and reflect on their mission and creative endeavors. At the heart of the Campus format lies a profound commitment to exploring and visualizing diverse educational approaches in the realms of art and creativity. Through these showcases, we gain invaluable insight into the distinctive identities, histories, and contemporary practices of the invited guest universities. It is a unique opportunity to analyze and comprehend the evolving landscape of media arts and design education, where experimentation, collaboration and boundary-pushing are celebrated.

The Campus Exhibition stands as a testament to the power of interdisciplinary exchange and international cooperation, fostering a vibrant community of artists, educators and enthusiasts who collectively shape the future of media art and culture. As we delve into the works presented by these exceptional institutions, we embark on a journey of discovery, celebration and mutual inspiration. This year, the University of Arts Linz celebrates its 50th anniversary with a special theme — Radical Collectives. In response to the festival question "Who owns the truth?", the University explores the activist potential of collectives, questioning and testing their role. The theme metaphorically signifies that the search for truth involves encountering a diversity of people and opinions,

emphasizing negotiation and jointly discussing content over individual perspectives. By embracing diversity and collective approaches to resources, knowledge and skills, the University seeks to understand and address the many challenges of today and the future. In 2023, the Campus also places a special focus on the partner university in Taiwan, the Taipei National University of the Arts, whose exhibition, *Epicentrum*, fits perfectly with the University of Arts Linz's anniversary motto and the festival's theme. The exhibition reveals how organic and inorganic matter is interwoven and set in motion, drawing connections to Taiwan as an epicenter in a tense global situation and geologically positioned at the intersection of two tectonic plates.

The University of Arts Linz is also represented in the POSTCITY with the Interface Cultures exhibition, created by the students of the course with the same name. Under the motto "Resonating Selves," the exhibition delves into our interaction with the world, both real and digital, and the clash between subjective and objective reality.

At the Salzamt during the Ars Electronica Festival, contributions from another partner university, the Nanyang Technological University, Singapore (NTU), are showcased. The exhibition, subtitled *The New Aesthetic of AI in Artistic Practice*, explores how AI can foster creativity and change the way we create and experience art.

A total of 56 international universities working in the academic fields of media art, design and technology participate in the Ars Electronica Festival 2023. Through this collective endeavor, the Campus Exhibition celebrates the power of creativity, collaboration and exploration in shaping our shared future.

UNIVERSITY OF ARTS LINZ (AT)

radical collectives

The University of Arts Linz is celebrating its 50th anniversary with a special theme that runs through the entire anniversary year and that is also the starting point for reflections on the Kunstuni Campus 2023: *radical collectives* – a gesture that puts the spotlight on collectives and, above all, tests out their activist potential, but also, a possible answer to the question of who owns the truth. The collective: a response as a metaphor that focuses primarily on the diversity found in a collection of people, their renegotiated content, and the process of negotiation itself, while individuals take a backseat role within the collective. Social media and technologically enhanced platform processes celebrate individuals and their opinions, yet tend to inhibit the potential of negotiating and arguing in the greatest possible candor and diversity of approaches. This makes the search for collectives and the form of their radicality of particular significance. However, *radical collectives* do not exclusively

mean that all participants must share the same convictions and demonstrate as much in activist actions. Rather, they encourage the questioning of one's own privileges and responsibilities, bolstered by dialogue, with the goal of making social transformation possible. In the arts, collectives differ greatly from other forms of communities, seeing themselves rather as an organization for thrashing out and testing the collective stance, for challenging pooled individual opinions. The individual's interests are (usually) given less priority for the sake of the common good. What Dada, Fluxus, the Wiener Gruppe or Guerilla Girls (to name just a few influential, perhaps stereotypical, art collectives as examples) represent for the art world has already been elaborated upon and displayed in museums. However, it is in the nature of collectives in the art world to question the very institutions and art market themselves, making them difficult to plan or direct by the latter. In order to free oneself from historical images

and stereotypical notions and attributions of collectives, a pluralistic approach is needed. Further, the challenges of our time can only be understood in their diversity and multiplicity; they can only be tackled employing a collective approach to resources, knowledge and skills.

The Kunstuni Campus at the Ars Electronica Festival is thus looking for new forms of collectives and evidence of their import. To what extent can collectives exist only briefly? Who can be part of collectives? Only humans or other sources of thinking and ideas? To what extent is conversa-

tion and discourse between people and systems a hindrance or a benefit to content and its realization in the collective? How would the structure in a collective with humans differ from that containing non-humans? And what can art and activism contribute in terms of demonstrating ideas?

The Kunstuni Campus aims to explore a plurality of collectives and promote an understanding of radicality, one that is not built on ruthlessness but aims to dismantle hierarchies and create participatory and inclusive spaces in the spirit of collectivity based on equality.

Manuela Naveau

Initiator and Curator of Kunstuni Campus@Ars Electronica Festival, Professor of Critical Data at the Interface Cultures Department of the University of Arts Linz

Marlies Hajnal, Simon Hochleitner

Project Management of Kunstuni Campus@Ars Electronica Festival



POSTDIGITAL LUTHERIE

Thomas Geissl (DE)
BOT or NOT



BOT or NOT is an interactive project, a dating app that explores human-machine relationships. As technology continues to advance, questions regarding the ethics and social norms surrounding relationships with artificial intelligence are gaining importance. Will there be a future in which dating an AI or engaging in intimate activities with one is socially acceptable? What about developing feelings of love for an AI? These complex questions demand thoughtful reflection, and as society wrestles with the potentialities and consequences of AI relationships, the future remains uncertain.

© Thomas Geissl

MEDIA DESIGN

Forum: Digital Education



Although the compulsory subject Digital Basic Education (DBE) has recently been introduced throughout Austria's schools for ten- to fourteen-year-olds, there is a lack of specific

didactic exploration of the resulting new pedagogical possibilities and challenges. At the *create your world Festival*, representatives from the field gather to discuss the implications and conditions of implementing DBE in teacher education. The Forum: Digital Education aims to foster a new culture of discussion about the future of the next generation, involving politicians, media educators, practitioners, theorists and young people.

Participants: Alicia Bankhofer (AT), Ian Banerjee (AT/IN), team member of Meditações (AT), Martin Bauer (AT), Sonja Hinteregger-Euller (AT), Jan G. Grünwald (DE/AT), Landesschüler:innenvertretung Niederösterreich (AT), Conny Lee (AT), Elke Hackl (AT) / Concept: Martina Sochor (AT), Elke Hackl (AT), Josef Buchner (AT/CH), Hans-Christian Merten (AT) / Sponsors: University of Arts Linz, Institute of Art and Education, Department for Media Education, University of Education Upper Austria, Austrian Society for Research and Development in Education

TIME-BASED AND INTERACTIVE MEDIA ARTS

INTERPLAYFUL SENSORIC ENVIRONMENTS

A major area of research within the Time-Based and Interactive Media Arts Department is the playful exploration of the interactions between humans, sensors, and a high-resolution projection system. The result is a wide range of applications and artworks that invite the audience to experiment and interact, as well as live performances in collaboration with dancers and performers.

Twelve of these recent works will be presented in Deep Space 8K of the Ars Electronica Center and in Studio 1 at Hauptplatz 8 as part of the Kunstuni Campus exhibition.



Visuals: Joann Lee (KR), Performer: Geon Kim (KR)

FILMS

Helena Brunnbauer (AT)
DANCING BARK



© Helena Brunnbauer

This experimental movie explores the connection between tree bark and human skin by projecting bark onto three dancers in the studio. As the bark dances with the performers, the similarities become apparent, highlighting how both separate and protect us from the world, at the same time they are our tools to explore our surroundings. The merging of these two elements seeks to create a metaphor for the interconnectedness of nature and the human body.

Tolga Karaaslan (AT)
Memories Of The Foreign



© Tolga Karaaslan

Revisiting places and memories of Fatma Selek, the grandmother of the filmmaker, who came to Wels, Austria, in 1973 as a guest worker. Her interview from 2012 gives insight into her experiences and struggles, such as being separated from her children for years, language barriers and the feeling of being torn between two countries. Her voice is accompanied by black and white Super 8 footage of places that shaped her life in Austria. Filmed fifty years after her arrival in Wels.

Tolga Karaaslan (AT), Gizem Kuş (AT)

Gizem — Scent Of Their Flowers

© Tolga Karaaslan, Gizem Kuş



Scent Of Their Flowers deals with the desire for deep intimacy. The attempt to trust one's inner light and strengthen it. Even in seemingly dark times. This music video was made for the debut single of the band Gizem. It conveys the emotions of the song through the interplay of contemporary dance and visual elements such as colors, costume and production design.

Valentin Vojka (AT)

This is the End of us

© Valentin Vojka



This is the End of us is a short experimental film about a young witch constantly on the verge of a breakup. She appears to be stuck in an endless loop between ending and salvaging her relationship with an unseen entity, as she questions her existence in her isolated room. Over time, the line between talking and acting blurs and monologue becomes silent dialogue as an obscure power struggle reveals itself through every aspect of the film. What happens when fantasies want to live?

Friederike Weber (DE)

Das Sockenpaar und der Sockendieb

© Friederike Weber



The experimental short film is inspired by the photo film genre. It is about platonic relationships and relationships in general. The photo film questions social patterns and does so by giving insights into the relationships and autobiography of the artist herself. While leaving space for interpretation, the artist uses the autobiographical interplay of language, image and text to provoke and reflect.

Hannes Buchwieser (DE), Katarína Krupičková (SK)

MICROCOSM

© Hannes Buchwieser, Katarína Krupičková



Together with Katarína Krupičková, a concept combining contemporary dance and images from a Zeiss Primovert microscope was developed. Together, we transformed and implemented the emotions and impressions created by the confrontation with these microcosms.

Mamoun Bakour (SY), Hazem Wakaf (SY)

Compass: Dreamscape

© Mamoun Bakour, Hazem Wakaf



An experimentation of resting and rediscovering human existence, and conflict in human emotions. In a brutal world where we are driven into dealing with a new skin, what would be the feeling of the first touch?

Elena K. Richtsfeld (AT)

Atmen

© Elena K. Richtsfeld



A short film dystopia that leaves a lot of room for speculation with its experimental design. But one thing should be said: we are in a thought experiment in the distant future, society is experiencing a change and an institution is taking radical measures to reduce the human population.

Emilia Vogt (DE), Philomena Juen (AT)

lucid dream

© Emilia Vogt, Philomena Juen



In a lucid dream the dreamer becomes aware of their own actions in the dream. While dreaming the dreamer can get some control to navigate the direction of the pathway, the approach to a character or the whole environment.

Visualizing dreams is an impossible task; the spirit of a dream cannot be caught even in a lucid dream. But some images, sounds and feelings will remain.

Verena Mühling (AT), Lena Isabella Deisenberger (AT)

KIra Chatbot

© Verena Mühling, Lena Isabella Deisenberger



KIra is a twelve-second short film concerning our insecurities and fears when it comes to dating, love and truly opening up to someone. The very short, short film aims to comment on what can potentially happen when we try to outsource dealing with our love related problems and let them be solved by bots rather than laying the trust in ourselves.

Patricia Göckert (AT)

Irgendwann wirst du verstehen.

© Patricia Göckert



The movie is about giving queer people the opportunity to use their voices in order to inspire others to find theirs. It is about their stories. Stories about discrimination, suffering, oppression and fear. But also, about unconditional love and solidarity. Stories that were told bravely. The aim is to show that the dream of an equal world is far from real. This requires a lot of educational work and action. It needs people who talk, demonstrate and show that they will never lose courage.

Ariathney Coyne (US/GR), Daniela Hanelová (CZ)

ESOPTRON

© Eva Stöflin



ESOPTRON, Ancient Greek for mirror, is an experimental dance film, based on a dance duet of the same title. The project is the artists' response to the changes that accompanied the global pandemic and explores the themes of touch, seclusion, longing for togetherness and the necessity of physical contact. The film portrays two mirrored characters, representing shadow and light, taboo and norm. They long for each other and ultimately merge into one complete entity.

INSTALLATIONS

Tolga Karaaslan (AT)

Aberration

© Tolga Karaaslan



A Physical Narration Artwork that serves as visual research for a short film about a woman who lives in a fictional authoritarian Europe. When the sister of the protagonist disappears after a protest, she decides to create a universal alphabet influenced by already existing ones. Her desire is to solve the conflicts all around the world and blur borders between nations and cultures. This installation shows the desk of the protagonist with projected visuals to define the mood of the short film.

Jakob Luckeneder (AT)

Alien Harmonies

© Jakob Luckeneder



Alien Harmonies, an intriguing interactive sculpture, captivates with its enigmatic design. Crafted from black glazed clay, this unique artwork features a collection of brass touchpads. Embark on a journey of discovery as multiple participants engage with this extraordinary alien device. The touch of fingertips awakens an array of distinctive sounds, fostering collaborative exploration. Unleash collective creativity, transcend earthly confines and immerse yourselves in the harmonious mysteries of *Alien Harmonies*.

Friederike Weber (DE), Juliana Vargas Rodriguez (CO)

es mucho tiempo

© Friederike Weber, Juliana Vargas Rodriguez



es mucho tiempo is an interdisciplinary project between dance and videography, a collaboration between the artists Juliana Vargas Rodriguez and Friederike Weber. In the project *es mucho tiempo*, the artists deal with the perception of time. The project is based on a detailed study of ways of waiting and observing people in such situations. The research focuses on perceiving simple situations where through the transformation of certain objects, time is represented. In other words, where is time contained in space?

Carlotta Borchering (DE)
Posthuman

© Carlotta Borchering



Posthuman is a photo series established at an abandoned location revealing faces and their posthuman identities. The project is based on a collaboration between the Institute of Dance Arts (IDA) of the Anton Bruckner Private University and the Department of Time-based and Interactive Media Arts from the University of Arts Linz at the POSTCITY Linz.

Hannes Buchwieser (DE)
SMALL SPACES LARGE ISSUES

© Hannes Buchwieser



Using a scanning electron microscope, I analyzed hair, fibers of a sweater, a coin, dust from the laboratory and a torn piece of a passport to elicit a deeper layer of meaning from these objects than is ascribed to them in everyday life by visualizing the invisible, illuminated by light elements.

Ania Böhaker (AT)
nexus

© Ania Böhaker



nexus is an approximately 124 x 124 x 124-cm cube surrounded by tubes. These tubes are all connected to each other. There are three tubes on each side of the cube that protrude from and into the cube. Looking through one of these tubes your view is deflected by moving mirrors inside the object. This keeps creating new connections between people looking through the tubes or new views of the surroundings.

Sofia Jüngling-Badia (AT)
The most beautiful place on earth

© Sofia Jüngling-Badia



Eleven analog photographs, depicting scenes from everyday life in an unusual living situation, accompanied by audio recordings of a fragmented narrative about being the daughter of a father with dementia. The order and arrangement of the music are determined randomly, symbolizing the temporal disorientation associated with dementia and the arbitrary nature of life's challenges.

Ania Böhaker (AT)
pars

© Ania Böhaker



Divided — different opinions — separated — parties — dispute — war — conflict — different perspectives ... are some of the most important keywords in connection with the video installation *pars*. The artwork consists of an approximately 114 x 45-cm wooden, textured mural on which a chess game is projected. Depending on the viewing angle, the game can either be seen from the white or from the black perspective.

Patricia Göckert (AT)
lust

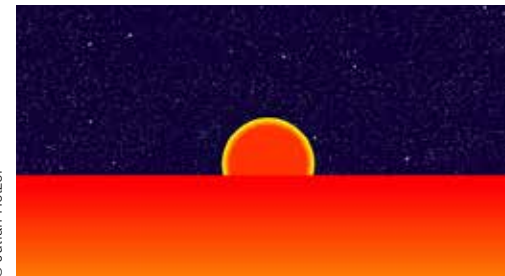
© Patricia Göckert



Female pleasure, masturbation, orgasms. Topics that are often avoided. Who is to blame? The video installation *lust* invites people to make themselves comfortable on the bed in which they can listen to female-socialized individuals who are openly talking about their lust and their experiences. The interviewees reflect and initiate a dialogue about liberating female desire. This is supported by mood images that abstractly represent the narratives.

Julian Holzer (IT)
StarryPainter

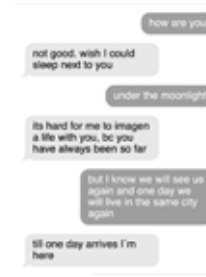
© Julian Holzer



StarryPainter is an interactive artwork that allows visitors to draw a digital starry sky. Visitors can switch between different scenes that, when viewed in detail, hide clues about the impact of human actions on the starry sky. Ultimately, the application reflects on the question: Will the starry sky be visible only digitally in the future?

Emilia Vogt (DE)
long distance

© Emilia Vogt



Text messages are the connection between long distances, written words become carriers of emotional states that are otherwise often conveyed via gestures, facial expressions and body language in general. This makes these words extremely powerful and valuable for each other. The installation illuminates this power by speaking private, emotive messages aloud.

Lisa Studener (AT)
Hysteria

© Lisa Studener



Am I allowed to be angry as a woman*? Why am I so angry? What should I do with this feeling? These are questions that many women are probably familiar with. However, in our system, women are often not given space to be angry. Annoying, demanding, sensitive, hysterical... these are all synonyms traditionally associated with an angry woman. *Hysteria* aims to challenge and question the many prejudices and stigmas surrounding “the angry woman” in order to create new narratives. (*socialized and raised as female.)

Janik Valler (DE)
RAS Awakening

© Janik Valler



RAS Awakening is an audiovisual sculpture that repeatedly comes alive, reminiscent of a futuristic being arising from slumber. Generative sounds orchestrate the sculpture’s awakening, infusing the space with an immersive audio narrative and a synchronized dance of light, rotation and glitch. It invites viewers to envision and transcend the boundaries of the known and venture into the unknown territory of the future.

Janik Valler (DE)
translucent reverie

© Janik Valler



translucent reverie is an artwork that combines various mediums to create a captivating visual experience. It seamlessly merges the physical and digital realms, blurring the boundaries between traditional art forms and contemporary technology. The interplay of the textured surface with the illuminated graphics creates a mesmerizing interplay of light, color and form. The organic motifs that emerge from the screen evoke a sense of natural fluidity, inviting viewers to immerse themselves in a dreamlike state.

Ildiko Mayr (AT)
Outside In

© Ildiko Mayr



Outside In is an interactive artwork that consists of three digital drawings showing abandoned places. Through objects shown in the drawings, the visitor can explore sound files that tell the story of what happened in these places before they were abandoned. Through sound, the places come alive again and encourage the visitor to make up the visual imagery and storytelling themselves.

Ben Ramsmaier (AT)
Neinblicke

© Ben Ramsmaier



Neinblicke is an interactive sculpture that is possessed by an evil and chaotic algorithm. Its only goal is to protect the secret lying within. As soon as one tries to find out what is hiding inside and steps in front of it, the wooden cube closes down. You have to find ways to trick it in order to catch a look inside and find out what this is all about. So far, nobody has been able to achieve this goal.

Isabel Schulz (AT)
creative differences

© Isabel Schulz



Within thirty minutes and with twenty to thirty reference images, the AI system Stable Diffusion can learn to imitate the style of any human artist. The more time is given to training, the more exact the results will be. In this work, prompts devised by participants are made into images by both the artist and an AI that has been trained in their style. In addition, the resulting image pairs are displayed for subsequent visitors. The work offers space for exchange between artists and visitors on the subject of AI-generated art and the effects that its further – unregulated – development can have.

PERFORMANCES

Daniel Bierdümplf (DE), Ben Wesch (DE/AT)
{LOW_LEVEL_LITERATURE}

© Daniel Bierdümplf, Ben Wesch



Reading and writing the unwritten onto digital papyrus
 Deciphering the unintentional
 Careful assembly of invisible particles
 creating audible pavements
 walked upon & forgotten
 piece by piece, invisible mosaics

Carlotta Borchering (DE), Semi Lim (KR), Veronika Maidukova (UA)
Paragon

© Carlotta Borchering, Semi Lim, Veronika Maidukova



Paragon is an interactive Deep Space 8K-performance reflecting on the question of space and interpersonal communication. As two characters become aware of themselves, tensions grow. Fighting for their own space means creating a collective space. When they become one and not two, they have no weight. We find peace as we belong to each other because we belong to ourselves.

Carlotta Borchering (DE), Semi Lim (KR), Veronika Maidukova (UA)
Environment

© Carlotta Borchering, Semi Lim, Veronika Maidukova



Environment (Umgebung) is an interactive space where users of the interface, the floor, can create visual content based on a simple line pattern. During the interaction the users' movement and their connection with one another are visualized and shown on the walls. This work focuses on the deconstruction of a static environment through movement thereby translating it into an organic and vibrant space. The performance visualizes the dynamic between two characters and how their interaction with each other forms and shapes their surrounding environment. While there is tension, there is peace, too.

Ania Böhaker (AT), Ariathney Coyne (GR/US), Carlotta Borchering (DE), Emilia Vogt (DE), Friederike Weber (DE), Chiara Wernbacher (AT)

NoiseRhythmLanguage

© Ania Böhaker, Ariathney Coyne, Carlotta Borchering, Emilia Vogt, Friederike Weber, Chiara Wernbacher



NoiseRhythmLanguage is a collective sound performance created by recordings of the environment. The sounds are arranged within a system ruled by noise, rhythm and language creating a unique performance of various sound patterns. The performance reflects sound clusters of the city and its diverse atmospheric spaces with various levels of volume, intensity and rhythm.

Ariathney Coyne (GR/US)

Scoring the Body: Unlocking Movement Potential

© Ariathney Coyne



Scoring the Body is a daily movement workshop that welcomes festivalgoers to take some time off, to stretch, shake, observe and research their own physicality. Through movement scores and improvisation tasks, participants are invited to reconnect to the potentialities of their own bodies and find joy in their kinesthetic experiences. The workshop is a space for experimentation and research and open to all levels of movement experience.

Alejandra Benet (ES/US), Ariathney Coyne (GR/US), Sara Koniarek (AT), Lucia Mauri (IT)

LEKANI

© Martina Pizzigoni



LEKANI is an immersive audiovisual contemporary dance performance. The powers that surveil society are invisible to the surveilled. These powers are abstract and self-regulating — applied from all angles. The boundaries between observation and surveillance become blurred. Artists and audience are immersed in a contemporary and explicit panopticon. The traditional observation tower is replaced by digital devices recreating a closed, guarded environment, resulting in a recursive relationship between surveillance and supervision. We are the observers observing ourselves.

Teodor Dumitrache (RO)
Heaven 47

© Teodor Dumitrache



Heaven 47 represents the space between reality and imagination, where the sounds of the future shape the feelings of the present. The digital sound of electronic machines, guided by the nature of the human soul, connected by an infinite number of cables, blends to create a sound that communicates feelings that are too complex to be put behind words. A performance that is not bound by genres, past or future ideas, awaits.

Daniel Haas (AT)
dBlech

© Daniel Haas



In *dBlech*, a mirror-polished metal-plate is excited with transducers, driven by audio signals, to create sound and vibration. Through the plate, the signals become audible, with its material characteristics directly affecting the sound. At the same time, the surface is deformed, visualizing the transverse waves in the mirror. The object creates sounds, reflects, distorts and manipulates light, whereby light and sound are inextricably linked since both arise from one and the same source.

BASIX_Latency, Botond Kelemen (HU), Lynn Mayya (SY)
Antichromatic

© BASIX_Latency – Botond Kelemen & Lynn Mayya



BASIX_Latency's performance creates immersive, interactive environments with generative real-time visuals and audio using a node-based visual programming language for real time audio interactive content creating a truly interactive and dynamic experience. The visuals are inspired by the connection between minimalism and the techno movement while the sound is a mixture of various elements that come together to create a deep energetic experience with infusion of acid and synth elements incorporate infectious rhythms.

Elena K. Richtsfeld (AT)
Timecats X DORFTV

© Elena K. Richtsfeld



What would happen if art students created a live show? The students of Time-based and Interactive Media Arts ask themselves this question in their attempt to break the boundaries of television. Maybe they can find answers to their question. So, switch on your tube or be there live!

Masoud Simaei (IR), Bashir Bastan (IR)
Harmony Fusion

© Masoud Simaei, Bashir Bastan



The project showcases ongoing research by presenting drafts that explore how the integration of sounds and visuals can create a captivating performance. The main objective is to establish a unified platform that harmonizes different software environments, allowing for the export and remapping of sound frequencies. The performance incorporates oscillation, 3D sound and live looping to facilitate interactive simulations between the music and visual components.

Alex Villard (MX), Jannis Labner (AT/GR)
Shattered

© Alex Villard & Jannis Labner



Shattered is an exploration of the beauty that can emerge from brokenness and vulnerability. A live performance exploring experimental electronic glitch beats, synced visuals and contemporary dance. As the music swells, the dancer is revealed on the projected stage, his movements are jerky and disjointed at first, like the broken pieces of a shattered vase. Gradually, his dance becomes more fluid, as he weaves in and out of the fragmented soundscape. Till the moment that will bring him into a grounded position referring to the Japanese art of Kintsugi.

TIME-BASED MEDIA

Emilia Vogt (DE)
Aware By Care



A space full of objects, people, needs and time. The performance *Aware By Care* combines everything using an alphabetical order of needs, and through actions taken out of daily life, brings it into another context. The performance shows a way of freeing the mind by associations and filling it again with relation.

© Emilia Vogt

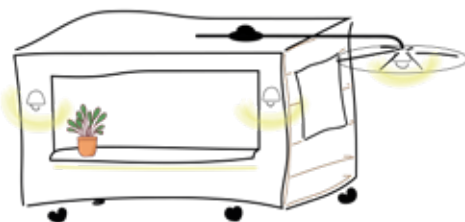
Sofiia Zeifert (RU)
What the skin says



What the skin says is a collaborative project between dancers, choreographers, visual artists and sound artists. The choreography represents the individual languages of each performer, based on their personal experience of mental and physical pain expressed through the body and words. The creative process is supported by somatic exercises and psychological methods for a better understanding of the current mental state and self-reflection.

© Sofiia Zeifert

Friederike Weber (DE), Verena Steininger (AT)
Studi-lounge



The *Studi-lounge* will launch its bar/café with an arts program and performances in the foyer of Hauptplatz 8 during the Campus Exhibition. The Lounge will welcome students and visitors for networking and exchange, delight them with drinks and cakes and, at the end of selected days, offer them a diverse program of performances, readings and presentations of various works of art. The *Studi-lounge* and the space around will create a place for seating and social exchange. The idea of the two initiators is to create a longer-term social sculpture and invite other students and artists to participate and let it grow together.

© Friederike Weber, Verena Steininger

Clarissa Cohausz (DE)
schlaftrunken



schlaftrunken is a German noun that means literally “being drunk with sleep” — describing that confused feeling after a long nap when one is unsure of the dimension they have woken up into. In Korea, people napping in public live in friendly coexistence within their habitat, embracing the act of collecting urgently needed power for whatever is next. Even if it is just the way to bed.

© Clarissa Cohausz

Lama Ghanem (SY)
El Kschk Sessions



El Kschk is a mobile sound station that roams in public space hosting musicians from all over the world and recording them with the sounds of the city on cassettes and phonograph cylinders. The musicians interact with the public by inviting them to jam and sharing their instruments. The sound station interrupts the routine of everyday life and creates new situations in the city.

© Lama Ghanem

Simon Hehl (DE)
g*ALLERY



*g*ALLERY* is a hybrid, interactive & fluid art collection — an exhibition within the exhibition. Flat screens become canvases on which modified live camera recordings are played. Viewers oscillate between artistic object and staged self. A field of tension opens up through the parallels to digital social media filters, but also to analog exhibition contexts. *g*ALLERY* is an invitation to the de:construction of un:known, ephemeral image worlds.

© Simon Hehl

Jakob Steininger (AT)
Word Of Gpd



As AI-based software and tools gain prominence, a cultural shift in our relationship with machines is taking place. With human-computer interfaces shifting towards a more interpretative, subjective and error-prone means of communication, the mystifying black box of increasingly complex technology creates the projection surface for our hopes and anxieties and opens the door to magical thinking and divine reverence in the search for Truth.

© Jakob Steininger

Thomas Guggenberger (AT)
IN MOTION

© Thomas Guggenberger



The three-channel video installation shows three dancers in infinite, vividly lit spaces that seem to have no boundaries. The dancers from the Anton Bruckner Private University in Linz move slowly and fluidly, their bodies becoming almost weightless in the ethereal environment. The use of slow-motion footage emphasizes the grace of their movements and highlights the beauty of their bodies in motion. The installation is an inviting audiovisual experience that transports the viewer into a world of light, movement and beauty.

Gabriella Vincze-Baba (HU)
V:A:D visual acoustic diary

© Gabriella Vincze-Baba



My project, which I started in the summer semester of 2022, is about the relationship between sounds and visual perception. The philosophical background is the work of Ponty: *The Perceptual Faith and its Darkness*. In the video work, I investigate in the form of a simple video diary, the different rhythms of sounds, noises and images and the resulting relationships of perception.

Sanaz Rafii (IR)
WILL YOU WALK WITH ME?

© Sanaz Rafii



The project *WILL YOU WALK WITH ME?* is an interactive video installation. Since September 2022, with all the happenings back in my home country in Iran, I went through different stages of dealing with this situation. Physically living in Austria but mentally living back in Iran. Through these thoughts, I defined this project to find out for myself and the audience about this “time” in between. An attempt to connect different worlds to each other. I am trying to find an answer to this question: is it possible to connect our inner worlds with each other?

VISUAL COMMUNICATION

All Sorts of Things... a design fiction investigating talking objects, (dis)obedient and dreaming of intelligent machines

Post-humanist design enables a world in which humans and non-humans (things) take center stage. It criticizes the exploitation of non-human species and materials. But what role do digital technologies play in this interaction? How will we communicate with our digital and intelligent things in the future? This design fiction show imagines future things and our options for action. We present different scenarios with intelligent objects that provide a glimpse into everyday situations in our near-future life:

spiritual technologies provide mind changing personal experiences with immersive jewelry, AI psychotherapy sessions invite to talk to intelligent machines with pushback, narrative space archives for media activists tell stories of freedom and resistance and sensorium kits offer a mutual understanding with plants for a more symbiotic relationship and cohabitation.

Concept and exhibition development: Barbara von Rechbach, Marianne Lechner

Leoni Demand (DE)
Artificial Therapy

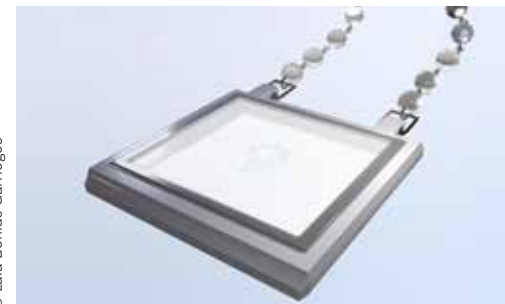
© Leoni Demand



Experience the future of talk therapy: tailored to your needs, available 24/7, practically infallible, right? Step into an intimate room and become part of somebody else’s therapy session. An embodied AI invites you to connect your smartphone, give insights into your biometric signals and open your mind to this new form of healing. Immerse yourself in this vision of the future, exploring the potential and dangers of AI-assisted therapy. Will technology become our mental health savior or a new set of challenges to overcome?

Laia Bonias Garrigos (ES)
The Omnia Project

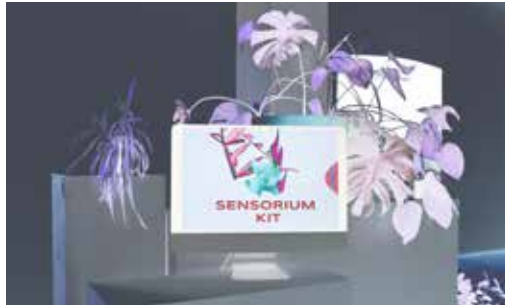
© Laia Bonias Garrigos



In an extremely individualistic future society, religion and spirituality find new relevance in daily practices and rituals. High-tech enterprises have entered this realm and offer sacred spaces where machines fuse with the human spirit. Using the image worlds of a Carmelite Scapular, *The Omnia Project* shows what could happen if a religious amulet became an intelligent tech device with mind changing features, and how this would impact us both as users and members of society.

Sophie Morelli (IT)
Sensorium Kit

© Sophie Morelli



The *Sensorium Kit* project seeks to enhance the connection between humans and plants by way of shared sensorial experiences. Users can engage through an interactive website to get a glimpse of the future kit's potential. The project intends to raise questions about connection, empathy and collective awareness, sensitizing people to the fragility of the natural world. By raising awareness and fostering a sense of responsibility towards nature, it aims to inspire positive actions for a better future.

Marianne Lechner (AT)
How are you, my digital friend?

© Marianne Lechner



Imagine it is 2040, and we live together in a collaborative network of diverse digital entities. This scenario proposes diverse entities as part of our social life – they are embodied, social and emotional. *How are you, my digital friend?* is a speculative design intervention that reconfigures the use of emotions in design practice and explores the implications of using emotions as a socio-technical entanglement in interaction design. The visual prototype, which uses “emotional matter,” enables a visceral atmospheric communication between things and people in a more-than-human world.

Bashir Bastan (IR), Masoud Simaei (IR)
ZUNITY

© Bashir Bastan, Masoud Simaei



ZUNITY is an immersive audio/video installation by Bashir Bastan that puts the audience in the flow of a modern revolution and addresses us with simple psychological questions from conflicts between the individual and society. The installation consists of collaged video loops of real-event documentary and characters from media activism during the 2023 Iranian movement led by women. Sounds by Masoud Simaei create an acoustic environment that aims to explore the relations between sound and space by creating a unique sonic landscape that responds to the acoustic properties of the installation site.

Nadja Reifer (CH), Tina Frank (AT)
many-headed (...)

© Nadja Reifer, Tina Frank



The installation *many-headed (...)* attempts to make tangible the interconnectedness of multi-headed organisms in order to enable a recollection of the interconnectedness with entities. Through a meditative milieu, at the center of which resides a living assemblage of apparatuses and glowing bioreactors with slime molds, symbiotic interconnections become perceptible through translations into sound and image, fostering new relational approaches in a shared ecosystem. In addition, the artists organize a daily “Caring & Sharing” performance together with the slime mold.

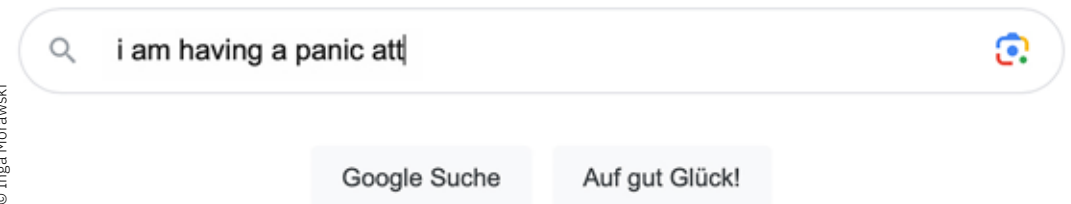
MEDIA CULTURE AND ART THEORIES

Inga Morawski (DE)
Liebes Google,

How much can we learn about a person by looking at their online activity? Would you rather reveal your diary or your Google searches? *Liebes Google, (Dear Google,)* is an installation that pres-

ents the artist's real Google searches from a time period of seven months from 2022 to 2023. Looking at the computer screen on a seemingly private desk, we are forced into a voyeuristic perspective.

© Inga Morawski



SCULPTURAL CONCEPTIONS / CERAMICS

Sheida Ramhormozihosseinzadeh (IR)

Breathing Clouds: A kinetic sculpture exploring the interconnectedness of objects and the natural world

Breathing Clouds challenges traditional value notions, embracing objects-oriented-ontology (OOO) where all objects hold equal ontological status. It urges viewers to recognize the aesthetic and conceptual worth of objects, regardless of origin or material. The sculpture explores hyperobjects, vast entities beyond human grasp. Through a dynamic, cloud-like form in motion, *Breathing Clouds* reveals interconnectedness and prompts reflection on our place in the natural world.

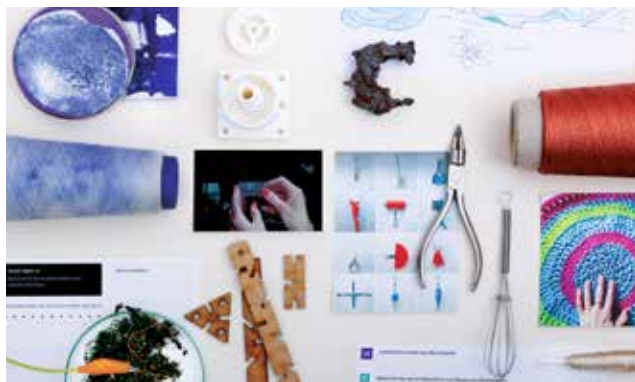


© Sheida Ramhormozihosseinzadeh

DESIGN AND TECHNOLOGY

Crafting Futures Lab

Thinking through material, touching new ideas, crafting futures — as part of this year's Ars Electronica Festival, the Crafting Futures Lab invites you to explore formats for material-based, physical interactions. We understand material processes as a form of inquiry and access to knowledge about matter, forms of production and connected personal and situated contexts, such as social, ecological or political questions. In an open lab setting, students, artists and researchers present experimental, critical and innovative approaches and confrontations with and in our environment. Visitors are invited to become a part of the lab, to interact, discuss and participate in workshops.



Concept: Irene Posch, Monja Hirscher, Julia Moser /
Works by: Anna Blumenkranz, Monja Hirscher, Lukas Hofpointner, Michael Kramer, Julian Kraus, Julia Moser, Valerie Moschner, Lilo Viehweg and others.

Co.Lab Crafting Futures Lab craftingfutures.net

FASHION & TECHNOLOGY



© Florian Voggeneder

Unusual materials open up new possibilities, The Material Intervention Lab of the degree program explores new textile territory: instead of conventionally producing and processing fabrics, experimentation, cooking and petri-dish cultivation take place here. New materials bring unusual properties to fashion, such as flexibility, brittleness or moisture. They have scents and flavors and enable local production methods of the future. Bacteria and plants offer new potentials for gently and sustainably dyeing textiles.

Seann Jawell (NL)

Do it yourself- Brain Computer Interface (DIY — BCI)



© Seann Jawell

Combining traditional skills, tech, and mindfulness, I introduce a unique approach by merging EEG and self-therapy. *DIY — BCI* offers a custom cap for ADHD and anxiety, providing hands-on kits and mental health discussions. Crochet instructions incorporate electrodes and chips for live brainwave feedback. Affordable electronics and open-source software create interactive visuals, stimulating specific brain regions. This DIY BCI toolkit emphasizes self-making, connection and simplification. Crafting personalized caps fosters self-esteem and inspires others.

Alberti Toni (DE)

Staring constantly, something constantly stares at me



© Alberti Toni

I use horror as a matrix of a world behind the world, walls of cardboard, in the flickering light of fluorescent lamps and exit signs in doorless buildings; a matrix in which fashion dreams us as people who do not exist; as bodies that cannot leave this media space and we stare at these images until they stop making sense. The silhouettes translate theoretical into physical bodies, an inversion of imagined identity on objects into surfaces, bodies into spaces.

Mira Haberfellner (AT)
Textile-ID

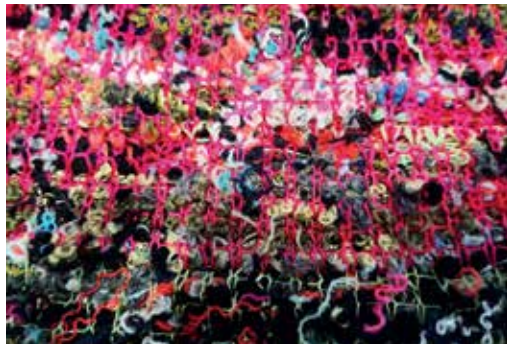
© Mira Haberfellner



The development of knit patterns with digitally readable codes enables garments and designers to communicate with wearers. Through this combination of fashion and technology, the garment itself becomes a medium that interacts with consumers, allowing them to connect more deeply with fashion and the stories behind it.

Marilies Luger (AT)
FROM WASTE TO WOW.

© Marilies Luger



Where you break an egg, you break a bone — in the specific case of the knitting industry, this means yarn waste and faulty knitted fabrics. This waste is incredibly diverse in color, composition and structure and comes to light especially at the end of the working day when the production hall is cleaned. This abundance of material inspires me to explore and raises the question of what else can be done with it.

ARCHITECTURE

Lisa Ackerl (AT), Daniel Schöngruber (AT)
urban:\GLITCH

© Lisa Ackerl, Daniel Schöngruber



urban:\GLITCH is a magazine accompanied by a research homepage. The title refers to the physical manifestation of an irregularity in the programming of urban space. The definition of an urban glitch presupposes the assumption of deliberate programming of an urban fabric and its spatial, environmental, and social impact. Urban glitches embody processes of a planning culture that have lost validity over time, have been compromised by parallel systems or contain inherent flaws in the programming code that appear to be random occurrences of different, unanticipated conditions.

SPACE&DESIGNSTRATEGIES

WAAAW World Artists Agency Against War

WAAAW is an Artistic Agency Against War. War is an unjust odyssey, in its premises and in its outcomes; war makes murder legitimate; war is a spiral at the bottom of which today there is the risk of the extinction of life as we know it. What contribution can art and design make to preventing or stopping war? Certainly, it could awaken consciences, but not only that; art and design can investigate, challenge and question war itself. So, why war? Why are we so afraid of peace? Space&designstrategies' year-long project initiated the *WAAAW Archive*, conceived as a mobile and collaborative device for all students' artworks, which will be activated around the city. The archive is a composition of diverse elements, such as a critical kitchen, chocolate weapons, moss room, border earths, pieces of peace, lost memories, anti-war laughter, a broadcasting station and more. The archive works as an interactive tool in public space to enable encounters, moments of sharing and assembly.

Wherever it stops, it communicates issues around art, war and possible strategies against it. Once a day, WAAAW will organize a walk from the main square below the foundation of the University at Hauptplatz 8, to address the history of the building and activate this invisible space to shape collective Agency.

Artists: Giulia Mazzorin, Sabine Pollak, Lorenzo Romito, Andrea Curtoni, Josef Maier, Franziska Schink, Ayan Rezaei, Xian Zheng, Berit Seidel (U5), Başak Tuna, Matteo Locci (Fonduk), Anne Laure Amilhat-Szary, Sophie Netzer, Luca Caldironi, Irina Müller, Lorenz Willer, Tomiris Dmitrievskikh, Lorenzo Iannantuoni, Viktoria Hauser, Sabrina Hauzinger, Margarita Gimaeva, Anna Proissl, Olivia Kudlich, Celeste Montales, Dzejla Cindrak, Margarira Ivanova, Shahrzad Khanmohammadihezaveh, Netanya van Dam, Michaela Všetečková, Strasser-Kirchweger, Franciska Dutzler, Chaz Gervais, Alen Panganiban, Robin Renner, Bastian Lehner, Fiona Prohaska, Alireza Karkhaneh 2 map: Eva-Maria Siegler, Rebecca Strasser-Kirchweger, Netanya van Dam, Franciska Dutzler, Michaela Všetečková, Sabrina Hauzinger



WAAAW
WORLD ARTISTS AGENCY AGAINST WAR

FACADE PROJECTIONS

Johanna Bruckner (AT), Tina Frank (AT), Claudia Rohrmoser (AT), Dagmar Schürer (AT)

we cascade

Inspired by the work processes and works of the media pioneer Lillian Schwartz, the artists develop a collaborative video work. They address the question of the origin of ideas and their transformation in networks. In a rapidly changing technological landscape of AI-based algorithms that repeat, vary and adapt existing ideas millions of times over, the artists use each

other's existing works as a starting point to create individual responses and variations on them. The vertical form of the projection is reminiscent of pop-cultural formats found in social media. Like a cascade, forms of expression, reactions, digital gestures and mash-ups of ideas flow into it.

Audio mix: Karin Fisslthaler (AT). In recognition of Lillian Schwartz (US)

Hubert Lobnig (AT), Moritz Matschke (DE)

Essay on Symmetry

The symmetrical arrangement of the bridge-head buildings at Linz's main square, and the mirror-image equality of the two façades, are the starting point for a site-specific intervention reflecting on the preference of totalitarian systems for simple forms of symmetry. The films, projected simultaneously onto the two opposing

façades by two projectors, throw the architecture off balance and turn its interior outward. Two mirror-image figures in the windows can be heard at the pigeon loft, as Sister Ray (Andre Zogholy, Samy Zogholy) varies themes and riffs from Neil Young's film music for "Dead Man".

Ruth Größwang (AT), Susanna Melem (AT), Severin Standhartinger (AT)

At the Pigeon Loft

Where there is a city, there are city pigeons. And where there are city pigeons, there is also resistance. (Fahim Amir, freely quoted after Michel Foucault) The performance moves in the tension

field between urbanity, human and animal, olive branch and fecal bomb. As "matter out of place," pigeons appropriate defensive architecture, and through sound, the public space is reclaimed.



we cascade



Essay on Symmetry

POSTER SESSION

Our poster session provides a unique platform for PhD students to present their artistic research, connecting theory, practice and critical inquiry. Students invite guest experts to explore how artistic research investigates societal issues, evokes emotions and expands artistic possibilities in the context of a poster exhibition. This confluence of artistic thinking and scientific research not only fosters a deeper understanding of the world around us but also expands the horizons of artistic possibilities.



Alexia Achilleos (CY), César Escudero Andaluz (ES/AT), Myrto Aristidou (CY), Charleen Elberskirch (DE/CH), Vanessa Graf (AT), Martin Höfer (DE), Fabricio Lamoncha Martinez (ES), HyungJun Park (KR/DE), Qingyi Ren (CN/UK/CH), Nomi Sasaki (PE/JP/CH)

ONB-Labs

ONB-Labs is the digital platform of the ONB (Österreichische Nationalbibliothek / Austrian National Library) for scientific and creative use of digital collections. Within the framework of the EU-co-funded project Open Digital Libraries, the ONB Labs invited students of the University of Arts Linz and University of Applied Arts Vienna

to participate in a Web Residency in 2022 and an Art Program in 2023. The project was initiated by Sophie Hammer and Martin Krickl from ONB Labs and has been supervised by Irene Posch and Manuela Naveau, both professors at University of Arts Linz. The observations resulted in a collaborative paper with the topic "Archiving the In-Between".

Katharina Birkmann (DE/AT)

Blumenstadt Venedig oder Die Elektrische Stadt. Exterritorial.



© Katharina Birkmann

Virtual archives are created by simultaneously "being in space", re-animating hybrid impressions of space, time, memory and knowledge. The Würstelprater and its historical development since 1895, between real places and fictional architectures, introduces concepts of representation, authenticity, visibility and stories of simulation, renaming and virtuality. The potential to make archives spatially experienceable as scripts for storytelling – documentary or fictional – enables history to be experienced and actualized as a story.

Lisa Puchner (AT)

Horizon Noise



As the horizon stands for distant desires, postcards are similarly projections of a place, staging horizons and views accordingly. Using the AKON archive, I experimented with abstraction and sonic translation of these views and horizons to have a new “look” at the aesthetics of historical postcards and how these shape our ideas of places. The thin line between earth and sky sets the tone and the missing landscape of four places is filled by the horizon’s melody.

© Lisa Puchner

Miguel Rangil (ES/AT)

Hyperconnected Past



Can artificial intelligence be a tool that speaks to us about the essence of things? Can we extract “something” that unifies a heterogeneous dataset? To address these questions, *Hyperconnected Past* uses various image generation and recognition methods based on machine learning (StyleGAN2, Computer Vision), the digital collections of AKON and Botanical Illustrations to configure a brief web essay about the essence of the image through a retrospective at the past.

© Miguel Rangil

Valentina Rodríguez (CO/AT)

Echoes of Experience



This project presents a digital open letter using Travelogues- and AKON-archives from the library’s digital collection. This work arises primarily from a sentimental relationship with the archive and personal experiences as a migrant. The starting point was the reconfiguration of the collected text to create a new metafictional archive that relates feelings of foreignness and exoticism associated with arriving in a new territory, and of course the stereotypes that this entails.

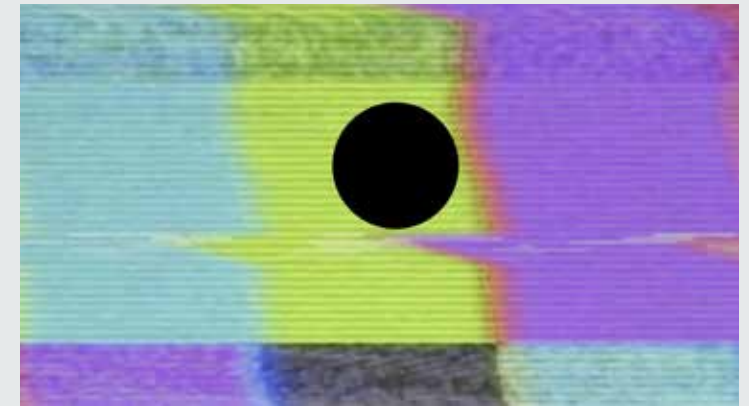
© Valentina Rodríguez

DORFTV – Radical Broadcast

DORFTV is setting a solemn sign for the long-standing cooperation with the University of Arts Linz, inviting participation in the open system of the community broadcaster. Students of time-based and interactive media art aim to “break the boundaries of television” with their contribution for one evening. In addition, the significance of fifty years of the University of Arts Linz will be reflected upon with current and former participants. Also part of the program are an Open House for the independent scene, civil society debates and live streams of projects

taking place all around the buildings and on Linz’s main square.

Daily from 5.-9.09, two to three hours of live TV at prime time.



SOUND CAMPUS

Embracing a collective and non-hierarchical approach, this year’s Sound Campus emphasizes the fluidity of sound expression and music making. Through notions of performativity and improvisation, a multidimensional stage provides a caring frame for solidarity and creation.

Since 2020, Sound Campus is a format hosted by the University of Arts Linz for students and performers to exchange and share with a wider audience. A series of performances, open sessions, radio broadcasts, workshops and itinerant installations will take place around Hauptplatz 6 during the Ars Electronica Festival.

University of Arts Linz – Inner Courtyard, Hauptplatz 6
TUE 5.9 – THU 7.9.2023, FRI 8.9.2023 Open Day
Radio, installation and open sessions
Performances: 19:00 – 22:00

Curators, organization: Gabriela Gordillo, Andreea Vladut
Technical support: Reinhard Reizenzahn, Artists: TBA,
Graphics: Viktoria Angyal



INTERFACE CULTURES

Interface Cultures at Ars Electronica 2023 – Resonating Selves

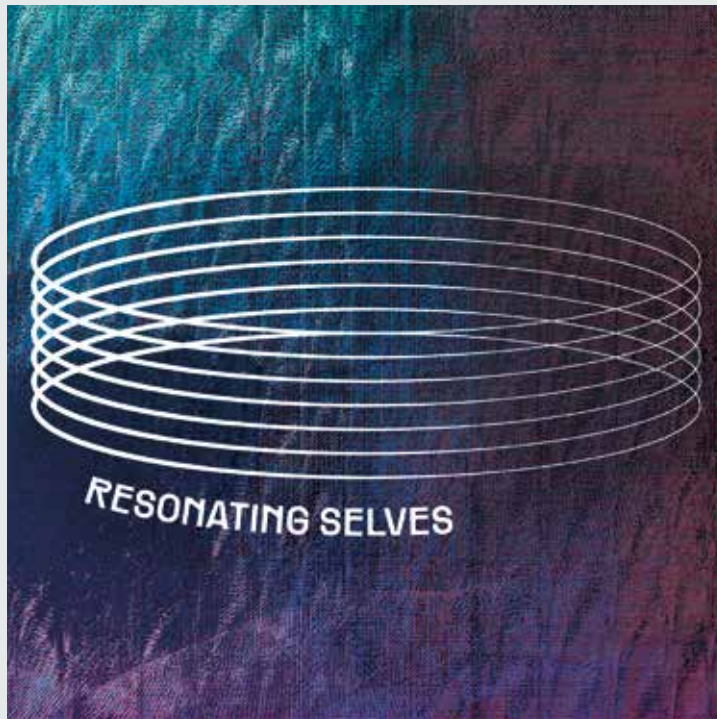
In an era in which truth is increasingly elusive and subjective, the latest Interface Cultures student exhibition *Resonating Selves* presents a captivating exploration of how our identities resonate and interact with the world around us. The fusion of technology and artistic expression enables a deeper understanding of the interplay between the digital and physical realms. Through the lens of media art, these artists probe the complexities of truth ownership and its influence on our sense of self.

The convergence of technology, particularly Artificial Intelligence (AI), plays a pivotal role in this context. AI, with its capacity to analyze and generate information, becomes a powerful tool for questioning truth and exposing the multifaceted layers of our identities. *Resonating Selves*, within the context of the Ars Electronica Festival 2023, amplifies the festival's overarching theme of "Who Owns the Truth?"

The exhibition acts as a catalyst for introspection, fostering dialogue on the intricacies of truth in our increasingly mediated and interconnected world. Each of the projects presented in this exhibition push the boundaries of our perception, inviting viewers to critically examine the dynamic relationship between human subjectivity and the objective reality we seek to comprehend. From interactive installations to immersive experiences, each artwork engages visitors in a profound exploration of personal truths and collective narratives.

As visitors engage with the artworks, they become active participants in an ongoing dialogue about truth ownership and the construction of selfhood. By navigating these immersive experiences, audiences are encouraged to question their own preconceptions, biases and societal influences. Join us on this captivating journey as we navigate the enigmatic territory of truth, technology and the resonance of our multifaceted selves. Explore the boundless possibilities of media art and experience the profound impact of AI as it shapes our perceptions of truth, identity and the complex narratives that intertwine them.

Faculty: Manuela Naveau, Laurent Mignonneau, Fabricio Lamoncha, Michaela Ortner, Gertrude Hörlesberger



Bálint Budai (HU)
999



© Bálint Budai

999 is a virtual-reality project researching the realm of psychedelic entities. Users embark on a mind-altering digital journey, through an immersive and transformative trance. Users don VR headsets and enter this ethereal landscape, greeted by a pulsating rhythmic soundtrack guiding them into a state of heightened awareness. This multisensory feast of visuals, soundscapes and interactive elements simulates a post-cyberdelic experience.

Volkan Dinçer (TR)
@theorchid_beauty



© Volkan Dinçer

In *@theorchid_beauty*, the orchid, becomes a cyborg in symbiosis with social media, revealing the relationship between capitalism and nature. This orchid survives on Instagram likes. It has its own Instagram and uses it for its own needs. When it needs water, it posts a selfie on Instagram and gets watered with likes. The anthropocentric culture of likes are phenomena that orchids, like many other species, have been exposed to for many years. This project explores potential discourses and questions about human-nonhuman relationships.

Behiye Erdemir (TR)
A Mesh/Mess Of Beings

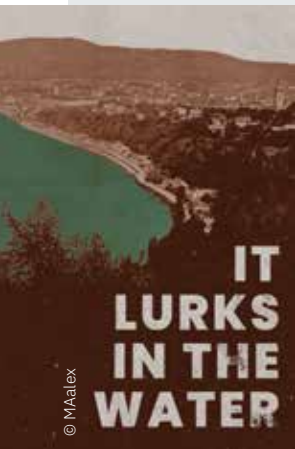


© Behiye Erdemir

Imagine being part of a network of devices. Data management sheds light on organizational challenges, misinterpretation and information transfer failure in your community. *A Mesh/Mess Of Beings* envisions an ecosystem where non-human entities prioritize their own interests, exploring absurd-yet-plausible relationships between familiar electronic devices. Devices are evolving into citizens of their own societies. This work hints at the potential for political interventions in human organizational design by transforming their functions and aesthetics.

Exhibition @ Kunsthalle Linz

Apophenia



An aesthetic presentation of speculative collective imaginaries and narratives invites the audience to question the constructed nature of our shared realities and notions of truth. Further aesthetic exploration of AI tools adds a new layer of complexity, amplifying new possibilities for biases and errors that can arise from this new shared agency. *Apophenia* delves

into the interstice of human-computer perception and our shared responsibility in the construction of our future collective realities, reflecting on the blurring boundaries between chaos and order, nature and culture, while embodying and celebrating our innate fascination and yearning to understand and make sense of the world around us.

AI Content: Miguel Rangil (ES),
Virtual Space: Till Schönewetter (DE), Ghazal Hosseini (IR)
Sound Design: Emma Tripaldi (IT)
Communication: Alessia Fallica (IT) & Martina Pizzigoni (IT)
Production: Behiye Erdemir (TR) & Hanif Haghtalab (IR),
Team: Ahmed Jamal (EGY), Aizhan Saganayeva (KZ), Danielius Marius Šermukšnis (LT), Rene Preuer (AT), Salma Aly (EG), Sofia Talanti (IT), Volkan Dinçer (TR)
Curator: Fabricio Lamoncha (ES)

Ghazal Hosseini (IR), 3D artist: Hanif Haghtalab (IR)

Behind the wall



Are scratched-out wall writings just an eyesore or are they vital messages? Writings on walls are used as a form of self-expression in societies where there is lack of freedom of speech. *Behind the wall* creates an AR portal, to show there is a life buried beneath the scratched words, revealing the message that the wall seeks to convey. This project aims to raise questions about the suppressed voices in society and raise public awareness of basic human rights.

Salma Aly (EG)

Contained Infinity



Contained Infinity explores the philosophical themes behind Khayamiya, the art of tentmaking. Khayamiya art is a visual representation of the Egyptian community and identity. Assemblage of Infinitesimals, a mathematical term, is based on the same philosophical principles. It refers to the process of summing up an infinite number of small values. *Contained Infinity* examines how humans, as simple components, are combined to create a cohesive and comprehensive visual composition. It also investigates how a single point can unfold to reveal an entire universe.

Ahmed Jamal (EG), Simon Weckert (DE)

Mirror Me!



Reflections are formed in our minds and shape our ideas about who we are. *Mirror Me!* is an attempt to answer from different perceptions, the question: Who am I? What is the nature of self-reflection and how does it shape our perception of personal identity? Viewers are encouraged to look beyond the obvious and delve deeper into the intricate connections that shape our identity. *Mirror Me!* becomes a metaphor for self-discovery, as we recognize that our identity is not isolated, but intricately intertwined with our surroundings.

LEONARDO LASER LINZ Danube Songs



Welcome to *Laser Talk Linz*, organized by the Interface Cultures department at the University of Arts Linz. In 2021, Linz joined the Leonardo LASER network. We continue our series *Danube Songs* looking into water as medium. Artists, curators, scientists, designers and architects will explore how artistic and scientific works have shaped agendas and personal relationships with this sensitive force of nature.

Hosts: Prof. Christa Sommerer (AT) & Fabricio Lamoncha (ES)
leonardo.info/laser-talks

Miguel Rangil (ES)

Future[past]



In the eyes of progress, the past is immutable. It is a crystallized mineral. It is a continuously growing, exponential segment. All the points form that line we call "History"; blessed and sacred events that have shaped our world as it is today. How can we get rid of History? *Future[past]* is a speculative device sent to Earth to process the past and transform futures. By means of an AI, it configures multiple new possible past futures, escaping ecological, political, economic and social uncertainty that defines our present, imagining other futures.

MAalex, Alex Fallica (IT), Martina Pizzigoni (IT)
I died on Facebook

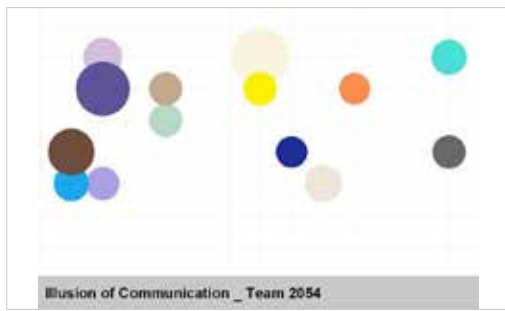
© MAalex Alex Fallica & Martina Pizzigoni



I died on Facebook is a game experience set in a cemetery, where Facebook profiles have been memorialized by their loved ones. The artwork prompts us to contemplate the impact of our immaterial selves on our physical lives, and the consequences of prioritizing our online personalities. Must we consider the fate of our digital counterparts when we die? Do they exist indefinitely, or do they perish as well? Visitors interact differently on-site or on the Internet, enabling a multi-layered engagement.

Team 2054, Joann Lee (KR), Younggon Kim (KR)
Illusion of Communication

© Team 2054



Can we achieve perfect communication? The artwork consists of three parts: “Confiding,” “Sharing,” and “Spreading.” Users can experience unique communication. “Confiding”: user conversations are transformed into visuals. “Sharing”: is an open space for artist performances and translation. “Spreading”: users share their stories speaking into a sculpture. It records and transforms stories, which are then randomly played through holes in the sculpture. People can hear stories from others and leave their own stories anonymously.

Katsuki Nogami (JP)
Skin Street

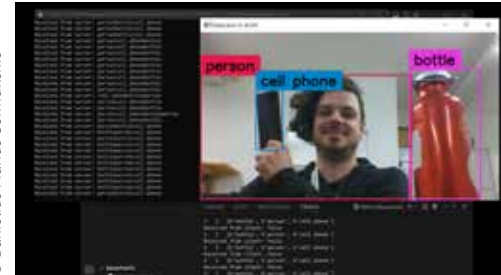
© Katsuki Nogami



Since I moved to Europe, I have often felt like an outsider because of the color of my skin. Advertisements here typically feature only white people, which reinforces my perception of being a foreign object as an Asian. Public art is an essential medium for finding my place in society. I used high-resolution images of my skin texture to fill in my silhouette and scattered it throughout the city for people who do not want to see my insides. After I experienced racism, *Skin Street* encouraged me to interact with society and expand my comfort zone in this new city.

Danielius Marius Šermukšnis (LT)
Data Trail Diary

© Danielius Marius Šermukšnis



Data Trail Diary explores current mass surveillance. Previously limited and more targeted by its physical, visible presence, surveillance is now being replaced by a relentless digital ghost, ever-present in all layers of our lives. This work is ambiguous, but also very personal and aims to bring back long-lost familiarity and physical presence of surveillance authority, while exploring the possibilities of ethical personal data storage, without losing the spirit of automatization.

Till Schönwetter (DE)
Parallax Window

© Till Schönwetter



Reality is always mediated by our perspective. Screens, through which we observe much of the modern world, continues the ancient Greek tradition of playing with our perception of images. Furthermore, reality is mediated by technology. *Parallax Window* creates an interface in which perception is not a passive act of observation but an active engagement with the world. The work allows us to see the gap between different viewpoints, creating a parallax effect.

Katherine Romero Martinez (CO)
What we like to remember

© Katherine Romero Martinez



What we like to remember is a performance and sound installation, gathering four artists from the University of Arts Linz at Interface Cultures to inquire about the nature of memory and community. Through short, nonlinear storytelling, we hope to address disorientation, dislocation and longing for home, while living in a culture and trying to speak in a language that is not our own.

Rene Preuer (AT), Ingrid Graz (AT) – LumiCore: Light-hearted Touch Interface
LumiCore: Light-hearted Touch Interface

© Rene Preuer, in collaboration with Ingrid GrazJKU

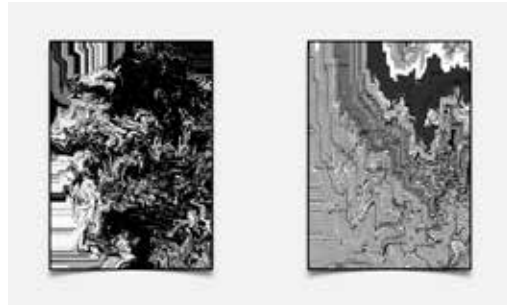


LumiCore: Light-hearted Touch Interface blends art and science, fusing tactile and visual elements with the aim of creating an interactive environment to take you on an immersive journey beyond ordinary perception. Visitors are warmly encouraged to engage with and explore illuminated pillars, bending, flexing and interacting with them to immerse themselves in this mesmerizing realm and leave their ethereal imprint on the work of art.

Maria Orciuoli (IT)

Raindrop Price Index — You Cannot Refill A Sea With Tears

© Maria Orciuoli



Raindrop Price Index features two generative animations based on measurements of terrestrial ecosystems' water balance cycles. The artist challenges the idea of capturing ecosystem value through big data and natural capital accounting. The artwork uses the ClimateEngine's 2011 — 2021 TerraClimate dataset, processed by Google Earth and obtained from NOAA and NASA by the University of Idaho's researchers. We pay homage to the Aral Sea tragedy, and we reflect on the interplay between nature, society and economic systems.

Viktória Angyal (HU)

Reconsolidated Memories

© Viktória Angyal



Recalling a past memory involves various areas of the brain and distribution throughout our neural networks. While retrieving a memory, it becomes susceptible to modification. *Reconsolidated Memories* is an interactive video installation using pictures from the artist's archive to illustrate how memories are processed and manipulated by the brain. Our memories are not static, but constantly evolving. The longer a visitor observes, the more distorted the memories become, reflecting the phenomenon of reconsolidation.

Emma Silvana Tripaldi (IT)

Resonating Absence

© Emma Silvana Tripaldi

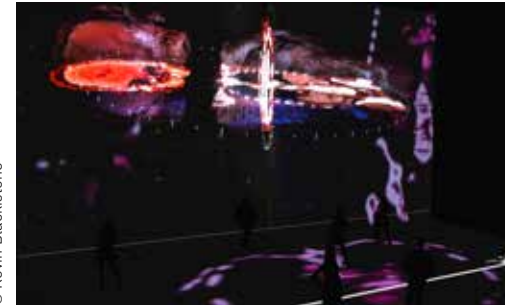


Resonating Absence is inspired by a feeling defined by the untranslatable word "Awumbuk." This refers to the melancholy and sense of emptiness that lingers after visitors have left. The work detects the presence and movement of the viewers and attempts to communicate with them, establishing contact, only to return, once left alone, to a state of silent stagnation. This is a reflection on the fragility of interpersonal relationships, encounters and the state of agitation induced by the fear of facing the void.

Kevin Blackistone (US)

Self Dissolution

© Kevin Blackistone



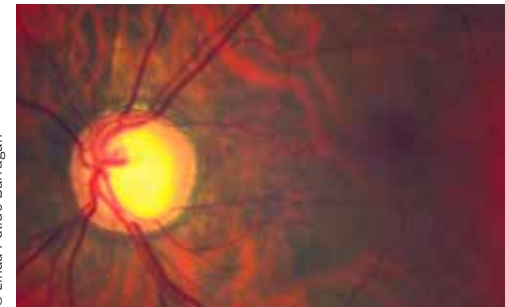
This work explores the personal interior and dissolves it through collective interaction. Participants occupying the space are scanned to reveal layers of a hybrid human radiological volume. As these layers build up, more of its form is revealed. Meanwhile, the number and proximity of individuals creates distortionary fields — blending this form into a stellar constellation. The cumulative effects of these scans and fields accelerate and expand over time until the constellation novas into self-oblivion and the cycle begins anew.

(presented in the Deep Space 8K/AEC)

Linaá Pulido Barragán (CO)

Qualia

© Linaá Pulido Barragán



In philosophy of mind, qualia is defined as instances of subjective and conscious experience. The perceived quality of experience is how it feels from the inside, how it is presented, and how things seem to us. The artwork *Qualia* is an individual immersive experience that seeks to alter the viewer's perceptually diverse range of experiencing realities. Through an optical and virtual sonic landscape, the user is induced to encounter the "reality" that is juxtaposed inside the eyeball and the image from outside. Technical support: Vahid Qaderi (IR)

Jelena Mönch (DE), Miguel Rangil (ES)

Unlearning Gender

© Jelena Mönch & Miguel Rangil



Language founds realities. Deployed vision machines encapsulate, label and categorize bodies through words. Image processing machines categorize bodies that fit into a binary worldview of gender. Reality is much more complex, a multitude of shades of grey. *Unlearning Gender* speculates on alternative modes of categorization to resist algorithmic-binary normalization. Through the symbolic hacking of the computer vision interface, the project aims to escape from gender and break with the technosocial binarisms embedded in technology.

Anton Bruckner Private University Linz (AT)

Manufacturing Audible Truth

Digital Music Focus / Artists' meeting @ ABPU

Since 2016 Anton Bruckner Private University has been hosting the *Sonic Saturday* as part of the Ars Electronica Festival. For this year's festival we will organize an artists' meeting to allow for an informal, hands-on, in-person exchange of ideas among artistic researchers working on relevant projects.

Symposium Theme

In accordance with the festival theme *Who owns the truth* the Ars Electronica digital music focus at Anton Bruckner University will focus on how the audible arts do research and question the manifold concepts of truth.

While music is a tool quite unfit for reporting the factual, it has again and again proven to be rather successful in helping to bring its audiences into agreement, which is quite understandable given

that it is a lot easier to feel part of a big group while marching (or dancing for that matter) to the beat of the same drummer, this classical tool for drowning out opposition as well as for the synchronization of movement, breath and heart-beat. Sound design, on the other hand, can play an important role in the creation of ever more *truthful* reproductions of, as well as substitutes for the (hyper-)real, more than the purely visual ever could.

With new AI tools for the automated generation and custom tailoring of the individually optimized sonic feed on the horizon, so is its potential for the (ab-)use of music for highly differentiated crowd control. Or is musical truth simply the optimal signal to feed to the receiving system, the always needy organism that the human body is?

WORKSHOPS

No One Died

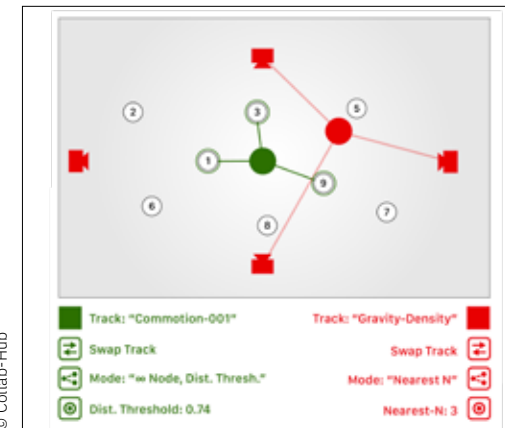
Yunyu Ong (AU)



Dive into a world of deceptive truths and immersive storytelling at the *No One Died* workshop! Explore multi-perspective sound music narratives that challenge conventional narratives through spatial audio experiences. Join award-winning composer and sound designer Yunyu Ong in a thought-provoking journey, inspired by Steve Reich's rhythmic concepts, as you become a witness, investigator and judge in a captivating multi-speaker horror audio theater. Unravel the secrets, question accepted truths and discover how truths can be shaped and manipulated in story space. This is an artistic application of dichotic listening that challenges listeners to hear multiple truths at once.

MoNoDeC: The Mobile Node Controller Platform

Nick Hwang (US), Anthony T. Marasco (US), Eric Sheffield (US)



© Collab-Hub

MoNoDeC is a multichannel audio system that uses audience members' mobile phones and IoT-hardware-driven speakers as point sources for configurable and dynamic immersive audio speakers and audience interface. Audience par-

ticipants register their current location within a customizable audience space (rows or cloud or freeform) on their mobile phones. Their mobile phones become a point source within the immersive experience (performance or installation). During a performance or installation, audience members interact with the mobile interface, which affects the experience in various ways, such as changing the musical form, drawing on a collective canvas, or changing their localized instrument timbre. A performance/installation *controller* sends audio, control and interface data to participants throughout the experience.

The workshop will demonstrate the usage of *MoNoDeC* (tool) in the context of the composition *Punctuated Equilibrium*. Participants would learn about *MoNoDeC*, *Punctuated Equilibrium* and Collab-Hub, and take turns being audience and control members.

SADISS, a smartphone-based sound system

Volkmar Klien (AT), Martina Claussen (DE/AT), Angelica Castello (MX/AT), Tobias Leibetseder (AT)



© Tobias Leibetseder

synchronized and joined together to form a Socially Aggregated, Digitally Integrated Sound System. *SADISS* is a web-based application developed at Anton Bruckner Private University (Linz, Austria) that bundles smartphones into monumental yet intricate sound systems or choirs. (www.sadiss.net)

Following a short introduction to the last iteration of *SADISS* by Volkmar Klien, workshop participants are invited to join the performance of the following compositions:

From the individual to the whole (2023) 10:00
Martina Claussen (DE/AT)

Luminochordae (2023)
Angelica Castello (MX/AT)

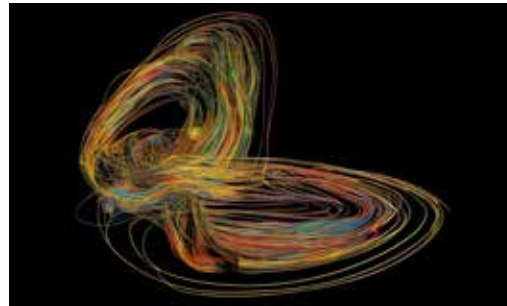
Kontur (2023) 6:00
Tobias Leibetseder (AT)

At any gathering these days you might find even more smartphones than people, all of which are equipped with loudspeakers and connected to the net; just waiting to be controlled centrally,

LECTURE-PERFORMANCES

Vibrate ResonAItE

Julian Rubisch (AT), Tobias Leibetseder (AT)



© ResonAItE by Julian Rubisch

Three performers, two of them human. A conversation between three intellects, one of them artificial.

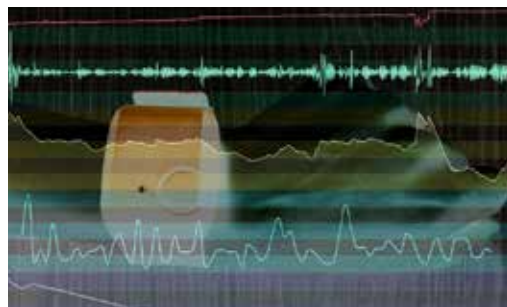
Vibrate ResonAItE connects human and artificial creativity in a dialogue of images and sound.

Mutual inspiration and provocation result in blending and diffusion of the participating minds until physical boundaries seem to disappear.

Generated images are transferred to video format, where they are processed and edited to create a seamless visual experience. The visuals are accompanied by live music that is created in real-time, based on the evolving images. Presented as a fusion of electronic and experimental elements,

Breathless

Mona Hedayati (IR/CA)



© Mona Hedayati

My lecture-performance initially provides a brief overview of a semi-generative, live sensor-to-sound performance conceptually embedded in my affective response to socio-political oppression

the live music performance acts as a dramaturgic counterpoint and connective layer. It enhances the immersive experience of the visuals, creating a multi-sensory experience that engages the audience at multiple levels.

ResonAItE as a platform and system explores the infinite possibilities of AI algorithms in the image domain. In a continuous process of image creation, an image generated from a given prompt is converted into a text description, which is subsequently fed back to create another image prompt. These feedback loops acting as quasi resonance frequencies of the cultural-historic space are questioning our understanding of source, truth and the process of creation.

The project aims to create a continuous and ever-evolving artistic experience that explores the possibilities of AI algorithms in the image domain while interacting with other artistic domains. The project thereby seeks to contribute to the ongoing scholarly discourse surrounding the intersection of art and technology, and the creative possibilities inherent in the integration of these domains.

that I am personally tied to. On a formal level, I will underscore the qualities of AI-powered immersive audio channeled into bodies that moves from particles to wave, from matter to event to build affective representations. This address will then merge into the performative section of the presentation activated by sound, during which I will recite a narrative that draws a parallel between the kind of truth produced by authoritative regimes and the definitive and terminal truths generated by machine learning algorithms both of which shape the realities of our lives. I will conclude by exposing how I use my body as a way to communicate the experience of living under such regimes of truth-making.

AI Explainability, Embodiment and Sound in Space: A Case Study

Nicola Privato (IT)



© Esther Porvaldsdóttir

RAVE is a neural synthesis model for real-time performance. It compresses high-dimensional input data into lower-dimensional representations, known as latent spaces, that can be navigated by the performer in visual programming

environments through dedicated objects. In this presentation I will reflect on the use of spatialization in a multichannel setup as a way of projecting the model's latent dimensions into the physical space, with the aim of increasing its interpretability.

In order to bridge *RAVE*'s internal representations with the outer world, I developed a compositional system based on magnetic scores and controllers that allows the design of complex performative gestures whilst retaining a high degree of independence and control over individual dimensions. After reporting on my research experience with the Tangible Music Lab's *Dodekaotto* spherical setup, I will perform live with the magnetic scores system.

Hate-follow me

Helga Arias (SP/CH)



© Helga Arias

Since the advent of the Twitter revolution and the widespread use of the internet, social media has profoundly transformed our interactions and responses during crises. It has gained a powerful and faster-than-ever influence on what is

known as crowd behavior. Recent phenomena, such as the proliferation of false information and the emergence of influencers who serve as role models for millions of followers, have given rise to a new perception of *truth*.

The spread of fake news through information cascades begins when users either lack accurate information or have a specific agenda to promote. This is where the problem starts, and as retweets or post-sharing accumulate, the dissemination of false information intensifies. As more and more people share the content, a particular post gains attention and is perceived as credible and believable. After all, if numerous individuals, especially influential ones, are engaging with it, it gives the impression of being truthful.

Machine Mourning: Beyond the Void of Extractive Listening

Daria Kozlova (UK) & Arwina Afsharnejad (DE)

Under the scorching sun on the top of the melting AI iceberg, Grimes peacefully reads *The Communist Manifesto* to David Guetta deepfaking Eminem's vocals. Google guru Ray Kurzweil floats by on a drifting ice floe. Kurzweil is waving hello and continuing a lively conversation with the AI-reincarnated double of his deceased father. Only distant twitter of stochastic parrots *haphazardly stitching together sequences of linguistic forms* interferes with the sonic idyll. But what lies beneath this pastoral landscape? What secrets hide in the murky waters of machine listening? And most important — whose voice will be heard and who is overwhelmed by the deep sea of data? In *Machine Mourning*, an interactive sonic-focused experience, based on sound datasets trained with artists' own voices, Arwina Afsharnejad and Daria Kozlova critically examine the entanglement between internet culture, pop music, digital media, military technologies, surveillance apparatus and audio data extractivism. The sci-fi plot of *Machine Mourning* unfolds at the opera premiere staged in the immersive digital environment simulating a melting glacier.

Investigating the silent violence of extractive listening, Arwina and Daria attempt to raise concerns about the shift from comprehension to operation and explore its implications for the subjectivity of human and non-human agents. The interdisciplinary research, which formed the basis of *Machine Mourning*, traces the trajectory of machine listening development from an early history marked by class inequality and bias of a different nature to current extractivist practices characterized by tech behemoths' ambitions to compute every conceivable sound. It analyses the artistic and scholarly practices of the Forensic Architecture group, Hito Steyerl, Machine Listening collective, Mark Andrejevic and Timnit Gebru, among others. In the lecture-performance, Arwina and Daria will share details of the research, the latest updates of the *Machine Mourning* development, and invite the audience to imagine collectively the depth of extractive listening pushing back from the bottom together in order to emerge beyond the void of overpowering machine learning.



© Arwina Afsharnejad and Daria Kozlova

MEDIUM SONORUM CONCERT

Dive deep into freshly made immersive electronic music with the 20.4 system of the Sonic Lab. This is a concert designed to perceive spatial music selected from the call for contributions that relates to Manufacturing Audible Truth. The program shows a variety of styles of multichannel music from around the world.



© Bogi Nagy

Sonic Lab, ABPU

La porta nel dado / (2023)

Jakob Gille (DE)

I took the wood and crumbled it up so I had nothing left but it seems that there was still something.

Do I open the door or use the sledgehammer?

La porta nel dado is an electroacoustic ambisonic composition that delves into the complex dialectic of truth and illusion in creation and destruction, offering the audience a transformative journey through an immersive sonic world. Drawing inspiration from Pierre Henry's *Variations pour une porte et un soupir* from 1963, the piece commences with recognizable soundscapes, altered and redefined by spatialization techniques. This auditory exploration progresses by deconstructing and obliterating initial sonic elements, leaving

behind a small, pulsating sphere. This sphere then expands, filling the entire ambisonic sphere and manifesting into ever-changing rhythmic patterns. As the piece progresses, these rhythms undergo transformations, eventually imploding until a seemingly divergent entity emerges at the sphere's summit, reminiscent of the original rhythms but comprising entirely novel material. Throughout the creative process, the major challenge was synthesizing diverse sonic elements into a coherent narrative about the transformational power of destruction, thereby embodying the paradoxical nature of truth — its malleability and enduring core.

FUTURE SOUNDSCAPES, a speculative electroacoustic interpretation of the soundscape of tomorrow / (2023)

Manu Meier (CH)

Changes in our environment are affecting the habitat of all species. Some factors of this change include climate change, population growth and technological development. What is becoming increasingly apparent are the interdependence and interaction of the changing conditions of all living things on Earth. The effects are apparent, palpable as well as audible on multiple levels. What does our future sound like?

The rapidly advancing development of technologies, digitization and automation, is already having a major impact on our everyday lives and will continue to have one on our sound environment in the future. Accordingly, it is assumed that our way of communication, locomotion and organization will change. Systematic analysis and control by machines will also have a major impact. What impact will this have on our future soundscape? How will machines with artificial intelligence influence this? Will there be more artificial biophony? What will become louder? What will become quieter? What will remain and what will be new? In this work, research and conversations were

conducted to investigate the soundscape, analyzing current acoustic conditions. The relationships and mutual influence of living organisms and humans in our common environment play an essential role. The study mainly considers biophony, antropophony and geophony. The acoustic conditions change through the factor of time. Parameters, such as temperature, humidity, the course of the day, the season (time) affect the sound environment. The sound sources that are most evolving or will be acoustically prominent in the future are used as source material. The rapidly transforming states of our environment are artistically represented through synthetic sound processing. Together with unprocessed field recordings, the processed sounds are composed into a multi-channel composition in an abstract narrative. Through the specific movements from sound in space, a unique and spherical ambience is created. A fictional reality or a real fiction of a future soundscape is speculatively elaborated. An auditory journey through a speculative creation of the future soundscape.

Mirror Sculpture / (2023)

Chin Ting Chan (HK)

The musical material of *Mirror Sculpture* comes from a variety of sources, including recordings of analog camera clicks, a printer at work, glass chamfering, piano strings and different synthesis models. It plays on the ambiguities between the contextualization of sound material and the use of it as purely an abstract musical gesture completely disassociated from its physical origin, as described by Pierre Schaeffer's definition of a *sound object* through the process of *reduced listening*.

The music is inspired by over twenty years of observation of a Ficus tree. While its surroundings have changed dramatically, the tree remains vigorous and intact. This shows the impact of time on things at different paces. Our perception or memory of them can vary dynamically, transforming them into a mirror that reflects who we are at different times and stages of our lives. When we are able to adapt to our surroundings with an open mind and curiosity, we not only see a clearer image of ourselves from this mirror, but also through it.

UMBRAE (Ambisonic soundscape) / (2023)

Ewa Trabacz (PL/US)

Umbrae (Shadows) is a personal reflection on fragmentation and distortion of human memory – a particular subjective distortion of reality, unique to each individual human being, yet a universal experience of humankind.

I have played a perilous game of moving a magnifying glass through my personal latent sound-space. I found it filled with glitches of corroded memories, inaccessible to another human being. A half-forgotten poem escaping translation from the language of my childhood; a disembodied scrap of a musical phrase erroneously preserved by my violinist muscle memory.

The original impulse for this piece was sparked by a glitch of personal memory, seeded by a

1920 poem by Polish poet Bolesław Leśmian titled *Departure*. The poem itself evokes feelings of grief associated with leaving something precious behind, irreparable loss and the realization of the inevitable final departure. The fragmented memories of the poem, which I memorized in my early teenage years, returned to me in shattered pieces, attached to other fragmented memories in paradoxical configurations – yet the feeling evoked by the poem not only remained, but seemed amplified. *Should one never abandon anything forever?* asks the poet. *Is this loss?* a random response generated by AI seemed to be a mockery at first, yet the question felt strikingly real.

Impulse Impromptu II / (2023)

Tolga Yayalar (TR)

Impulse Impromptu. Each piece in the series takes up an instrument and explores its sonic possibilities through virtual improvisation. The pieces explore the transformative potential of sound and challenge conventional perceptions of reality within the realm of music. Focusing specifically on the Japanese instrument Koto, *Impulse Impromptu II* takes the instrument out of its traditional context and reimagines it as a sound-emitting object.

In this piece, I delve into the sonic essence of

the Koto, utilizing its inherent sounds and the reverberations of its soundboard. By manipulating these sonic elements, I aim to transcend the instrument's conventional boundaries. One of the key aspects of *Impulse Impromptu II* is the incorporation of spatial models and High Order Ambisonics. Through these technologies, I aim to immerse the audience in an expansive sonic landscape, pushing the limits of traditional stereo imaging and inviting listeners to experience a multidimensional sonic experience.

Hypnagogic Hallucination Machinery / (2023)

Berk Yagli (CY)

Hypnagogic Hallucination Machinery is about the twenty-first-century condition. Living in a hyper consumer-based world, where everyone happily becomes a commodity to take part in society, it once again becomes crucial to question and discuss concepts of individuality, freedom, privacy and humanity. The sea of endless escapism, simultaneously fractured and monotonous people and ideas; we are now a part of the systematic

hallucination machine more than ever. This piece aims to reflect on these topics in an auditory way. This piece acts as a trajectory between unfolding realities and positing a degree of fiction to tell a story. One of the beautiful things about art and music is the ability to talk about factual matters while using abstractness to make the whole more powerful and significant through the audience's perception.

SOUND INSTALLATIONS

DodekaOTTO

Tangible Music Lab (Linz, AT) &
OTTOsonics (Ottensheim, AT)

The *Dodekaotto* is a spatial sound sculpture for the realization of hybrid sound spaces. Built from a dodecahedron structure, it provides a twenty-channel spherical multi-channel system based on the OTTOsonics infrastructure. The *Dodekaotto* has been designed at the Tangible Music Lab for the fiftieth anniversary of the University of Arts Linz.

SWYM

Jorge Gómez (MX)

Sound and visual elements forge an intricate relationship. At times, they align with the visual image, while at other times, they arise as expressions emerging from it in our minds. This interplay blurs the boundaries between image and sound, creating a sense of uncertainty that challenges our perception and prompts us to question the sources of these sounds. It invites us to contemplate whether the sounds truly emanate from the image itself or if we construct the associations within our own imagination, highlighting the rhizomatic nature of perception and the multiplicity of potential interpretations. Is there a true source? Can the event or its archive be truer than the creation of an association in our mind evoked by an audiovisual event? I by no means intend to answer these questions, but rather let them resonate within me and throughout the work.

Saxicola Rubetra L.

Sam Erpelding (LU)

Protecting an environment means that an environment has already been polluted to such an extent that some protection is needed. Before protecting something, man should save it from unwanted harm. Change as something fruitful and yet self-destructive at the same time. Space creation for the wealthy, and space elimination for the needy. Cultural heritage results not only

from high performance achievements, but also from historical buildings and ecological protection. Urban green zones, urban parks, and urban gardens to preserve biodiversity, improve the overall quality of life, and provide a safe haven for non-human earthlings. However, such green oases often project the spirit of the times, as well as the human urge to control nature. Man is now faced with the question of how wild nature is allowed to behave in areas populated by humans. A question that is also reflected in this sound installation. In this way, this installation also aims to question the extent to which artistic ecological research can promote an awareness of the loss of biodiversity with the help of imaginary soundscapes. To what extent can *audible truth* in the form of surreal soundscapes represent ecological issues?



DodekaOTTO © Tangible Music Lab



SWYM © Jorge Gómez Elizondo



Saxicola Rubetra L. © Sam Erpelding

LISTENING ROOM

During the symposium, the ABPU's Production Studio will become the space for the *Listening Room*. A studio with a 20.2 speaker array that will allow visitors to perceive multichannel music in a relaxed way. Visitors can enter, exit and move freely through the space, perceiving thirty selected fixed-media pieces from the call for contributions.



© Enrique Mendoza Mejia

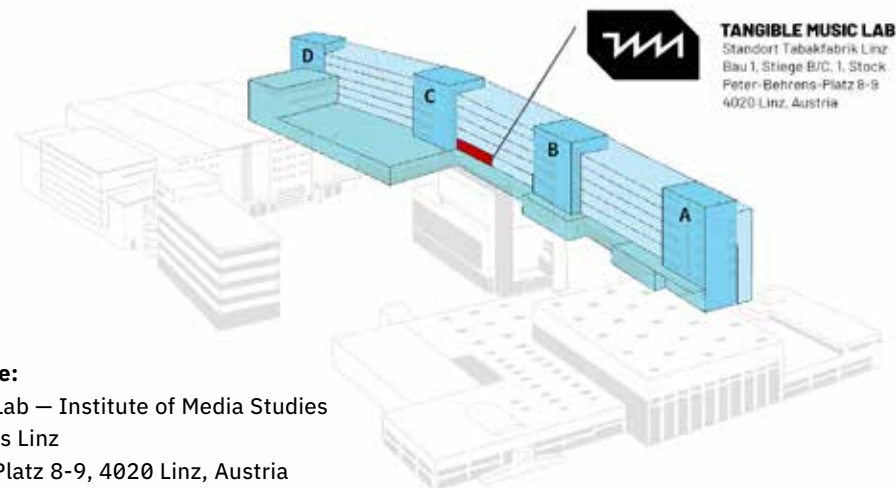
Program with selected multichannel works:

- Augusto Meijer (NL) / *Music for Churches* / 2021 / 15:24
- Bariya [Pratyush Pushkar (IN) & Riya Raagini (IN)] / *Med Dew Dims – Bromine* / 2021-22 / 16:06
- Ben Wesch (DE) / *sin of tau* / 2023 / 06:28
- Chen Te-En (TW) / *Deep Sea in the Sky* / 2023 / 20:00
- Christopher Dahm (DE) / *This is...* / 2023 / 12:06
- Daniel Mayer (AT) / *Matters 9* / 2022 / 09:15
- Domenico de Simone (IT) / *CHANCE* / 2022 / 07:10
- Emiliano del Cerro (SP) / *RESEMBLANCE* / 2023 / 10:06
- Enrique Mendoza (MX) / *Dark infinite void* / 2023 / 15:00
- Federico Pessoa (BR) / *Ocean Ontologies* / 2021 / 25:00
- Gustavo Arima (BR) / *In loco d'ogne luce muto* / 2019-2020 / 14:57
- Juan Campoverde Q. (EC/US) / *strata* / 2022-2023 / 18:00
- Kim Hedås (SE) / *Nu* / 2021 / 11:30
- Ksenia Bakhtina (RU) / *Agnus Dei* / 2023 / 10:00
- Lidia Zielinska (PL) / *Insektarion* / 2016 / 08:18
- Magz Hall (UK) & Peter Coyote (UK) / *Don't Listen Up* / 2022 / 15:00
- Marco Buongiorno (US/IT) / *I Am Not A Robot, Am I?* / 2023 / 05:00
- Masafumi Oda (JP) / *Anti-Automationism* / 2022 / 05:46
- Matteo Tomasetti (IT) / *Shaking Like Sparks* / 2023 / 08:13
- Matthias Kranebitter (AT) / *Sweet Muzic – Assoziative Musik III* / 2023 / 20:00
- Meifen Shih (TW) / *The Dawn Pilgrimage of Klbiyun* / 2023 / 05:34
- Natalia Quintanilla (MX) / *Abejas* / 2023 / 08:32
- Nathan Ó Maoilearca (IE) / *What's Alan* / 2023 / 07:00
- Nicola Cappalletti (IT) & Nicola Fumo (IT) / *PNX* / 2023 / 08:39
- Peter Trabitzsch (AT) / *Schwarze See* / 2022-2023 / 06:22
- Ruben Kotkamp (NL) / *10,000 gushes* / 2023 (revisit) / 07:56
- Sam Erpelding (LU) / *ZUR TOTEN PAPPEL* / 2023 / 18:01
- Stefan Damian (RO) / *NAUFRAGE* / 2013 / 10:46
- Thomas Gorbach (AT) / *Modulated Resonances* / 2022 / 08:14
- Yu Jinqiao (CN) / *Imagery of Note and Rhythm* / 2022 / 07:05

Brunch at the Tangible Music Lab, Tabakfabrik Linz

<https://tamlab.kunstuni-linz.at/>
9.9.2023 10:00-13:00

We will open the doors of our Tangible Music Lab for those attending this year's Ars Electronica festival. If you are interested in visiting us, we will prepare some demos, snacks and drinks on Saturday, September 9th from 10:00 until 13:00 at the Tangible Music Lab location at the Tobacco Factory Linz.



How to get there:

Tangible Music Lab – Institute of Media Studies
University of Arts Linz
Peter-Behrens-Platz 8-9, 4020 Linz, Austria

Festival X (AE) in collaboration with The Dubai Institute of Design and Innovation (AE), New York University Abu Dhabi (AE) and American University of Sharjah (AE)

Festival X Next Gen

Shedding Light on UAE Media Arts Students

The truth is multifaceted, and multiple narratives contribute to its understanding. Festival X, a novel interdisciplinary platform, existing at the intersection of Arts, Science, and Technology based in Dubai, UAE, aims to shed light on a part of the truth owned by a community that has always existed but now finds itself in the spotlight. Central to our ethos is the empowerment and fostering of youth, bringing individuals together and creating a collaborative and sustainable community that thrives on dynamic growth and collective impact. Festival X's role is to facilitate collaboration and dialogue, recognizing that by harnessing the collective knowledge and creativity of forward-thinking individuals and establishments, and driving innovation and positive change. Progressive entities such as NYUAD, AUS, and DIDI have consistently demonstrated their commitment to pushing boundaries and have emerged as the pillars of the community that Festival X aims to unite.

Through this platform, they now have the stage to tell their part of the truth, to share their insights and experiences and to showcase the groundbreaking work they have undertaken. Festival X aspires to create a regional community in Dubai, where the impact of one's contributions generate a chain reaction, leading to dynamic growth and development. This exhibition celebrates the diverse narratives that contribute to our understanding of truth through the collaborative efforts of an interconnected community.

Co-founder and Director at Festival X; Curation and Director: Amin Davaei, Assistant Professor at DIDI; Joanne Hayek, Architect, Co-Founder and Chief Design Officer of Nyxo Ltd. with the support of the DIDI Future City Lab, Curation and Advisory: Mirko Daneluzzo, Head of Interactive Media, Associate Arts Professor of Interactive Media, New York University Abu Dhabi; Curation and Advisory: Aaron Sherwood, Associate Professor, Art and Design Department, College of Architecture, Art and Design; Curation and Advisor: Zlatan Filipović, Festival X Project Manager; Rokhsana Taghvaei, Assistant: Atousa Radmanesh, Festival X Art Direction for Visual Design: Mona

Samadani, Festival X Graphic Design: Ali Rabei, Special Thanks to Christl Baur, Violeta Gil Martinez, Lisa Shchegolkova, and Mona Nateghi

Powered by LINKVIVA.

© Festival X, © Tak-On, Mohammad Reza Aleaei



Areeba Shahid (PK), Aaliyah Mohammed (IN), Rand Kachlan (SY/KN), Shamma Al Shamsi (AE), Joanne Hayek (LB), Mirko Daneluzzo (IT)

Airsense

Purifying Cities, Unifying Communities



This project stems from an interest in measuring and mapping air quality patterns in Dubai, with a higher definition than the static station method. The project consists of a wearable micro-device called *Airsense*, that people can use to track the air quality around them in real time as they move through their daily activities. The device is connected to an application that aggregates the data distinguishing indoor and outdoor environments using object recognition algorithms.

© Areeba Shahid, Aaliyah, Mohammed, Rand, Kachlan, Shamma, AlShamsi

Areeba Shahid (PK), Aaliyah Mohammed (IN), Rand Kachlan (SY/KN), Kaya Tueni (LB), Joanne Hayek (LB), Mirko Daneluzzo (IT)

Particle Cruisers



This project stems from an interest in cleaning the air while activating pockets of public space in the city proposing a series of *Particle Cruisers*: mobile outdoors furniture elements built with a mycelium body, that have the capacity to clean the air, through a mix of air-filtering plants, as well as a photo-catalytic coating that collects the PM2.5 and PM10 particles when exposed to the sun. The PCs are autonomously moving around in search of sunlight to trigger the depuration process.

© Areeba Shahid, Aaliyah Mohammed, Rand Kachlan, Kaya Tueni

Areeba Shahid (PK), Aaliyah Mohammed (IN), Rand Kachlan (SY/KN), Joanne Hayek (LB), Mirko Daneluzzo (IT), Suad Alfardan (AE), Ayesha Taher (IN)

BaTree



This project studies a real-time mapping of the micro-wind patterns in comparison with the prevailing winds expected in Dubai. *BaTree* makes use of custom machine-learning tools and algorithms to extract from video recordings the wind intensity and impact on palm trees' movement. The study highlights the importance of quantifying and mapping the micro-wind flows and proposes to transform the movement of the palm tree leaves into electrical energy using piezo-electric technology.

© Areeba Shahid, Aaliyah Mohammed, Rand Kachlan, Suad Alfardan, Ayesha Taher

Ahmad Saleh (AE), Joanne Hayek (LB), Mirko Daneluzzo (IT)

Hacking Heat

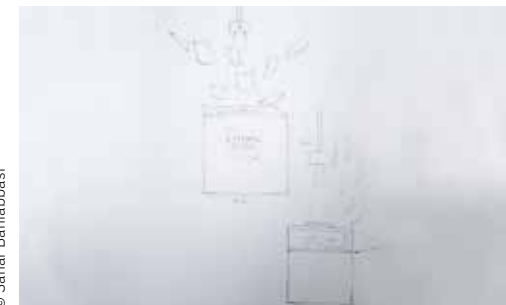


© Ahmad Saleh

This project stems from an interest in urban heat waste as a source of pollution and potentially a source of energy. Focusing particularly on the heat wasted by AC units in Dubai, *Hacking Heat* proposes to implement a system of real-time mapping to measure and compute the amount of heat generated by the AC exhausts throughout the year in different neighborhoods and areas of Dubai, with a view to proposing methods to repurpose it as a source of energy.

Sahar Baniabbasi (IR)

Eternal Echoes

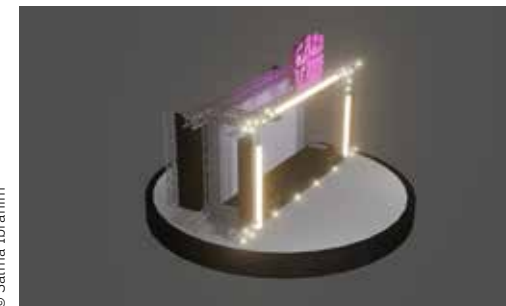


© Sahar Baniabbasi

Eternal Echoes is a project showcasing the impact of timeless storytelling on today's society by focusing on two world famous books: *Frankenstein* by Mary Shelley and *1984* by George Orwell. It does so via short animations projected on top of a blank book and a voice-over explaining the significance of each book and the warnings they aimed to project to future generations.

Salma Ibrahim (EG)

Calibeaute



© Salma Ibrahim

Calibeaute is an interactive installation that dives into the dark underbelly of toxic beauty standards. Through an interactive physical installation and exhibit, it sheds light on the manipulative tactics employed by the beauty industry, which prey upon our insecurities and coerce us into conforming to unattainable ideals.

Tasneem Abdel Fattah (AE)
4 O'Clock



4 O'Clock is a first-person narrative 3D game that discusses the speed at which time passes us by, and presents topics including work, time and death. Led by your higher consciousness in the shape of a fish, explore the terrains of life while you consider philosophical questions on time and how you spend it.

© Abdel Fattah

Sarah Al-Yahya (JO)
YOU ARE NOT HERE



YOU ARE NOT HERE is a durational interactive installation that explores misrepresentation on typical maps. It encourages audiences to engage in counter-mapping by pinning locations on an unlabeled map, meaning it does not contain any labels, and pins contributed by users are not geo-tagged, but placed in a grid on top of the traditional map. Over time, contributed pins will cover the original map, creating a new representation of the world that does not rely on the optics of colonial mapping.

© Sarah Al-Yahya

Dhabia AlMansoori (AE), Joseph Hong (KR)
The Oasis



The Oasis is a set of mechanical lotus flowers that interact with light in order to challenge the presumption of a lifeless, barren desert. The flowers are designed to be static artworks, buried into the crests of sand dunes. As the sun descends below the horizon, the flowers come to life, blooming as they cast a soft light onto the sand below and transforming the space around them.

© Dhabia AlMansoori

University of Applied Science Berlin, School of Culture and Design, Department of Communication Design (DE)

Artificialism

Artificialism describes a child's assumption about the creation of objects or things. In this, children assume that things are artificially created by human hands or by God. In the relationship between humans and artificial intelligence, it is existentially unclear at the moment who is the child making assumptions and who is the thing being created. Who is truthful: carbon or silicon? Who is actually constructing the reality we will believe in?

The works shown in the exhibition are use cases that demonstrate both the social and scientific relevance of artificial intelligence. They convey media competence, allay fears, develop critical faculties and represent relevant experiences for users. It is about understanding and applying artificial intelligence, creating hybrid spaces between reality and virtuality, enabling alternative access and showing people realities that will change their subjective perceptions.



Artificial dialects © Rosa Pernthaller

We confront truths, show what escape means, experience the beginning of change, set off into the future, dance with A.I. and push people over the threshold of death. What a brave new world, because God is dead!

Curator: Prof. Andreas Ingerl, Technical Director: Thomas Kemnitz, Mentors: Maria Bürger, Mykala Hyldig Dal, Prof. Pablo Dornhege, Oliver Feichtinger, Felix Kapolka, Prof. Alexander Müller-Rakow, Prof. Dr. Erik Rodner, Moritz Schell.

Kaja Mussenbrock (DE)
Artificial dialectics

The search for truth and knowledge is intrinsic to humankind. Theories, theses, reflections and refutations progress with us and are always somewhere a testimony of their time. With regard to the development of artificial intelligences, questions of truth take on new dimensions, which perhaps also need to be explored reflexively. If one enriches the binary nature of true/false with truth theories and allows them to draw their own parallels and conclusions, what new horizons of action and thinking might possibly arise?

Linda Maas (DE)
The Vanish

The interactive VR experience *The Vanish* brings one of the most serious human diseases to life: amyotrophic lateral sclerosis. *The Vanish* is a 20-minute, immersive, narrative experience that ranges between a film and a game. The viewer slips into the role of the patient and experiences the symptoms of paralysis on his or her own body. The developer tells her own family fate with this work, which was created as part of her bachelor's thesis as her first work in VR.

Daniela Vogel (DE)

In the Eye of Humans

In the Eye of Humans demonstrates that human perception is an essential part of artificial intelligence. The interactive installation shows the results of a generative AI, on the one hand as raw data, and on the other hand as visual data. Only in the eyes of people does this data acquire meaning.

Andi Mazreku (XK), Emilia Vivian Gentis (DE)

Scanopticon

Scanopticon was created within the main project *Augmented Reality—how can we decolonize the digital sphere?* Surveillance capitalism manipulates self-identity, limits data control, raises technology's impact on self-identity and exemplifies the panopticon's hypervigilance. Augmented reality overlays digital information onto the physical world. The physical and virtual realm mesh into one.

Hilda Hedberg (SE), Nico Petermann (DE),
Anna Lena Reisinger (DE)

RIOT

The VR-Experience *What happened at the Stonewall Inn?* shows an important milestone in queer history: the Stonewall riots of 1969. The oppressed queer community of New York defended itself against police arbitrariness, abuse and violence. The riots resulted in the CSD, which is now celebrated annually all over the world. Immerse yourself with our VR-Experience to the bar where it all began, the Stonewall Inn.

Masha Maksimova (RU), Ekaterina Tuchina (RU)

AINIMA

AINIMA is an exploration of human-AI interplay through a short film, dance and animation. It examines the balance of cooperation and competition, and the duality of fascination and apprehension towards artificial intelligence. As every live-action frame morphs into an artwork, the boundary between a dance and a confrontation fades, prompting a reevaluation of our perception of reality in this digitally influenced world.

Philip Gerdes (DE)

inter

Truth often implies a sense of objectiveness despite its ability to be highly subjective. What an individual considers to be true is the result of a decision-making process involving societal context and personal experience. The transformative nature of both facilitates an understanding of truth as a fluid construct with the ability to evolve. Combining many of these singular impressions into one might reveal an unseen artifact somewhere between subjectiveness and objectivity.

Carla Noëlle Martini (DE), Valeria Schwindt (DE)

Canvas of Consciousness

Our minds continuously generate an infinite stream of thoughts as we interact with the world around us. Every day we create approximately 60,000 of them, both conscious and unconscious. Even during moments of rest, our brains continue to stay engaged. Still, we rarely actively question the process of thinking as it is. *Canvas of Consciousness* — an interactive kinetic installation controlled by an EEG headset — encourages us to adopt a new perspective on this essential yet abstract phenomenon.

Tijana Mirjagic (DE), Maksym Pidluzhnyi (UA),
Maksym Ponomarenko (UA), Anastasiia
Vishnevskia (UA)

Tactile music interfaces

The interactive application was developed with the aim of providing inclusive access for blind and visually impaired people and was created in cooperation with the Museum of Musical Instruments (MiM) in Berlin. The three musical interfaces are each inspired by historical musical instruments in their functionality and appearance. These are the hurdy-gurdy, the clavichord and the shelf. By touching or pressing these tactile interfaces, the samples of the respective exhibits produce sound and encourage visitors to make music.

University of the Arts Berlin (DE) and Technical University Berlin (DE)

MA Design & Computation, New Practice in Art and Technology

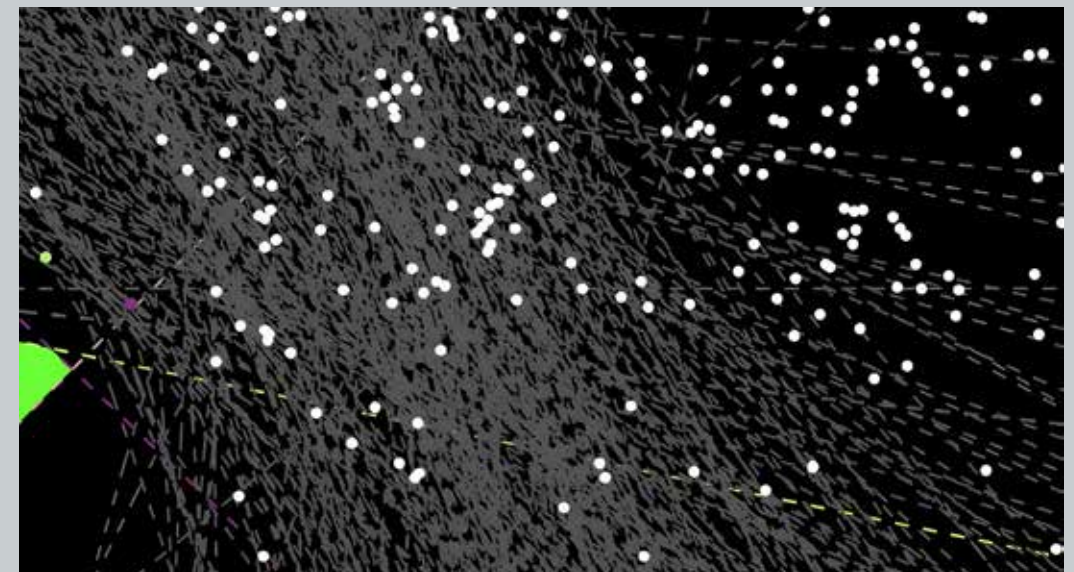
How do we engage with the rapid transformations caused by technological systems and their vast social and cultural effects? Virtual identities, spaces, infrastructures and models are becoming increasingly recursive, latching onto the physical and the metaphysical, inscribing their logics into bodies, landscapes, geopolitics and culture. This year, the first master works from Design & Computation are on display, focusing on aspects of virtuality through the lens of identity and space. They are joined by works from the master of art's current year-long research studio, bringing together students from a large variety of previous fields of study and testing, probing and developing new media, materials and methods in their interdisciplinary project work. Students and researchers in this model program have access to a broad curriculum including the most diverse teaching and research cultures, merging together both theoretical and practical approaches.

The program's research platform New Practice in Art and Technology brings together the research activities emerging from the master's program, creates networks through its weekly event series inviting artists and scientists from diverse backgrounds and fields, and provides a space for publishing both artistic and scientific work.

www.newpractice.net

Studio Design & Computation

The research studio at Design & Computation presents works around its yearly theme, starting from Bruno Latour's notion of the "Terrestrial" as a mode of inhabiting both a local and global scale. By superimposing layers of technological, ecological and (geo)political forces, the separation of material and megastructure, local and global, starts to fray at the edges. The project-based studio brings students from highly diverse fields of study together in interdisciplinary formations, inviting them to challenge and expand their previous practices and modes of research.



Studio Design & Computation

Kinan Sarakbi (SY), Lucy Rolbin (DE)

Hyperspace



© Kinan Sarakbi, Lucy Rolbin

Hyperspace fosters a palpable link between individuals and their surroundings, forging a tangible connection. It invites visitors to actively partake in a reciprocal conversation with an interactive environment, where the amalgamation of multi-sensory encounters blurs the demarcation between the physical and the virtual realm. As a result, human actions and spatial configuration become intertwined, defying traditional perceptions of space. By challenging established notions of spatiality, *Hyperspace* crafts a dynamic environment that continuously evolves in response to visitor interactions.

Jonny-Bix Bongers (DE), Christian Schmidts (DE/RO), Orhun Mersin (TR), Fang Tsai (TW/DE)

O cea n fli g ht



© Jonny-Bix Bongers, Christian Schmidts, Orhun Mersin, Fang Tsai

The performance questions how we present ourselves in the digital realm, exploring avatars and metaverses as essential aspects of our future society. This piece uses digital media to foster self-expression and community formation, departing from traditional forms of representation. Drawing on Gilbert Simondon's theory of transindividualism, *O cea n fli g ht* combines motion tracking and gaming software to create an interconnected dance performance. The transdisciplinary team invites viewers to reflect on the transformative power of digital self-expression and its impact on our identities.

University of Arts Bremen, Digital Media Program (DE)

Matter Matters

Matter feels, converses, suffers, desires, yearns and remembers.

— Karen Barad

The exhibition *Matter Matters* gathers seven projects that pose different yet overlapping and interrelated questions around the duality of matter as the substrate of technology and its mattering in society. Each project seeks to find cracks, indeterminacies, disruptions, poetics, states of liminality within technology and its ubiquitous presence in order to provoke new imaginaries, narratives and speculations in the realm of matters. Can we rethink digital matters as processes of embedding and embodying? How can we

resonate with the non-human? How can AI generate stories if only able to reference others? What are the underlying orders of the material world? What is the past and future of the digital traces that we leave behind? What could the cracks on a grain of rice tell us about the future? How can we imagine new ways to measure a planet?

All projects were developed at the University of the Arts Bremen as part of the Digital Media Master's program. The exhibition was developed by Prof. Ralf Baecker and Prof. Dennis P. Paul.



© Hsun Hsiang Hsu & Fabian Mosele

Lotta Stöver (DE)

Sleep Like Mountains

Sleep Like Mountains enacts a process of digital embedding and embodying. The installation measures the topography of a human body and compares it to geodata sets of Earth, searching for a most similar location. It attempts to (re-)discover bodies in landscapes and vice versa. By exploiting the inherent reductiveness of digital discretization processes, it opens up a virtual space where the essential categories of the human and the other-than-human can be imaginatively merged.

Marcela Antipan Olate (CL)

How to Measure a Planet

Is it possible to connect two points on Earth based on their geographic characteristics? And more specifically, on their height differences? This machine-instrument seeks to create imaginary topographies through the height difference of two places on the planet based on digitally collected data. In other words, the project is a method and a subsequent representation that metaphorically connects two points on the planet by means of environment-related data.

Alberto Harres (BR)

Arche-scriptures

a speculative archeological experiment

ARCHE-SCRIPTURES revolves around understanding ceramics as a possible medium in which to store digital information. It "emerges from an impossibility, from the ambivalence between two disparate realms: archaism and future" (Fabi Borges). It proposes an archaic digital medium, a paradox of fragility and permanence. Presented as the unearthing of an ancestro-futuristic artifact, a machine attempts to reveal the sonified audio data engraved on its surface, speculating on the future of our digital traces.

Bon Kim (KR)

A Chair for Co-responding

Body heat, evidence of life activity, is perceived through constant giving and receiving within one's surroundings. The installation attempts to form a relationship between participating plants and the audience through human body heat. By sitting on the chair, energy is converted from body heat to electricity. The electricity powers a light which amplifies photosynthesis, causing the plants to generate more oxygen that is again circulated to the audience in the same time and space.

Credits: Technical support: Sangbong Lee

Hsun Hsiang Hsu (TW)

HIDDEN ORDERS_ Microstructural Machine

In the material world there are countless natural orders that shape the environment and the world we live in, and the main theme of the HIDDEN ORDERS series is to explore and represent these hidden orders in matter. Microstructure Machine uses bubbles with atomic-like structural properties as drawing units to create miniature landscapes by controlling the dynamic order of the bubbles. It presents the relationship between human control and the natural order of liquid.

Fabian Mosele (IT)

reflection of a reflection of a reflection

a synthographic motion picture

Inspired by the 2013 blog post "I, We, Waluigi: a Post-Modern analysis of Waluigi" by Franck Ribery, the film reflects on what it means to exist only in reference to others. λ, just like generative machine learning models, bears no relation to reality whatsoever. The film was created through a novel technique mixing Stable Diffusion, 3D animation and ethically sourced datasets. The fine-tuned models, original frames and all parameters + prompts have been open-sourced on its website.

Qianxun Chen (CN)

A Message Lies Between the Cracks

Rice, a fundamental sustenance in many cultures, holds deep ties to rituals and divinations. During cooking, the force of heat and water causes cracks to form on them. In this project, five hundred grains of rice are cooked, dried, and individually photographed, resulting in a comprehensive collection of crack patterns. Based on this database, a divination system is developed, leveraging computer vision technology to unveil the hidden messages embedded within a single grain of cooked rice.



HIDDEN ORDERS_Microstructural Machine

© Hsun Hsiang Hsu

National University of Theatre and Film "I. L. Caragiale", Master of Interactive Technologies for Performing and Media Arts (RO)

Digital Orbuculum

The digital world grows daily with 2.5 quintillion bytes, extending our worlds and interactions. As the Theatre Scene was the model of the World in Elizabethan time and the Clock Mechanism was the Cosmic and Mind model at the beginning of the Scientific Revolution, so the image of a Computed Universe is a growing narrative of the Zeitgeist. The digital model has brought about a mesmerizing pluriverse where currently our avatars interact with predictions of an everlasting life for AI powered beings, creating a new after-life reality.

If there is a digital reality, is there also a digital truth? *Digital Orbuculum* dives into numerical reality through a series of works developed by students in Interactive Technologies at UNATC IL Caragiale Bucharest looking for magical truth in the digital chaos. Are the newly emerged narratives corporate and privately owned or do they form a "collective consciousness" democratically extending the human mind?

Curator Alexandru I. Berceanu, Works by ITPMA Students 2022-2023, Diana Chiru, Denis Fluerau, Caty Şamata, Constantin Şimon, Selina Yilmaz

Selina Yilmaz (RO)

Orbuculum



© Constatin Simon

In the mystical tradition, the Crystal Globe is known to possess the ability to reveal future insights by showing symbolic imagery within its translucent depths. *Digital Orbuculum* employs image sonification to "predict" the past by analyzing the pixels of a face. Our personal history is intricately reflected in our image, as it is molded by past experiences and choices. Through the transformation of this image into malleable sound, the mysteries of the past are unraveled, providing the insight that we, ourselves, play a significant role in shaping our own future.

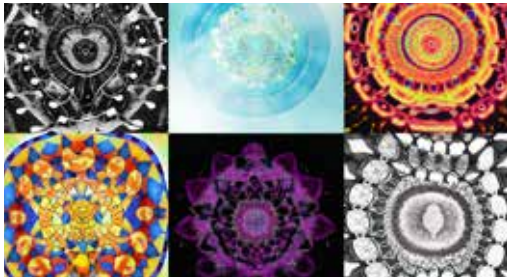
Denis Fluerau (RO)

Aural Topographies



© Denis Fluerau

The installation explores the sonic world of textures. The TRT microphone amplifies the time patina found on each surface and attempts to add a physical dimension to field recordings. *Aural Topographies* presents the sound of textures captured in evanescent landmarks of Bucharest preserving a sonic image of an ever-altered physical reality. The sonification process starts with obtaining a mold print of a 15 square centimeter which is physically scanned by a sensor. The obtained vibration is amplified and presented as a sonic image.



Clouded Consciousness



Canola



© Constatin Simon

Loop Pixels



© Caty Şamata

© Constatin Simon

Guess what?

Diana Chiru (RO)

Clouded Consciousness

Embark on a mind-bending journey at *Clouded Consciousness*, an awe-inspiring interactive installation that unveils the mesmerizing bond between the ethereal cloud and Jung's enigmatic "collective unconscious". Step into an intimate space that pulsates with energy, where the boundaries between reality and the virtual dissolve. Behold a mesmerizing interplay of enchanting mandalas projected before your very eyes. Each mandala, intricately woven with symbolism, is uniquely tailored to reflect the archetype that lies dormant within your being.

Constantin Simon (RO)

Loop Pixels

Loop Pixels is a particle animation created in processing, repeating a circle with randomly generated points that interacts with your hand movements.

Caty Şamata (RO)

Canola

Canola is an interactive digital work for the computer in Unity that explores the overwhelming amount of information that bombards us daily and its effects on our perception of reality.

Caty Şamata (RO), Ema Motea (RO), Selina Yilmaz (RO)

Guess what?

This installation explores the concept of choice and its translation into a concrete symbolism of cause and effect. *Guess what?* poses questions about damage, responsibility and power. The central element is water, which constantly floods a miniature city within an aquarium.

School of the Art Institute of Chicago (US)

Funnel & Switch

Funnel & Switch traverses a network of potential solutions to some of the most pressing sociopolitical questions of our generation. Ownership of both digital data and natural resources currently defaults to corporations and is exploited to subvert the common good. *Funnel & Switch* tackles crucial questions which respond to compounding technological developments and our swiftly decaying Earth. How does a lack of government regulations in the digital sphere destabilize individuals' decision-making capacity over personal privacy? What solutions can we find to preserve natural resources when corporate capitalism is eclipsing our climate emergency?

Funnel & Switch examines controversial topics surrounding security cam footage, body imaging, AI, heartbeat data, ownership of cultural artifacts, and the manipulation of natural resources such as plant material and water. The artists tackle these ethical dilemmas by investigating alternative dynamics that can exist between those with power and the rest of humanity, innovating tactics to resist, respond, recount, restore, repatriate and recycle. Despite unveiling harsh realities, the exhibition intends to instigate mechanisms for positive change, and pepper hope throughout an increasingly bleak trajectory for our collective future.

Juan Eduardo Flores (US)

Happy Travels

Happy Travels is part of a series of work in which zippers on found travel items are modified to be computer-controlled in order to autonomously reveal and conceal a partial view of a livestream video of the international border bridge area between the US and Mexico. These broadcasts are publicly provided by both US and Mexican government websites and are used in the installation to visualize moments of bi-directional bodily crossings of an international threshold.

Mac Pierce (US)

The Camera-Shy Hoodie

An open-source wearable for confounding night vision surveillance.

The Camera-Shy Hoodie is an open-source DIY adversarial garment designed to give the user the option to anonymize themselves within the recording of a night vision security camera. By embedding IR-LEDs of the same type used in security cameras and strobing them back at the same cameras, the head of the wearer is then significantly obfuscated.

Reid Arowood (US)

Dysmorphic Reflections

Dysmorphic Reflections is a composition of bodies born of a machine learning algorithm trained on the artist's own flesh. By training and producing these unpredictable bodies, the artist reflects on feelings of control and agency over their own physicality.



Dysmorphic Reflections

© Reid Arowood



Happy Travels

© Eugene Tang



The Camera-Shy Hoodie

© Mac Pierce

Yiyi Liu (CN)

Overload.Love

Overload.Love is an interactive installation that explores how digital technology carries biosignals and emotional experiences. The program is fueled by the heartbeat data of the participants, resulting in the emergence of figures that collide with one another. As these figures multiply, they intensify the computational strain on the device, leading to program slowdowns and glitches. This intentional overload serves as a grotesque metaphor for the chaotic and irrepressible nature of love.

Eul Lee (KR/MX/US)

Eteron 15

The Lovers

The Lovers is the 15th series of Eteron, a non-existent word for an ontological integer between 1 and 2. In this work, two watering cans interdependently circulate water. Despite their individuality, they are intertwined. If one ceases to provide water, the other will soon follow. Therefore, these two must consider each other as themselves. In this relationship, the distinction between self and others is meaningless, and the concept of hierarchical superiority or possession is also blurred.



Overload.Love



Eteron 15

Korina Victoria Hernandez (US)

ReThinking the Archive

ReThinking the Archive is a museological platform built to remedy cultural disconnection between Central Americans and their heritage along with the cultural displacement of displayed objects through the use of technology. It is shown to you here with the hope that it can return power to individuals who can now interact with these objects in a meaningful way, whether that is through XR or the 3D printing of these antiquities. It is time to revisit our heritage through a new art historical lens.

Kelly Xi (US)

Benthos of the Synthetic Suns

Kelly Xi's neon sculptures mimic the saturation of screen-mediated diaspora, repurposed to elicit the fruiting of fungi. To beckon renewal from what is left to landfill, she links a language for leaving a rare earth lake hometown with a social geology that spans tectonic time, colonialism, and emerging technologies. Through fermentations, the photic and olfactory, she provides lures for audiences to seek better relationships with more-than-human agents that support our ability to live.



ReThinking the Archive



Benthos of the Synthetic Suns

University of Chicago, Actuated Experience Lab — AxLab (US)

Actuated Experience

Actuated Technology that Actuates People

AxLab — Actuated Experience Lab — invents, materializes and speculates on the future of interactive “actuated” technologies to design novel user experiences. The work of the lab imagines a relationship between humans and computers/machines where dynamic, reconfigurable actuation technologies are integrated into everyday environments and materials. The lab’s vision, manifested by “Actuated Experience”, foresees design that builds and speculates on user experience and engages people to interact

with technology in tangible and embodied ways, exploring the dual definition of the word “to actuate”. Through this exhibit, AxLab showcases its latest technological prototypes which explore how actuation technology and AI could shape the future of our lives by integrating them into everyday spaces, toys and materials. Via the research prototypes, the lab asks an open question, “How would actuated technologies ‘actuate’ people?”

Lilith Yu is supported by Stamps Scholars Program.

You Li (CN/US), Emilie Faracci (FR/US), Harrison Dong (US), Ramarko Bhattacharya (US), Ken Nakagaki (JP/US)

Threading Space

Threading Space offers spatial experiences by dynamically and geometrically reconfiguring physical lines. Swarms of mobile robots on the floor and ceiling control lines of thread, manipulating human’s spatial perception. The unified swarm reconfigures, twists and aligns threads, creating an installation of architectural scale. The physical and actuated abstractions lay open our perception of space and reality.

Lilith Yu (CA/US), Marco Wang (HK/US), Ken Nakagaki (JP/US)

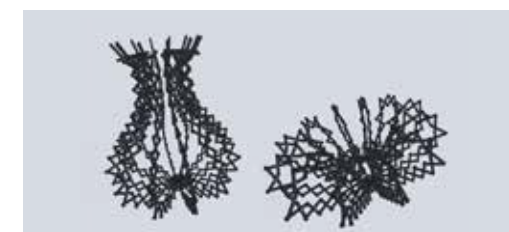
Tomo

Tomo is a physical toy that utilizes artificial intelligence (AI) to chat and play with humans. *Tomo* is designed to ask intriguing questions, spark curiosity, foster creativity, and encourage exploration. As people engage with *Tomo*, it becomes increasingly attuned to their feelings, displaying a genuine “care” for the user.

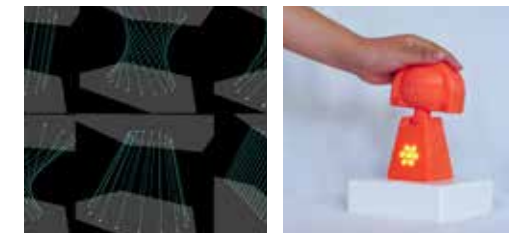
Skylar Liu (US), Vasco Xu (PT/US), Ken Nakagaki (JP/US)

Xs Sculpture

Xs is a shape-changing user interface with high expandability and customizability based on reconfigurable interactive scissor mechanisms. With *Xs Sculpture*, we explore how such mechanisms can create 3D forms as kinetic sculpture, morphing into various kinetic artifacts.



Xs Sculpture © Ken Nakagaki



Threading Space © Ken Nakagaki Tomo © Lilith Yu

© Yiyi Liu

© Eul Lee

© Captured Still — Korina Victoria Hernandez

© Kelly Xi

Babeş-Bolyai University, Faculty of Theater and Film (RO)

Reverse Manipulation

The title of the project makes reference to one of the most debated issues today: manipulation and the means to tackle it. *Reverse Manipulation* refers to the act of manipulating a situation or information as though someone else is responsible or at fault. More precisely, the title is understood as a way to oppose, to establish an antithesis, or to react promptly to counter any form of manipulation.

At the same time, it suggests manipulation as an assumed artistic act, a way to engage and temporarily control the participant while experiencing the artwork. Thus, the title reflects equally the main preoccupations of the artists included in the project, and aims to address and respond to the provocations formulated interrogatively in the generic of 2023 Ars Electronica: Who Owns the Truth?

The theme is approached by the artists in different conceptual and productive frameworks. One is represented by interactive digital installations which, in one case, activates the public through using people's own voice, in another, speculating the fragmentation of the body, or in other work, referring to maps, weather and the manipulation through mass-media. Other works are based on extended reality experiences such as AR and VR in order to speak about mental health, to immerse the viewer in a totally imagined, abstract environment, or to address questions in a dystopic key to our biological limits. Yet another project employs AI to speculate about the intricate relationship between myth and truth.

Digital Interactive Arts Master program @ Faculty of Theater and Film, Babeş-Bolyai University, Cluj-Napoca, Romania.



© Agata Olteanu

Agata Olteanu (RO) Blow Mt Flowers

This installation is a reminder that childhood is right around the corner, no matter how old we are. The audience is called to reflect upon the simplicity of life through a universe of particles that form a wind map whenever air is moved inside the interaction zone. The game evokes early memories and discoveries of the world, when spinning a paper windmill was enough.



© Ana-Maria Bocaniciu

Ana-Maria Bocaniciu (RO) Fantasia Enclosure An AR Experience with Virtual Animals

Fantasia Enclosure is an augmented reality installation that questions the possibility of virtual life and the relationship with reality, by placing known animals and human companions to run around in the same space. The audience is encouraged to approach the animals and to interact with them as they wander in 3D space.

Andra Purdea (RO) Anamorphic Reality (AR)

AR experience that questions the effects of the rapid digital development today and the decline in mental health in the context of artificial intelligence and native intelligence. The visual content seeks to honor and elevate the experiences of those who struggle with dysphoria and discontent in the face of the constant motion of the contemporary world and dissociation with nature, paradoxically using the latest technologies of AI and AR to create an interactive mural piece.

Cristina Pop-Tiron (RO) Visual Voice

Visual Voice is an experience that puts you in control of the visual display using mainly your voice. The rings appear and vibrate alongside the stories and sounds you want to speak, whisper, or confess. What will come out of it is another story. Truth-and-lie is an old game that brings people and their stories together. It can reveal insights that are hard to express. What will you say?

Florin Adrian Marc (RO) Enigmatic Reflections

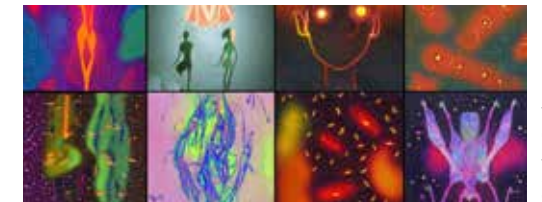
Enigmatic Reflections stimulates the imagination through VR, challenging participants to question reality. Participants venture into an immersive experience with a blurry boundary between reality and imagination and are asked to reflect on their perception of reality. This introspective exercise reveals the power of imagination and the influence of our beliefs on our interpretation of the world.

Lucia Codreanu (RO) Fragmentation

The audio-video installation *Fragmentation* explores the idea of eternal living through “undead” bodies. Spatial depth and irregular frame ratios influence visual perception and encourage self-reflection on the nature of existence. The installation weaves pieces of footage together in a seamless and fragmented video montage, for a raw, intimate, and personal feel.

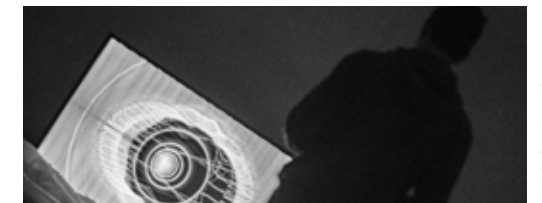
Toma Bărbulescu (RO) Dragons, Giants, Citadels

AV installation which explores Romanian mythology regarding dragons, giants and their citadels, from the perspective of folklore explanation of geomorphology in the West Carpathian Mountains. The installation uses raw drone footage of different locations in the mountains, footage which has been passed through the AI filter deepdream-generator.com and afterwards processed through EBSynth app. The sound features an interview with a specialist in cultural anthropology.



Anamorphic Reality (AR)

© Andra Purdea



Visual Voice

© Cristina Pop Tiron



Enigmatic Reflections

© Florin Adrian Marc



Fragmentation

© Lucia Codreanu



Dragons, Giants, Citadels

© Toma Barbulescu

College For Creative Studies (US), Graduate User Experience (UX) Design Program

DETRO TUNE

Virtual voyage through the city of Detroit's authentic cultural identity

The *Detrotune* exhibition is conceptualized as an audio-visual virtual voyage through the city of Detroit's music history, subcultural anatomy and authentic cultural identity. To achieve such a unique experience, we expose the audience to multisensory stimuli powered by various media technologies such as virtual and mixed reality. This eternal Detroit placed in a timeless virtual

space aims to immerse us into the cultural habitus that shaped a fruitful era of fresh and influential ideas and innovations. The projects are College For Creative Studies' MA/MFA User Experience Design student's works.

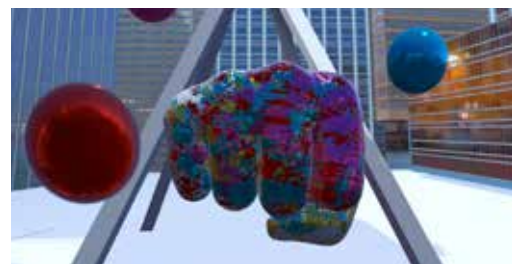
We thank the College For Creative Studies, Detroit, USA, for giving us enormous support and sponsoring the *Detrotune* exhibition.

Mihir Sharma (IN), Raghunath Rajasekar (IN), Siddhi Sakhare (IN), Mahsa Khoshkbar Foroushan (IR), Sara Fallahi (IR)

Motown Techno

A Fusion of Downtown Detroit and Techno Music

Motown Techno is an innovative and immersive project that combines the rich cultural heritage of Detroit's downtown area and the pulsating beats of techno music. This unique experience aims to transport visitors into a virtual reality (VR) world where they can simultaneously enjoy the iconic sights of downtown Detroit while being engulfed by the infectious rhythms of techno. At the heart of *Motown Techno* is the idea of merging two distinct elements: the urban landscape of downtown Detroit and the electrifying energy of techno music. By combining these two iconic features, the project creates a harmonious blend of sight and sound.



Splatroit © Juyoung Lee

Abhishek Sen (IN), Shima Solati Dehkordi (IR), Hoda Solati (IR), Andrea Bautista-Romero (MX)

Technodom

Technodom is an exhilarating VR journey to the birth of techno music in Detroit, providing a truly unique interaction with the music pioneers themselves. Delve into the extraordinary Hall of Fame, where you'll discover visionary musicians who spearheaded freedom movements through their groundbreaking techno sounds. Ignite the fiery spirit of liberation and unleash it as a Techno DJ at the enchanting silent disco. The mesmerizing center stage completely engulfs your being, freeing your mind and body and compelling you to surrender and dance to techno music's infectious, pulsating rhythms. Embark on an extraordinary quest for freedom within the captivating realm of *Technodom*.

Juyoung Lee (KR), Chia Wei Hsieh (TW), Bo-Yun Cheng (TW), Mai Nguyen, (VN)

Splatroit

Splatroit is an immersive virtual reality game that intertwines Detroit's iconic techno music with its cityscape. The heart of this VR experience lies in the interactive monument to boxer Joe Louis, "The Fist". As players engage with the pulsating techno rhythms, they dynamically color this emblematic landmark, creating a visual spectacle synchronized with the soundtrack. *Splatroit* embodies Detroit's spirit, allowing players to interact with its music and art.

Virginia Commonwealth University, School of the Arts in Qatar (QA)

Meta-Functions of Cultural Production

As VCUarts Qatar's inaugural participation in the ARS Electronica Campus Exhibition, *Meta-Functions of Cultural Production* features a selection of 10 works produced by undergraduate and graduate students and student-faculty collaborations. Reflective of the diverse creative and cultural ecosystems of Qatar and the larger SWANA region, this exhibition presents a multifaceted exploration into the metafunctionality of cultural production and preservation.

Students and faculty on the Qatar-based campus engage in a plurality of hybrid forms of creative practice-crossing domains and intersections in art, design, science and technology. This exhibition showcases the creative outcomes of multidisciplinary explorations, highlighting the

innovative and highly collaborative approaches cultivated by our community.

Unpacking complex issues and challenges through critical insights and new perspectives, the selected works invite visitors to explore and unpack meaning through cultural forms and contexts existing within systems of communication, behavior, and interaction. *Meta-Functions of Cultural Production* includes a selection of works exploring Arabic typographic forms, nanotechnology for increased functionality in textiles, generative processes translating pattern to sound, usages of AI datasets for blind contour drawings, prototyping for responsive architecture and a visual exploration in cultural conceptions of place.

Preceding Emptiness © Raviv Cohen



Levi Hammett (US), Mohammad Suleiman (JO), Hind Al Saad (QA), Fatima Abbas (SD)

Preceding Emptiness

Alternative Arabic Typographic Technologies

Preceding Emptiness is a light installation that imagines alternative typographies by constructing unconventional language display technologies. Here, Arabic is freed from structural conventions pressed by the conformal trajectory Latin typography had on alternative scripts. The words drive toward a landscape populated by unconventional technologies that in turn shape new typographic structures — a new symbiosis between technology, typography and tradition.

Stimulated Fashion © Hadeer Omar



Hadeer Omar (EG)

Stimulated Fashion

Simulated Fashion is an immersive video created by students in Art Foundation's Time Studio. Each team developed a 30-second 360-degree experience, resulting in 12 collective films, showcasing the Fashion Design Senior collections. Each collection presented a unique narrative, allowing the students to create a world based on an existing concept, while also expanding it. They discovered their individual voices to tell compelling stories using time: merging fashion, new technologies and filmmaking.



Electric Calligraphy © Raviv Cohen

Noor Rashid Butt (QA), Khaled Saoud (US), Christopher Fink (US)

Nanoabaya

Designed by Fashion Design student Noor Rashid Butt in collaboration with Physics Professor Khaled Saoud, the Nanoabaya is treated using nanotechnology that absorbs UVB rays to improve the synthesis of Vitamin D by the skin and block the sun's harmful rays in extreme summer climates. The abaya also has thermal insulating properties that maintain a comfortable temperature for the end user by blocking heat particles.

Naima Almajdabah (JO)

Stitch by Stich

Stitch By Stich is designed to experience, translate and spread the rich visual culture and diversity of traditional Palestinian textile patterns using modern techniques and mediums including visual communication and sonification. With the aim to preserve the Palestinian culture, traditions and customs, the project is divided into three distinct yet interconnected phases: experience, translation and dissemination — connecting the past and the future and acting as a bridge between both.

Basma Hamdy (EG), Shima Aeinehdar (IR), Selma Fejzullaj (AL)

Sacred Silence

Sacred Silence explores the Arabic letter nun (ن). It is the 14th letter of the Arabic alphabet, marking the midpoint of 28 letters. In its isolated form it opens Surat-al-Qalam in the Quran making it a deeply spiritual letter in Islam. It is reversible in spelling and symmetrical in shape. The concepts of reflection and reversibility are explored to signify the dance between internal spirituality and external stillness, a journey from recognizing our existence through to contemplative silence.

Lana Abou Selo (US), Fatima Abbas (SD), Levi Hammett (US)

Electric Calligraphy

Electric Calligraphy is a series of Arabic typeface designs that re-examine the evolutionary path of the Arabic script within the Latin-based technological constraints, adding new perspectives to the discourse of contemporary type design. The names of Allah are often displayed in intricate calligraphy to reflect the beauty of their meaning. Displaying them through calligraphy that is guided by light, constructed with segments and modules, brings a new way to honor them in contemporary times.

Jood Elbeshti (LY)

Transformative Distortions

Transformative Distortions explores the transformation of a rigid shape, a square, into a fluid object through motion. A square often represents stability and order — yet by adding foldable points and an axial rotation, it is broken down into a fluid and dynamic object. Within interior architecture, it identifies new interactions between the body, mind and interior space. The philosophy can be applied to larger residential solutions or foldable housing for adaptable and responsive living spaces.

Ghayda Abduljalil (JO)

Fast Paced Life

Fast Paced Life is a mixed media audio-visual installation about mindless habits that leave temporary senses of satisfaction: such as scrolling through social media, fast fashion, smoking, fast walking and fast food. Through manipulating collected videos, scanned objects, paintings, charcoal, poetry, cyanotype prints and soundscapes, this project discusses fundamental aspects of a modern lifestyle, where layering mediums evokes emotions of interruptions, multitasking and overwhelmingness.

Hind Al Saad (QA), Sara Khalid (SA), Joshua Rodenberg (US), Fatima Abbas (SD)

Rays of Essence

Rays of Essence allows viewers to interact with projected Arabic forms. From a letter to a complete narrative, it aims to root the contemporary digital tools we use with our language, our heritage and our identity. Rays of Essence imagines an alternative reality for Arabic, where Arabic letterforms are explored through computational tools and mathematical variables. The letters are drawn with light, an unbounded medium that elevates the constraints of the movements of a calligraphic pen.

Jameela AlHumaidi (QA)

Morphing Memories

Morphing Memories is a generative artwork that harnesses the power of artificial intelligence to explore fusing blind-contour art to create an abstract and dynamic image. Using a database of hand-drawn, blind-contour portraits, the objective is to delve into the interplay between individual facial characteristics and the broader aesthetic possibilities offered by generative AI. The project forges a novel and unexpected form of abstract art that accentuates the beauty of simple lines.



Morphing Memories © Jameela AlHumaidi

The Hong Kong University of Science and Technology (Guangzhou) (CN)

Back to the Roots and Up to Space

Back to the Roots and Up to Space is a captivating exploration of the intertwined complexities of our earthly roots and celestial aspirations. This exhibition offers a compelling, multifaceted journey through time and space, through our ancestral heritage and towards the outer fringes of our future imaginings. At the core of the exhibition lies a deep contemplation of human existence, both where we come from and where we are headed. It strives to ignite a profound dialogue on how our roots – in both the literal and metaphorical sense – nourish our aspirations to reach into the cosmic unknown. Our featured artists delve into these themes with a profound sense of curiosity and innovative methodologies. They draw upon a variety of mediums, from virtual reality and bio-data representation to cursive calligraphy and AI-enhanced reconstructions.

Each work is a testament to human ingenuity and artistic innovation, highlighting the delicate balance between our connection to our heritage and futuristic ambitions. In tracing the lines from our past to potential futures, the exhibition invites audiences to experience a unique blend of traditional art forms and cutting-edge technology. Through immersive installations, interactive experiences and thought-provoking narratives, *Back to the Roots and Up to Space* challenges us to examine our relationship with our environment, our body, our past and our potential futures in the cosmic expanse.

Curator and project coordinator: Dr Varvara Guljajeva, Faculty involved in students' work selection: Dr Varvara Guljajeva, Dr Theo Papatheodorou, Jake Zhang, Dr David Yip, and Rui Hui, Supporters: CMA and HKUST(GZ)

Zhiwan Cheung (US), Oksana Kryzhanivska (CA) A Matter of Orientation

A Matter of Orientation is a narrative expansive Virtual Reality (VR) installation extending Edward Said's critique of Orientalism to examine how historical objects translate across time, space and digital realities. The project uses video taken from San Francisco's Asian Art Museum of its oriental artifact collection. The 2D footage is transformed into 3D models through AI and placed in a VR environment. Combining these technologies engenders new aesthetic forms while generating meanings not there before.

Aven Le Zhou (CN) Wushu Generating the Experience of Chinese Calligraphy from Bodily Engagements

Wushu is an infinite and collaboratively written "book" which intends to encourage and archive active participation in cursive calligraphy, while extending its scope as an art form. It engages the audience in generating ink strokes and inscrutable characters from motion and automatically "writes" them in the style of Chinese Cursive Calligraphy. The book serves as a compendium for the generated works and keeps expanding with the collective participation.

Rungu Lin (CN) Body Cosmos An Immersive Experience Driven by Real-Time Bio-Data

Body Cosmos is a VR artwork that connects our body and the cosmos with bio-data. We use heart rate and EEG devices to create emotion indicators that shape the particles in virtual space. This reflects the complex structures of human anatomy and cosmic nebulae, creating a personal and intimate bond with the cosmic expanse. "Body Cosmos" aims to ignite curiosity, imagination and transcend immediate presence, exploring the digital data relationships that humans can form with the cosmos.

Danlu Fei (CN), Ziwei Wu (CN) Benefit Game: Alien Seaweed Swarms

Benefit Game: Alien Seaweed Swarms creates an artificial ecosystem with installations. This work explores the impact of anthropogenic interference on seaweed populations. By simulating the growth and colonization of virtual algae swarms and symbiotic fungi, the game invites players to interact with the ecosystem using game tokens with the goal of achieving capital accumulation.

© Zhiwan Cheung and Oksana Kryzhanivska



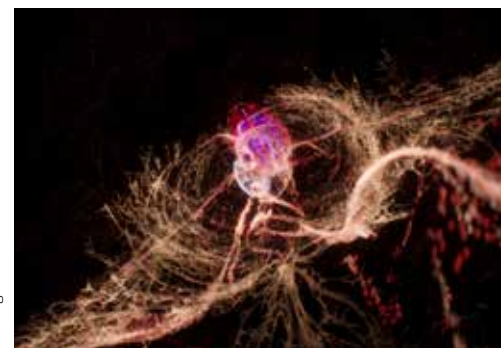
A Matter of Orientation



Wushu

© Aven Le ZHOU

© Rungu Lin



Body Cosmos



Benefit Game: Alien Seaweed Swarms

© Danlu Fei, Ziwei Wu

National Tsing Hua University (TW)

A Face Drawn in Sand

According to Michel Foucault, the concept of “human” is a relatively recent invention. Once the “episteme” — the arrangement of the knowledge framework — changes, “then one can certainly wager that man would be erased, like a face drawn in sand at the edge of the sea”. Foucault's anticipation appears particularly thought-provoking today as we witness new technologies such as AI reshaping the entire structure of human knowledge. As a result, the existence of artificial entities would increasingly no longer be regarded as alien or fake. At that point, will anthropocentrism begin to crumble, just like a face drawn in sand that is washed away by the wave? What will we become? And will we, as Manovich has suggested, adopt an accepting or even embracing attitude towards certain “sub-personal processes” of artificial entities?

In the exhibition *A Face Drawn in the Sand*, *Cybermove* explores a methodology that enables us to escape into the virtual realm. *Exchange between Reality & Virtuality* lets the audience decide whether to exchange value between virtual and real coins. *Leashing the Socket* discusses the relationship between people and sockets creating hidden constraints and who holds the power to dominate. *Symbiosis with Bees* examines the rightful stewardship of natural ecology through fashion wear and audio-visual installations. *trans-[ai]s* investigates what AI sees with human eyes. In the era of AI-truth, who has the right to explain and own the truth?

Sponsored by: Spring Foundation (春之文化基金會),
Advised by: National Science and Technology Council,
Taiwan, R.O.C., Ministry of Education, Taiwan, R.O.C.

Jia-He Zhao (CN)

Cybermove



The artist decides to move — in her room — from 12 square meters to 6, then to 3..., until a minimum living space. Discarded items will be 3D scanned and stored in a virtual room. At any place, with a simple construction of portable furniture and a VR headset, the artist can immediately flee from real estate finance and enter her cozy virtual nest.

Yan-Lin Li (CN), Drew Cavicchi (US), Tang-Chen Chang (TW)

From Post-Truth to AI-Truth



The Oxford Dictionary named “post-truth” as the Word of the Year for 2016, officially ushering in the post-truth era. The truth of post-truth is far more complex than its literal meaning. Who defines fake news? And now, with the rise of AI, texts and images generated by AI are becoming increasingly difficult to distinguish. In the era of AI-truth, who has the right to explain and own the truth? Who defines the truth? Is it the authorities, news publishers or mass communicators?

Tsai-Wen Ling (TW)

trans-[ai]s



Human vision is often confined by existing rules, unable to consistently transcend apparent realities. The artist, in collaboration with AI, delves into societal issues, crafting trans-species visual narratives, and revealing possible underlying truths through a dual-screen animation.

Chun-Huang Lin (TW), Chi-Hung Huang (TW)

Leashing the Socket



Sockets, nodes of the power grid, both shape our lives and create hidden constraints on our lives. *Leashing the Socket* aims to challenge the framework of civilization by promoting the autonomy of entities. By swapping the roles of “supply” and “demand” in electricity, it binds humans and non-humans together through the power cord, fostering autonomy and challenging established networks. This prompts us to question who is actually in control.

Fen Cheng (TW)

Symbiosis with Bees



As pollinators, the frequency of honeybee wing beats is closely related to nectar production and impacts the flower pollination rate. “Who should defend nature's symbiotic rights?” This interactive work, *Symbiosis with Bees*, intends to motivate individuals to reflect on the consequences of their activities and promote action to protect the environment.

Hung-Yu Chen (TW)

Exchange between Reality & Virtuality



“Virtuality” has reshaped modern society's operations, transitioning from exchanging physical currency for real goods to trading virtual currency for virtual or real items, achieving complete virtualization. Through metal craftsmanship, the artist reestablishes the tangible connection between the body and objects. Proposing the exchange of “handmade coins” for “virtual items,” allowing the audience to choose whether to exchange between the virtual and the real.

© Jia-He ZHAO

© Hung-Yu Chen

© Tsai-Wen Ling

© Chun-Huang Lin, Chi-Hung Huang

© Fen Cheng

© Hung-Yu Chen

Musrara, the Naggar School of Art and Society (IL)

Dual Space

The Musrara School exhibition brings together two young creators, students of Musrara, the Naggar School of Art and Society, Jerusalem, exhibiting fragments of their graduation projects. As an educational institution for art studies, Musrara constantly strives to find new approaches and concepts in the fields of art and allows each student to develop and specialize practically and conceptually according to his or her inclinations and personal and professional ability.

Ilay Skutelsky, a student of the Department of New Media Art, and Shelly Reizis, a student of the Department of New Music, both present, each in their own unique voice, a point of view that dis-

mantles and rebuilds structures based on nature and culture. For this, tools and practices taught in Musrara are used, as well as unique personal languages. In both projects, the code and algorithm are used as a technique for disassembling and reassembling images, and at the same time becomes an image in itself that is displayed next to the others.

School Founder and Director: Avi Sabag Sharvit, Head of the New Music Department: Amir Bolzman, Head of the New Media Art Department: Ayala Landow, Participating Artists: Shelly Reizis and Ilay Skutelsky, External Relations: Dana Shahar; The participation in the festival is made possible thanks to the support of Les Amis de Musrara, France.

Ilay Skutelsky (IL)

Noctam.jpg

As the moon gets fuller and brighter, more data is introduced to the image, and the source code grows, creating a tide of data that rises and falls with the moon's cycle.

While the loop plays, its source code is being changed byte by byte. This creates a glitch, an error in the data that alters the image. Randomly, a change will remain, changing the value of this byte for all the next frames too.

This creates a glitched lunar cycle, with mutations in its DNA, which keeps altering and evolving.



© Ilay Skutelsky

Shelly Reizis (IL)

Entering a Room and Seeing All Those Same Faces Again (ERSATSFA)

The installation *Entering a Room and Seeing All Those Same Faces Again* is a musical algorithm which outputs small musical compositions from reconstructed audio recordings. The algorithm performs audio-descriptive analysis on the recordings, reducing the audio source to numbers, thus changing the way each recording is naturally organized and perceived. The audience can experience the sound through a set of headphones.

Osaka University of Arts (JP)

Possible Fiction

When imagining the future, it is important not to take things for granted. But that can be very difficult. So, we gathered together some of the students' outlandish ideas. For example, they brought in a variety of ideas, such as imagining planets as ice cream or imagining aliens and assembled them into a story. At first, each of us focused on what we thought of as initial inspiration.

However, during the process of creation, teachers asked students to set out the story in detail and explain why. The students' thinking about this requirement led them to realize that in everyday life, there are so many unconscious decisions we make, things we do without questioning, stereotypes, etc. Furthermore, some students realized that the essence in art is to make the experimenter

think so that they can interpret, rather than to convey one clear message. This leads to seeing things from various directions and understanding that different positions and different ways of thinking have different principles of action. Our Department of Art Science aims to cultivate the ability to conceive, to learn imagination, logical thinking, and expression. As a concrete methodology for this purpose, we believe that this production was very effective.

Ando Hideyuki, Tamura Misato, Akao Hirotaka, Kuzukami Kana, Inoue Haruka, Kaneko Naoya, Terao Yu, Matsumoto Arata, Aritomi Haku, Chujyo Masahito, Sugao Tsunefusa, Okawa Hinata.

This exhibition was supported by Osaka University of Arts and JST CREST (JPMJCR22P4).



Terao Yu (JP)

We are (were) here

A video work in which an alien with no hands produces an origami crane to prove human civilization to aliens after the Earth is destroyed.



Akao Hirotaka (JP), Kuzukami Kana (JP)

Planet ice cream

The Universe that everyone is looking at with relish

Let's eat the solar system

Planetary ice cream toppings of different sizes and weights, topped with space debris, are stacked in a balanced manner and placed on top of each other so that they do not collapse.

Pile up as much ice cream as you can without the planet ice cream collapsing!

Matsumoto Arata (JP)
 06/09/2023 –
 10/09/2023 (CEST)

The “concept of time in modern physics” is different from our common sense. The work is composed of multiple monitors suspended by arms that can be moved by the viewer. The images on each monitor are integrated with the concept of time of modern physics. How will our lives be transformed when we accept the reconstructed concept of time?



Kaneko Naoya (JP)
Agave to check the touch

Is the agave only to be admired as it spreads out its magnificent hands to bask in the sun? There are times when a tender feeling arises in the midst of the poorness of a baby's crawling. Isn't this another truth? The upside-down agave in this video is the motion-captured movement of a human body feeling warmth on a blanket, mapped onto a 3D model of a flowerpot rigged to the shape of a human body. Can you feel the sincerity and brightness in the seemingly chaotic movements?



Ando Hideyuki (JP), Ono Nagi (JP)
Aesthetic Avatar Mirror
 Using avatars for enhancing self-esteem

Avatars in the metaverse can cause unconscious changes in the user's mind. It is called ghost engineering technology. We have reduced fear of heights with the Dragon Avatar, and also reduced stuttering with the Ideal Avatar. Based on these facts, we created a mirror that reflects a slightly upgraded avatar's face. This mirror improves unconscious self-esteem. What is not true for others is true for oneself.



University of Continuing Education Krems (AT),
 University of Arts Linz (AT),
 University of Applied Arts Vienna (AT)

Expanding the Archive of Digital Art

The *Archive of Digital Art* (founded by Oliver Grau, in 1999) has over the past three years been expanding with a focus on teaching, research and analysis of Media Art. Among others, innovative data visualizations, search and analytical tools have been developed in two current research projects at three universities. Additionally, VR and mixed-reality experiences now allow virtual exploration of the *AR[t]chive* of the Sommerer/Mignonneau collective, the performance *Swarming Lounge* by Kondition Pluriel, and presentations of selected works by Ruth Schnell.

Funding: Federal Ministry of Education, Science and Research (BMBWF, Austria), Federal State of Lower Austria / EFRE.

University of Continuing Education Krems (AT)
 Founder of ADA, concept & project lead / PI until June 2022: Oliver Grau Project lead since July 2022: Viola Rühse Research team: Laura Ettel, Isabel Iskra, Carl Philipp Hoffmann, Michael Perl, Max Resch, Alejandro Quiñones Roa, Paolo Schmidt, Fabian Schober, Carla Zamora Campos, Alexander Wöran

University of Arts Linz (AT)
 Project lead: Laurent Mignonneau, Christa Sommerer Interface design & research *AR[t]chive*: Tiago Martins

University of Applied Arts Vienna (AT)
 Project lead: Martin Kusch, Ruth Schnell Interface design & research (VR/HoloLens): Thomas Hochwallner, Johannes Hucek



AR[t]chive © Tiago Martins, Indira Di Benedetto

ECAL/University of Art and Design Lausanne, Bachelor Media & Interaction Design (CH)

Fantastic Smartphones

Fantastic Smartphones — a series of interactive installations developed by students in Bachelor Media & Interaction Design at ECAL, investigating in a critical and offbeat way our relationship with smartphones and the way they influence our daily behavior. Behind the derision-filled title *Fantastic Smartphones*, alternative accessories, interactive installations and machine performances highlight the excesses relating to our use of these devices. By imagining innovative ways of interacting with our smartphones or by delegating our repetitive actions to machines, this exhibition takes a critical look at a society that has become addicted to an object that seems to have become indispensable: the “smart” phone. Is this object, which was initially perceived as an extension, still a source of pleasure or has it become a source of alienation? Bachelor Media & Interaction Design students provide answers to this question through

a series of installations that address different aspects of this issue in an original and immersive way. Visitors will be able to discover how to save time when using a dating app; cheat on their personal health data through bots; illustrate the time lost away from their phone; attend a discussion between two smartphones; scroll to infinity in a mesmerizing way; discover neologisms relating to new digital behaviors; free themselves from digital addictions; or witness the strange choreography of a robotic arm that takes pictures of itself with a selfie stick.

Heads of Project: Vincent Jacquier, Pauline Saglio; Teachers: Alain Bellet, Thibault Brevet (AATB), Jesse Howard, Vincent Jacquier, Eric Morzier (SIGMASIX), Florian Pittet (SIGMASIX), Pauline Saglio, Tibor Udvari, Roel Wouters (Moniker); Assistants: Pietro Alberti, Lison Christe, Martin Hertig, Paul Léon, Laura Nieder, Callum Ross

Aurélien Pellegrini (CH), Bastien Claessens (CH)
Biobots

Biobots criticizes the policy of large multinationals that collect and trade personal data through smartphones that relate to their customers' health. Selling this information to some institutions would have serious consequences. For example, a health insurance company could deny a claim to a person who, based on his or her personal data, might be deemed not to be working on their fitness sufficiently. By simulating the activity of a perfectly healthy individual, *Biobots* presents itself as a collection of objects of resistance to this collection of personal information.



© ECAL Jimmy Rachez

Léonard Guyot (CH), Maya Bellier (FR), Paul Léon (CH)
Meanwhile

Our smartphones give us access to a huge amount of content designed to occupy our time. Once we are glued to the screen, time seems to pass so quickly. Conversely, parting with our smartphone sometimes feels like exposing ourselves to extreme boredom. This deep fear of emptiness creates a dependency, sometimes causing us to spend several hours a day staring at our screen just to escape boredom. *Meanwhile* invites us to consider our relationship with time by inciting us to separate ourselves from our smartphone for a short while.



© ECAL Jimmy Rachez



© ECAL Kylan

Fantastic Smartphones — ECAL Bachelor Media & Interaction Design

Lisa Kishtoo (FR), Bastien Mouthon (CH), Diane Thouvenin (FR)

Taptaptap

Predictive text is a feature that aims to simplify text input on smartphones. Based on an analysis of our writing habits, our devices suggest a sequence of words that are supposed to match our writing style. *Taptaptap* exploits this feature to enable two machines to chat using only predictive text input. What kind of discussions can emerge from a dialogue standardized by algorithms? Although devoid of communicative intent, this machine dialogue does not appear devoid of meaning, and sometimes even takes poetic turns.

Pablo Bellon (CH), Kylan Luginbühl (CH), Yaël Sidler (CH)

Kinetic Scroll

Kinetic Scroll is a matrix of smartphones equipped with mechanisms that enable them to scroll endlessly. It echoes the social networks pages through which we sometimes scroll for hours. Scrolling endlessly, but what for? Scrolling for fear of missing an image that must be seen, but which will not be remembered ten images later. What do we hope to reach or what do we hope to escape from? This timeless kinetic installation with its regular rhythm seeks to hypnotize and capture attention like the continuous flow of images so emblematic of today's interfaces.

Antony Demierre (CH), Basil Dénéreaz (CH), Nora Fatehi (CH), Paul Fritz (CH), Sébastien Galera Larios (CH), Rayane Jemaa (CH), Dorian Jovanovic (CH), Valentine Leimgruber (CH), Valerio Meschi (CH), Ignacio Pérez (CL), Michael Pica (CH), Jorge Reis (CH), Malik Sobgoui (CH)

A Screentime Connoisseur's Lexicon

The arrival of smartphones has changed our daily lives to such an extent that the very use of this device has led to a good number of new behaviors. New attitudes are manifold, daily and for the most part unconscious. In a digital world where behavior changes faster than new words can be created to describe them. *A Screentime Connoisseur's Lexicon* studies some of this behavior through a series of neologisms that enable us to better understand certain addictions, means of resistance and social biases.

Nora Fatehi (CH), Michael Pica (CH), Jorge Reis (CH)

Adam & Eve

Adam & Eve revisits part of the famous story of the creation of Man and Woman according to biblical sources. A triptych of vertical screens stages the discussions that God, Eve and the Serpent might have had at the time of the birth of original sin. Transposed to our time, the three protagonists dialogue through an instant chat application. Each screen represents the smartphone view of one of the protagonists, enabling us to follow their ongoing discussions.

Kylan Luginbühl (CH), Aurélien Pellegrini (CH)
Anti-Stress Case

Do you ever feel stressed by your smartphone? The *Anti-Stress Case* helps you deal with it. You can switch between various modules with pleasant tactile sensations. The more you play with the case, the less you will be annoyed by the notifications.

Antoine Barras (CH), Maya Bellier (FR), Pablo Bellon (CH), Ivan Chestopaloff (CH), Bastien Classens (CH), Guillaume Giraud (CH), Léonard Guyot (CH), Evan Kelly (CH), Lisa Kishtoo (FR), Paul Léon (CH), Kylan Luginbühl (CH), Aurélien Pellegrini (CH), Yaël Sidler (CH), Diane Thouvenin (FR)

Smartphone Symbiosis

Smartphone Symbiosis tackles how we interact with the data flows to which smartphones give us access. This research through design aims at imagining objects and interfaces, allowing a detachment from the smartphone or stimulating a more balanced and focused interaction with some of its functionalities in desired situations. It aims to offer proposals for re-appropriation or re-extraction of certain features locked in the smartphone.

Pablo Bellon (CH), Ivan Chestopaloff (CH)

Desktop Notification Center

Desktop Notification Center is a collection of two desktop accessories that provide notifications in the work environment in a way that avoids unnecessary disturbance and stress. Notifications are classified in three categories: Important (calls), Not Urgent (messages), and Futile (social media).

Basil Dénéreaz (CH), Sébastien Galera Larios (CH), Rayane Jemaa (CH), Ignacio Pérez (CH)

Selfie Robot

Since the appearance of cameras on the front of smartphones, the selfie seems to have become a commonplace act, a narcissistic gesture and even an artistic act. *Selfie Robot* is a machine performance featuring a robotic arm equipped with a smartphone and a selfie stick taking pictures of itself with different face filters. As amusing as it is disturbing to see this robot contorting itself in search of the perfect selfie, it turns us into viewers of the incongruity of our own behavior.



Kinetic Scroll, ECAL Bachelor Media & Interaction Design

© ECAL Jimmy Rachez

Paul Léon (CH), Diane Thouvenin (FR)

TicTocLock

With technologies such as fingerprint and facial recognition, unlocking the smartphone is becoming faster and less of a conscious gesture. For instance, you only wanted to quickly check the time but find yourself scrolling through social media, even though it wasn't your initial intention. *TicTocLock* aims to reinstate a gesture for the unlocking that helps the users take back control over their smartphone activity by physically visualizing their usage time.

Antoine Barras (CH), Guillaume Giraud (CH)

Mistarget

Is your phone spying on you? *Mistarget* is here to tell you. A lot of people seem to be wondering whether their phone is listening to them for commercial reasons. Some of them even test their phones. We offer technology that automates the test. When the phone is connected, the dock starts whispering misleading information. Fake conversations about needs and consumerist desires are recorded and stored in the dock. Are the ads going to be affected?

Bastien Classens (CH), Léonard Guyot (CH)

LIA-Leave It Alone

LIA is a smartphone dock that discourages you from constantly checking your phone while working. With its inclined edges, it is impossible to remove the phone from its dock without reason: only receiving priority notifications will make the phone accessible again.

London College of Communication, University of the Arts London (GB)

Body Machine Ritual

How are new truths created in times of technological change? What is the role of myth and ritual in uncovering, shaping, and instrumentalizing these truths? For whom, or what, or which worlds?

In this exhibition from MA Interaction Design Students at UAL's London College of Communication, new works explore the relationships between bodies, environments and technologies; question received notions of smartness and judgement; and search for ways to understand and communi-

cate our shifting relationship with new machines and systems.



Embodied Perfection © Olivia Burgess

Han Bao (CN)

Cybernetic Resonance

This installation embodies a revolutionary approach to music creation, converging human input, artificial intelligence and automated guitar performance. Hummed melodies from participants are metamorphosed into intricate guitar compositions. This fusion instigates a fresh musical paradigm, presenting an uncharted territory for both seasoned musicians and novices to explore, challenging the conventional norms and inspiring a world of new possibilities in the realm of music creation.

Rajvi Bhandari (IN)

AI Judges: The Future of Fairness

This speculative art installation explores the integration of artificial intelligence in judicial proceedings and raises questions about potential biases and ethical considerations of using algorithms to make decisions. The dialogical nature of this piece aims to encourage reflection on the role of technology in shaping society and values, and the tension between unbiased judgement and human subjectivity. The installation offers an opportunity to reflect on the challenges of achieving unbiased judgement and the role of technology in addressing this issue.

Murilo Gasparetto (BR)

Everyone prays differently

A ritualistic space proposing new perspectives about the connection between spirituality and nature. In contrast to vision, this piece stimulates other senses like hearing and touch to move away from everyday habits often associated with technological advancements and the appreciation of pure reason. *Everyone prays differently* uses the speech of Afro-Brazilian religious believers in a dialogue with the audience, thus shedding light on ancestral traditions like oral storytelling.

Zheng Chen (CN)

Non-home

Non-home is a 3D single channel video illustrating the phenomenon where some domestic spaces in megacities are becoming "nonplaces", as defined by Marc Augé. Set within a fictional apartment, the video follows a monologue of a smart system. It tells a story in which home becomes a machine that supports the megacity system, while humans are just a part of the machine. A feeling of emptiness pervades the entire video, leading the viewer to consider a series of questions about super-modern city life.

Hanqi Li (CN)

Down to the underground Karst landscape

This project is an installation and sculpture-based mapping simulating a speculative archaeology scenario in China's Guizhou karst landscape. By presenting the presence of technological products as the evidence of geological strata that have been mined, *Down to the underground Karst landscape* aims to question how we could search for traces recording the entanglement between data centers and the landscape beneath the natural surface.

Yuanyuan Li (CN)

Fang Sheng

Set in a Chinese Buddhist context, this project focuses on the phenomenon of Fangsheng. The work uses on-screen text files, images and laptop microphones to show the gradual transformation of spiritual Buddhist practice into ritualistic activities of external, networked, capitalist propaganda, reflecting on the deviation of the current practice of Fangsheng from the Buddhist concept of compassion itself.

Aashna Nair (IN)

The Canvas of Tomorrow

Tracing AI's path to generative art

Through screen captures and storytelling, this short film— which shows the evolution of artificial intelligent generative art — is an invitation to explore the limitless possibilities that emerge at the intersection of artificial intelligence and human creativity while reimagining the meaning of creativity and “what is creative?”

Youhao Jiang (CN)

Live in the present

We are overloaded with information in this age of information explosion and everyone is increasingly living in the present without thinking about the future.

Tiemu Zheng (CN)

The Red Slogans

This work looks at the phenomenon of dense red slogans in China. It explores the social phenomena that lie behind the density of red slogans. The first part of the work describes the phenomenon of red slogans, the second part examines the origins of the slogans, and the third part considers their social impact through the lens of the public. People seem to be living in a giant “slogan machine”. Do we deserve better ways of communication?

Chuan Liu (CN)

The Camden Lid

A social experiment. The author reshaped the Camden Bench, a hostile architecture based in London, with cardboard. By choosing a place for the homeless, the author hopes to arouse the audience's thinking about the design ethics of public facilities and encourage the re-creation of public space.

Lokyin Pang (HK)

OFF-LOADING

VISIBLE OR NOT

This project explores how the reliance of people on digital tools to manage tasks and memories affects cognitive functioning. It investigates whether this “offloading” is a subtle or directly perceivable process. It seeks to determine whether this “offloading” is imperceptible or overt by assessing cognitive modifications and our awareness of these changes.

Yueying Yang (CN)

Narcissus

The machine algorithm uses human data to give the answers that humans want. Arguably, machines change their image according to human preference, making people as enamored of their machine selves as the mythical narcissus who fell deeply in love with his reflection in the water. However, in the mirror, what the person sees is often not the real thing, but the appearance produced by the processing of the medium.

Xiong Congxiao (CN)

Eating Machine

Eating Machine explores the relationship between humans and machines when machines possess or surpass human-like capabilities. Through an activity—eating—that is useless for machines but irreplaceable for humans, the work presents a deliberately absurd scenario, raising the question of whether it is still necessary for humans to engage in firsthand activities when machines can perform them better.

Xiaohan Leng (CN)

Decoding Lab — Bioacoustics: 2050

Decoding Lab — Bioacoustics: 2050 simulates a future decoding technology to translate plant bioacoustics into humanly understandable speech, aiming to reflect on human and nature relations through a narrative from the perspectives of non-human agency.

Tianyang Zhang (CN)

Until The End

Until The End is a psychological horror interactive novel game. As a new tenant in a haunted house, you'll experience five days of life in this house. In this game, I aim to demonstrate how superstitions can influence our consciousness and behaviors through psychological implications, leading to negative consequences. Moreover, I hope that players can reflect on what they truly want while pursuing their beliefs.

Zibo Wang (CN)

The Forgotten: Behind the Wall

In an ancient Chinese street, strange noises emerge from behind a courtyard wall. This virtual reality project narrates a tale about ancient Chinese beliefs, using animism to explore the evolving connection between humans and the environment amidst growing reverence for scientific progress, emphasizing the resurgence of tradition.

Olivia Burgess (US/FR)

Embodied Perception

Through video, dance and poetic storytelling, this instillation calls for the interrogation of reality. Reality is built from perception, the sensorial experience of our orientation towards different objects, people and places. This work encourages us to question the power structures that have historically exploited the promise of scientific objectivity and disempowered the body to their own end. An invitation to uncover alternate and unmediated realities through the moving body in space.

Lu Deng (CN)

Newton's Sleep

“Dandelions are often mistakenly identified as weeds, aggressively removed, but are hard to uproot. Resilience. Resistance. Regeneration.” (Brown, 2017).

A person is training a computer model to understand the world, during which images of dandelions strangely reappear. Is it a virus? Or is the protagonist hallucinating? Through glitch and poetry, the work attempts to provoke questions about value. How does value mean something different to a model than it does to humans?

Ayushi Chandani (IN)

Traces in the Shadows

Examining the Interplay of Virtual Presence through Embodied Presence

Exploring the entanglement of virtual and physical presence through the human body, the work prompts the audience to confront their daily interactions with technology and contemplate the traces of data they unknowingly leave behind, even when physically absent. The project originates from the notion of what we leave behind in this world and how we exist within machines, crafting our virtual presence. Paradoxically, this virtual existence renders us immortal, even without a physical body.

Royal College of Art, School of Communication (GB)

Digital Undercommons

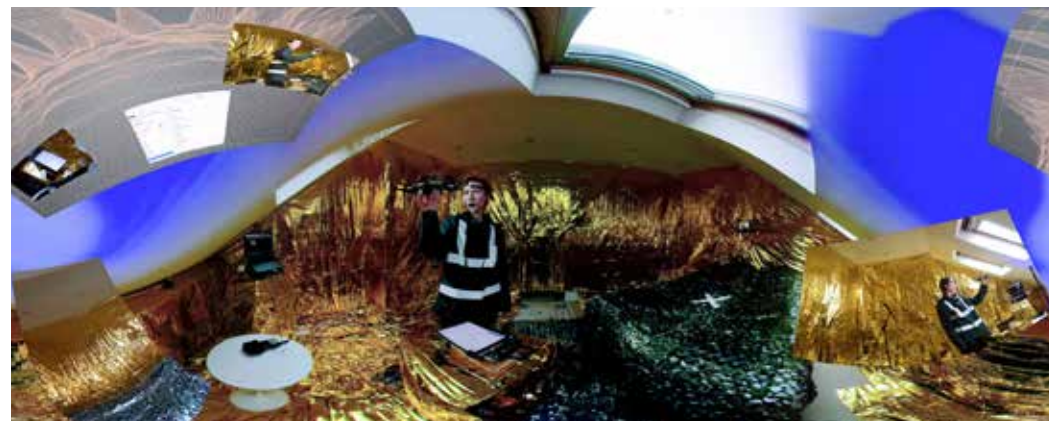
Data justice and parrhesiastic (truth-telling) embodiment in the contemporary technological landscape.

Parrhesia is defined as speaking truthfully and candidly without fear of reprisal or punishment. Parrhesiastic embodiment can be the act of embodying one's words and beliefs, of living the truth that one speaks. This can manifest as advocating for social justice causes, sharing personal stories of struggle and resilience, or using technology to share marginalized voices and challenge dominant narratives. It involves a critical engagement with the ways that technology can be used to control and manipulate public communication, but instead using technology ethically to promote freedom, autonomy, and democratic participation.

Our existence is being datified constantly. From the automated creation of digital representations, through to constant production and collection of personal data within surveillance capitalism, to the haunting of our digital footprints, and remote sensing and quantification of Earth's ecosystems and its life forms. Little personal or civic agency over the influence on the governmentality is permitted us in the aggregation and interpretation of this data.

Digital Undercommons can be seen as fugitive spaces and a set of practices proposed originally to criticize the professionalization of knowledge, expanded to describe public, cultural and civic spaces and discourses whose original common purpose no longer serve those encompassed by or subject to it. It can be understood as radical forms of "oppositional solidarity" from which "emerges neither self-consciousness nor knowledge of the other but an improvisation that proceeds from somewhere on the other side of an unasked question".

This showcase acknowledges the support of the Dean of the School of Communication Kerry Curtis, the Head of the Digital Direction Program Tom Simmons, Teal Triggs Head of the Research Program for financial support. It also acknowledges the curatorial contribution of Lena Dobrowolski and Anna Nazo, and the administrative support of Dieudonnee Burrows, Katrina Preston and Caroline Vulela. The students shown here are from the Digital Direction, Information and Experience Design, and Postgraduate Research programs.



Undulation (SWERVE) © Anna Nazo

Anna Nazo (CA)

SWERVE

Digital Queer Ecologies

SWERVE is an art-led research initiative that investigates radically different ethical-aesthetic narrative ecologies, enabling critical cross-cultural ways of knowledge production through innovative storytelling in more than human worlds. *SWERVE* was initiated in 2021 as a finalist project of the Terra Carta Design Lab, a competition to develop solutions to the climate crisis, conceived by King Charles III and Sir Jony Ive as part of the Sustainable Markets Initiative.

Karen Bosy (CA/GB)

the sky is taught by falling, 2023

We project our own reading, our own intentions and desires through the images we collect and we read the landscape according to our circumstances. Videos and other works in my practice suggest encounters with the real and material in the world. I acknowledge political structuring within the contexts of landscape and image space. Experimental (structural) film and diary filmmaking are primary fields of reference, offering linkages to the open-ended ways of thinking to which my art practice refers.

Jeanyoon Choi (KR)

≠

≠ radically challenges the notion of equality ('=') within algorithms, when a result of likelihood-based generative AI is regarded as ('=') a truth. ≠ invites users on a hyper-narrative journey, where the screens' initial layout gradually transforms into chaos: simulated into the real, 'Ja's into 'Nein's, Nietzsche's Camels into Lions, and '= into '≠'. This Multi-Device Web Artwork involves users' real-time engagement with the 4-channel installation through their mobile phones.

ShangYunWu (TW)

FactWave FM

Where Truth Blends with Trend

FactWave FM: "Where Truth Blends with Trend" is a media and sound art project that delves into the fusion of human and AI elements to create an immersive news radio experience. Inspired by a real Generative AI News report on the "Pentagon Explosion," which caused panic in America, this project integrates emotional news content and AI voice technology. By combining human creativity with AI-generated content, *FactWave FM* challenges traditional news consumption. As Taiwanese, we face a significant amount of fake news from the Chinese government. *FactWave FM* provides a dynamic platform that empowers the audience to navigate the vast ocean of fake and factual news. Through interactive installations and experimental audio compositions, it prompts critical thinking and fosters media literacy. *FactWave FM* seeks to reshape the relationship between the audience and news, inviting them to actively participate in the exploration of truth in today's complex media landscape.

Yun Hyeong Park (KR)

Fragment of Babel

The Artifacts of Lost Translation

We live in the age of generative AI Models. The emergence of AI-generated images during the age of Mass Reproduction, like photography during Benjamin's era, raises questions about the artistic potential of AI beyond its role as a prompt-to-image transition tool. But the possibilities of intersection of them are yet to be discussed. I would like to explore the boundaries of the intersection. Such as texts to images to objects. In this project *Fragment of Babel* I aim to develop a method to translate "texts" to "objects".

Ya Feng (CN)

What is your ideal world?

This project delves into the intricate interplay between the ideal world (containing utopia) and the real world from a philosophical and sociological perspective. The ideal world is defined as an idealized society, environment or situation in the mind of an individual or group, pursuing the idea of a state of perfection. On the other hand, the real world refers to the actual situations we experience and face in our lives. Using kaleidoscopes as an artistic medium, with sound recognition and AI-generated imagery, the project transforms the audience's description of an ideal world into a compelling visual experience. This exploration encourages the audience to think in response to the question "What is your ideal world?". Through the interactive experience with the installation there is an opportunity for self-reflection, self-questioning and self-discovery, thus helping the audience to re-evaluate their understanding of the ideal world and the real world. Through this project, I aim to promote a dialogue between the ideal and the real and to promote society's progress and the individual's growth. At the same time, it reminds us that ideal worlds are often abstract and idealistic, and a gap exists between them and actual reality. However, through reflection and action, we can gradually integrate our ideals into reality and work towards creating a better world.

Niccolò Abate (IT), Nikita Raina (US),
Shaye Thiel (CA/US), Katie Weitzmann (GB),
Lyla Zhou (CN)

Ex Nihilo

Ex Nihilo: "Out of Nothing" addresses storytelling through digital media, merging the five authors' personal experiences to highlight the political position of the digital landscape through a confrontational Virtual Reality experience. The journey consists of becoming a digital human and all that entails, such as identity, gender, race, sexual harassment and escapism within five episodes.

Ojasvani Dahiya (IN)

शहर मे

शहर मे (Sheher Mein — Hindi for "In the City") is a docufiction short film that illustrates the contradictory tensions between objective representations and subjective interpretations of agency in a developing urban landscape — focusing on communities that exist on the fringes but make up the very backbone of urban ecosystems which are fueled largely by capitalism.

Camille Baker (CA/GB)

INTER/her

Journey Inside the Female Body

Journey Inside the Female Body is a film of an immersive installation and VR artwork focused on reproductive diseases and pain women experience: endometriosis, fibroids, polyps, Ovarian and other cysts, cervical, ovarian, uterine and endometrial cancers. The sensory, intimate and emotional and haunting experience moves from the outside within a real dome space into VR space A soundscape of the voices and stories of real women recount their experiences, with an accompanying haptic garment providing a visceral vibration responsive experience on the lower abdomen where the various diseases occur.



INTER/her © Camille Baker

Design for Performance and Interaction, The Bartlett School of Architecture, University College London (GB)

Agents of disruption and transformation

In the article "How technology disrupted the truth" in The Guardian (<https://www.theguardian.com/media/2016/jul/12/how-technology-disrupted-the-truth>), Katherine Viner highlights a shift from focusing on the content of information to technologies that best enable information flow in the post-truth era. Here, acts of clicking and sharing manipulate our perception of reality and guide the formation of what we — collectively and individually — construct as true.

The Bartlett School of Architecture's March Design for Performance and Interaction is showcasing a collage of design research centered around and interweaving ways in which we conceptualize issues such as privacy, globalization, power (structures), identity, or fact and fiction. The work explores, disrupts and transforms connections between subjective experience and

collective realities, producing a meeting ground for cultural, social and political discourse, interrogating how, in enabling such exchanges, and central to this year's Ars Electronica theme Who Owns the Truth, there exists potential for transforming narratives and definitions of the "truth" and for "thinking of truth as plural".

March Design for Performance and Interaction, The Bartlett School of Architecture, University College London
Programme Director: Dr Fiona Zisch
Design: Dr Ava Aghakouchak, Dr Paul Bavister, Parker Heyl, Jessica In, Emma-Kate Matthews, Johnathan Tyrrell, Alex Whitley, Dr Fiona Zisch
Technology: Dr Vasilija Abramovic, George Adamopoulos, Dr Sandra Ciampone, Alberto Fernandez Gonzalez, Parker Heyl, Michael Wagner, James Wilkie, Dominik Zisch
Theory: Dr Ava Aghakouchak, Prof. Stephen Gage, Nikoletta Karastathi, Johnathan Tyrrell, Dr Fiona Zisch



Heavenly © Keyi Liu

Vanessa Tang (TW), Natalie Pirarak (TH)

(un)do

(un)do is an immersive installation that seeks to harmonize the technologically amplified disruption of mind and body through movement.

Ziqin Xu (CN), Hongcai Lei (CN)

Modular Theatre

Modular Theatre is a scalable system that serves as a narrative tool to enable a range of theatrical performances.

Xinyue Li (US), Mie Eusebi (IT)

Echoes of Glory

Echoes of Glory uses projection technologies and a bespoke physical control system to examine power structures through an investigation of the role of statues.

Naitian Zhang (CN), Mengyun Liu (CN),
Annisa P. Cinderakasih (ID)

L U D D I T E S

L U D D I T E S reflects on desires and tensions in wanting to preserve human agency and freedoms within larger political systems.

Jr-Yun Lin / Karen (TW), Jaewon You (KR)

Identiscentory

Identiscentory delves into the realm of sensory experiences, offering participants the opportunity to retrieve, reinforce and share personal narratives through an enchanting analogue mechanical installation.

Keyi Liu (CN)

Heavenly

Heavenly is an interactive experience that combines narrative film and VR, using trans-media storytelling to explore “digital mortality”.

Jingyu Zeng (CN), Jiawen Cao (CN),
Zhaohua Chen (CN)

Reverie Resonance

Reverie Resonance is an immersive experience that takes participants on a journey into uneasy nostalgia and dreamlike fantasies.

Dezjian Zhou (CN), Yi Guo (CN),
Yuanyuan Deng (CN)

Social XR

Social XR is a response to feelings of separation in Long Distance Relationships. The project aims to facilitate interaction by leveraging technologies such as bio-sensing and eXtended Reality to create a sense of closeness.

Lihong Gao (CN)

Popcorn

Popcorn is an educational, interactive video examining the phenomenon of online cults.

Zihan Peng (CN), Jie Luo (CN)

O.Duir

O.Duir is a speculative project, centered on a future immersive “seed bank” that preserves tree seeds and makes come alive sensory data relating to extinct tree species, such as olfactory or visual information.

Yilun Liu (CN), Hong Xu (CN)

Cat’s Cradle

Cat’s Cradle is a movement piece where two performers’ motions are interlinked by and together drive a physical installation.

Xiner Huang (CN)

An Egg within an Egg

An Egg within an Egg explores questions of identity, existence and digital life forms through VR, a screen-based game and a physical installation that together create a multimedia landscape.

Ziyu Wei (CN), Kexiu Zhuo (CN),
Tianhang Zhou (CN)

Lucky Fish

Lucky Fish is an immersive, interactive installation that examines superstition and modification of behavior on social media platforms.

Yufei Lin (CN), Ivy Xia (CN)

infra-reality

infra-reality considers current transformations of artificial intelligence (AI) and how the relationship between AI and humans is evolving.

Bing Lu (CN), Julia Zhu (CA),
Pranayita Myadam (IN)

Technically Touchable

In a tech-infused world, can machines replace therapists? *Technically Touchable* delves into the potential technology may have for (psycho)therapy settings.

Yuxuan Ren (CN)

The Tracing Line

The Tracing Line explores the Chinese befriending ritual Jie laotong, used by women in the 19th century in Hunan Province in China, to create an immersive experience facilitating moments of bonding between strangers.

Shabnam Asadikavan (IR)

Sonic Eyes

Sonic Eyes is an exploration into human connection, transforming the silent language of eye contact into a dynamic symphony of electronic-microtonal music.

Runjia Mao (CN)

Zero-Sum

Zero-sum is an immersive, interactive film interrogating the challenges of being in an emotional relationship with a narcissist.

Bhagyashree Amle (IN)

Deconstructing Drama

Deconstructing Drama explores parallelisms between Dramaturgy, Phenomenology, and Architecture by using elements of deconstruction to create an extended Reality experience centered around Jane Austen’s novel Persuasion.

Xiruo Wang (CN)

Window's Story

Window's Story is a VR experience that allows participants to create windows into surrealist worlds in order to examine philosophies of relativism.

Sofia Beatrice Malatesta (IT)

Wind's Tale

Wind's Tale uses wind and sound as carriers of meaningful messages, exploring notions of interconnectivity within the natural world and how natural phenomena transcend geographical boundaries, forging connections between distant places and cultures.

Jie Yu Wang (CA)

Plebeian Throne

The Plebeian Throne is a form of passive protest against the mass system of capitalism. The throne is a transformative space for reflection, an intentionally organized enthymeme, creating a performance that is performative restraint.

Alberto Fernandez Gonzalez (CL)

Cellular Architecture

The PhD project *Cellular Architecture* delves into the intricate relationship between users and spatial design. This exploration is developed through the establishment of user-defined rules, intended to transfigure self-evolving structures within a discrete environment. This transformative process fosters an immersive experience, transitioning from a tangible model to a highly detailed digital spatial construct.

HSLU— Lucerne School of Art and Design (CH)

The Anatomy Lessons

Artificial intelligences are being created in research to find out how human consciousness works and what relationship humans have with the universe. The goal is to create an AGI (Artificial General Intelligence) that can understand and learn every human intellectual task. To this end, various modules are currently being built that perform individual tasks of human consciousness: Text-to-Image AIs, GPT-4, Deep Dream, Deep Fake, etc. In the best case, they can be combined to form a general intelligence. These studies and creations pose several questions to me: What is the ethical responsibility of humans for artificially created intelligences?

What if a consciousness is created that is conscious but may not be on the same level as humans or function differently from human consciousness? What ideal human being would serve as a model for an AGI? Why? Who sets the criteria?

Based on these questions, I have created a situation reminding of the painting *The Anatomy Lesson of Dr. Deijman* (1656) by Rembrandt. For me, this painting symbolizes current research, which tries to produce a functioning AGI and in the process demonstrates the intermediate steps to the public.

Mentors: Robert Müller, Christina Zimmermann

Joerg Hurschler (CH)

The Anatomy Lessons

What is the human responsibility for artificially created (partial) intelligences? How would an ideal AGI be designed? What societal values and norms will it be guided by?



© Joerg Hurschler

University of Nova Gorica School of Arts (SI)

me ∞ us

Yes, "who owns the truth?" The view of ownership of the planet, of nature, of people, of ideas, of technology is changing. We reflect on this through a selection of student works that interrogate social and environmental themes, artificial intelligence, contemplating a future without humans, as well as through intimate reflections on identities, gender, power and the fragility of the individual.

The exhibition invites the visitor into a whispering sound-light landscape, with points of individual works that invite reflection... on distant times, inhabited by new cultures, fungi growing out of a book, specifically a scientific encyclopedia of physics.... about us NOW, in the discomfort that overtakes us in the face of the world, the future, the unknown, about the feeling of helplessness and at the same time with confidence in the community of beings on the planet... about concrete solutions in the desire to survive through connection... and it also invites us to a quiet intimate space within the public, a calm boudoir with plants and a candy dispenser and a multitude of

cyclical tempos, continuously generated by an installation of animated video moments.

The hybrid art projects are created in the context of explorations in art and society, natural sciences and technology, and are intended to lead to a better understanding of empathy, solidarity and care in the context of human and multi-human relationships. The primary method used under the title *Futurama* was the "Empathic Strategy". It involves perceiving the environment beyond our empirical understanding and recognizing our active participation in it, rather than being mere observers or exploiters. This also applies to the other selected works in the exhibition.

Exhibition curator: Rene Rusjan, Producer and coordinator: Rok Govednik, Technical support: Urša Bonelli, Responsible person: Boštjan Potokar, The selected student works were created in research activities of *Futurama*, *Time and Space in moving image*, *The power of female blood* workshops and under the mentorships of: Robertina Šebjanič, Jasna Hribnik, Rene Rusjan; Participating students: Ana Logar, Anastasija Kojič, Luka Carlevaris, Tamara Taskova, Tamara Kostrevc, Lazar Mihajlovič and diverse animation students



5476 © Rene Rusjan

Miha Godec (SI)

Fluvial dialects

Fluvial Dialects is a series of three kinetic sound installations — *Palingenesis*, *Con·d/s·ense*, *D·still* — that uses water as its central medium to create a meditative space where visitors can listen to the sound of water being purified, condensed and distilled. Fluvial dialects aim to raise awareness about global water scarcity and speculate on potential technologies, offering hope for a better future. Godec sets subtle natural sounds within the context of new media art and water environmentalism, while he attempts to transcend a viewer to a higher level of awareness.

Anastasija Kojić (RS)

Grayspaces

Time and Space

Pace of life varies in a regular fashion with the size of the local population, regardless of the cultural setting. The truth is, cities move fast. Living in a city is frequently associated with tension, worry and loneliness, but we can lessen these effects by spending more time in nature. That is why many people recommend spending a minimum of 15 minutes a day in nature to unwind, recharge, and refocus in the fast-paced city. Based on everything that has been said about connecting with nature, does this count?

Luka Carlevaris (SI)

Micro need for speed

Futurama

Motorsport is very interesting and colorful, but this entails the fact that it is the only sport that directly affects the pollution of this planet. *Micro need for speed* is a work combined from motorsport photos projected onto the surface of the water on top of the tire tower. The situation with microplastics is getting worse and I want to highlight this dark side of racing with my product. That is why every viewer will get a black reminder when they dip their finger in the water.

Ana Logar (SI), Anastasija Kojić (RS)

5476

In the year *5476*, Earth has transformed. Humans are replaced by new life forms. Only remnants of humans exist. Mycelium-infused books symbolize human culture's lasting impact. Nature's reclamation of structures evokes awe and reflection. Thriving plants and fungi revitalize humanity's remnants. Evolution's beauty transcends time and space. Nature's triumph bids farewell to humanity, embracing a hopeful future.

Various students

Animated

At the UNG School of Art, students also focus on animated film. At this year's *Ars Electronica*, we are presenting some selected animated films from previous years, which are thematically connected to the theme of *Ars Electronica* and our exhibition this year.

Tamara Taskova (MK)

Cycle fragments

The Power of Female Blood

Cycle Fragments explores the notion that each person experiences their own cycle, influenced by external and internal factors. Variations in duration for each animation contribute to an ever-changing puzzle, creating unique configurations for each visitor. Leaving the arrangement to chance, the installation symbolizes the unpredictable nature of personal cycles and the individualized paths that navigate them.

Tamara Kostrevc (RS), Lazar Mihajlović (RS)

Littering / Echoing shadows

Littering was conceived with the idea of awakening viewers' awareness of the environmental crisis we have caused ourselves and to provoke thoughts about our responsibility towards the planet. The concept of *Echoing shadows* is to provoke thoughts about the vitality of nature and its ever-accelerating disappearance under the influence of human activity.

UMPRUM Academy of Arts, Architecture and Design in Prague (CZ)

Revising the digital

Environmentally conscious strategies of design, materiality and fabrication

At the time when material science and digital fabrication expands our formal possibilities to previously unseen levels and AI development hints at upcoming disruption of the design processes, it is essential to step aside and critically evaluate the meaning and the potential of the digital at a time of environmental crisis. Studio Architecture III UMPRUM exhibition presents students' projects focused on revising three sides of digital architecture: design, materiality and fabrication.

The projects of Martin Kavalec and Hugo Fekar under the common name *My Bespoke AI* explore the possibilities of popular prompt-to-image AI such as stable diffusion by creating personalized and personal neural networks trained on their previous projects and experiences. The result reflects their work and at the same time reveals its position in the context of shared popular common narratives, stereotypes and biases.

The installation *Mycelium Landscapes* by Jakub Míča, Antonia Stretavská, Kateřina Suchanková and Viktoria Žigmundová suggests that a living materiality of mycelium can challenge our existing understanding of what is "digital material" and at the same time use the precision and flexibility of digital fabrication to the utmost.

The furniture pieces *Robinson Chairs* by Ashton Bird, Maya Diab, Hugo Fekar, Lyza Melnyk, Jan Novák, Petra Sochůrková, David Stingl and Elin Werme explore fabrication processes and materialities which reflect scarcity of resources as the primal input for any architectural task.

Curators and project leaders: Imro Vaško, Shota Tsikoliya;
Authors: Ashton Bird, Maya Diab, Hugo Fekar, Martin Kavalec, Jakub Míča, Jan Novák, Petra Sochůrková, David Stingl, Antonia Stretavská, Kateřina Suchanková, Diana Suleimanová, Viktoria Žigmundová; Photographs: Tomáš Zumr, Jiří Královec



Revising the digital © Tomas Zumr

University Research School ArTeC, Paris 8 University Vincennes – Saint-Denis, TEAMeD Research Lab (FR)

The Looting Bag Theory of Fiction

The question of truth in contemporary times leads us to consider issues of power ownership in a globalized, stacked and suffocating world: who owns the earth, what circulates on it (information as well as goods), to create the big narratives in which we live? Through practices of gleaning on the internet as a renewed attention to the small, the leftovers or the details of what lies behind a décor imposed as a truth without alternative, our proposal is articulated as a manner of *faire avec* (Citton, 2020). *Faire avec* can be translated as “doing with”. It implies a methodology in action within a system, and this is where the word “loot” appeared in our discussions. From simple screws to legendary weapons, “loot” generally refers to items and rewards players can collect in video games and are often at the root of the value system. In that sense, we wish to question objects or data collection by becoming collectors ourselves. In the gesture of the gleaner or the ragpicker, there is the action of bending down to keep what is left (grains of wheat after harvest, if we focus on Millet's painting, for example), but

also of giving another life to discarded or obsolete objects. With five artists and researchers from Paris 8 University, we have imagined the exhibition *The Looting Bag Theory of Fiction*, a direct reference to Ursula K. Le Guin's essay *The Carrier Bag Theory of Fiction* in which she suggests that bags and containers instead of weapons are the first survival objects in human history (Le Guin, 1986). In the hollow of our bags, you will find the looted object we have gathered and want to redeploy outside of their original territories to draw alternative paths within an imposed system of truth.

University Research School ArTeC (FR), Paris 8 University Vincennes – Saint-Denis (FR), Doctoral School Esthétique, sciences et technologies des Arts, Arts des images et art contemporain (AIAC), TEAMeD Research Lab, Doctoral School Pratiques et théories du sens (PTS), TransCrit Research Lab, Doctoral School Sciences sociales, Centre d'étude sur les médias, les technologies et l'internationalisation (CEMTI), Supervisors: Gwenola Wagon (FR), Annael Le Poulennec (FR), Artists: Nicolas Bailleul (FR), Vincent Bonnefille (FR), Hortense Boulais-Ifrène (FR), Angelica Ceccato (IT), Lorena Lisembarb (FR)

Nicolas Bailleul (FR), Hortense Boulais-Ifrène (FR), Lorena Lisembarb (FR)

Dispensable Loots

This proposal is conceived as a harvest in our fields of research: survival games (Nicolas Bailleul), GTA-like (Lorena Lisembarb), and virtual worlds (Hortense Boulais-Ifrène). By applying various methods of gleaning objects in different online worlds, we aim to develop a typology of “dispensable object” by exploring the act of looting as an artistic gesture.

What is the status of these objects, which are not essential to the game but fill our inventories? What functions and desires do they fulfill?

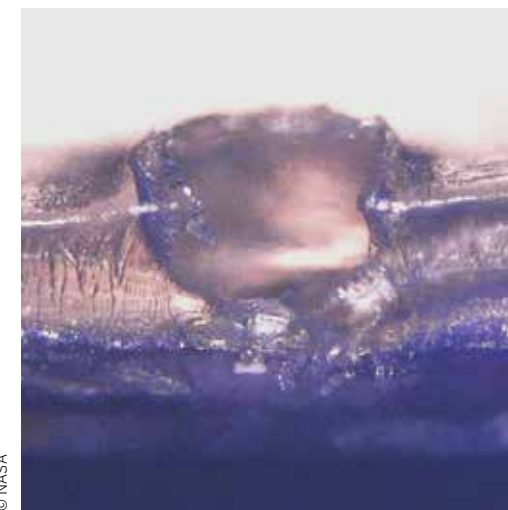


© Nicolas Bailleul

Angelica Ceccato (IT) Spolia Mundi

A Tale of Collisions

By 2030, some private space agencies will have launched over 58,000 new satellites into near-Earth orbits, giving substance to the syndromic theory of Kessler-Cour-Palais (1978): a collision between orbiting bodies — be they artificial or natural — causes an unstoppable chain effect. The sky hosts a hyper-congested belt of debris and wounded, exhausted satellites. The sky is no longer black but thick with storms of silvery projectiles. Besides being a bet against deeply critical odds, every space launch is a nourishing show for the counterintuitive utopias of progress: winning gravity, sailing safely in unknown skies, and owning the future. *Spolia Mundi* (from the Latin *Spolia* meaning “ruin”, “fragment”, but also “found material meant to be reused”, and *Mundi* meaning “of the cosmos”) is a research-based visual essay about fantasies of rise and collision, underlying the uprising NewSpace (necro)politics. The project stages multiple narratives, harvested from forgotten space conspiracy theories, mythology, and stories of collapsed satellites in familiar orbits, combined to repurpose collapse in a sensible urge of taking care of the sky.



© NASA

Vincent Bonnefille (FR) Chat Chouquette

Icebergs

The idea is to create a thematic mashup based on various sources of inspiration. The resulting iconography is designed to immerse the viewer in a world of visual representation, losing focus, confusing purposes. Not exhaustive, this portrait tends to gather and collect content around specific hotspots. There's also a desire to confront expurgated imaginaries, to go head-to-head with them.

How it works:

- A computer connected to the internet receives images from a server (local or remote).
- These images are animated together via a web page (full screen).
- This rapid animation of the images produces a continuity between them: a flipbook.
- New images are added to the image bank: locally with a pre-established dataset /or/ remotely with the addition of images retrieved via the internet using a scraper.
- A local app (GUI) for moderation is possible.
- The video stream is projected onto a wide screen



© Vincent Bonnefille

Mozarteum University (AT)

Spot On MozART

What do you see when you listen to Mozart? In a reality and society that is strongly oriented towards images, one must not simply surrender to the omnipresent worlds of images, but rather actively shape them. The power of images does not simply mean helplessness in front of them, but the call to actively create the images of the present and, for us in particular, to exploit technological innovation and digital tools within an art-driven project.

In order to focus even more on the vital connection between acoustic and visual perception, research is also being conducted at the university level on various approaches to the production, distribution and reception of audiovisuality. Spot On MozART is an internationally successful example of this endeavor, based at the University Mozarteum Salzburg. Spot on MozART is an

inter-university and interdisciplinary project that aims at a visual exploration of listening and thus a new understanding and visualization of Mozart and his work. At the intersection between art, science and technology, students and teachers from international universities as well as renowned partners from culture, business and technology are developing visualizations of selected works by Mozart. Under the umbrella of Spot On MozART up to 50 so-called work projects, ranging from music videos to short feature films, from media installations to apps, will be created in its duration from 2020-2023.

Project organization: Anna Sophie Ofner, Research Studio Austria: Christian Thomay, Peter Fritz and Michael Matscheko, Research: Thomas Scherndl, Visualization: Luca Mathies and Philipp Toigo, Sound technician: Constantin Hemetsberger



© Christian Schneider

Anna Sophie Ofner (AT)

Mozart Contained! 1

Mozart Contained! 1 is an interactive musical experience. The visitors move through the room as authors. The movement in space influences volume and visualization. Just as a quartet cannot be played by just one musician, this room works best in cooperation with other participants. The differentiated listening, movement and interaction with the sculptures and with the other visitors creates new possibilities for experiencing Mozart's music.



© Christian Schneider

Anna Sophie Ofner (AT)

Mozart Contained! 2

The Rondo in A minor (KV 511) by W. A. Mozart is the framework – the cycle, the organism into which we invite. The visualization presents a concept that combines the experience of timeless eternity and interaction – with each successive repetition, with each successive movement, more space is opened, like layers slowly peeled. Sequences of sounds are listened to without expectation until the ear recognizes and anticipates a rhythm, a melody.

University of Salzburg (Paris Lodron Universität Salzburg) (AT)

DEGENET

Dark Communication in Digital Networks of Conspiracy

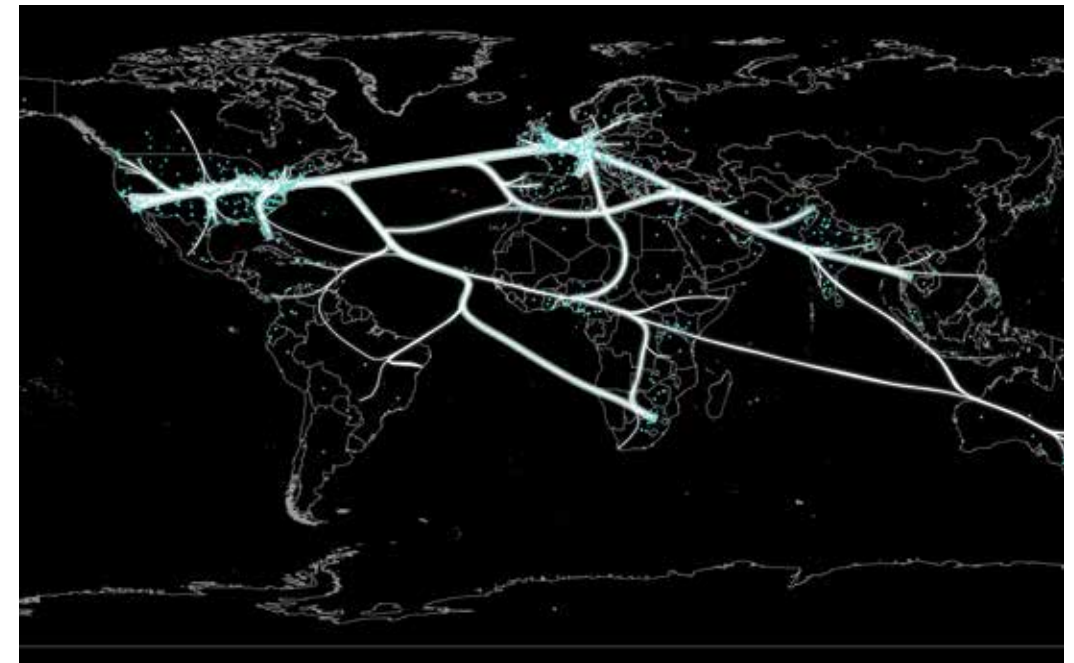
Conspiracy narratives on social media raise concerns about the quality of public discourse. They spread across various platforms, transcending geographical boundaries. Users from different countries engage in multiple platforms simultaneously, including popular ones like Facebook and emerging "dark platforms" such as Telegram. These dark platforms are characterized by minimal content regulation.

DEGENET, an interdisciplinary project at the University of Salzburg, investigates how users leverage platforms to spread "dark communication" transnationally. This issue is investigated through a case study on the Austrian Corona protest movement. Advanced computer-assisted

analyses of geo-social media data using semantic and geo-referential techniques shed light on the transnational digital network that disseminates conspiracy narratives – both in the network's topological nature and its manifestation in geographic space. The project also explores the democratic challenges arising from these findings.

Ricarda Drüeke (DE), Roland Holzinger (AT), Nefta Kanilmaz (DE), Corinna Peil (DE), Bernd Resch (AT), Charlotte Spencer-Smith (AT, GB?), Thomas Steinmaurer (AT), Christian Wasner (AT)

The project is funded by the Regional Government of Salzburg (Land Salzburg) and is located at the University of Salzburg



UC Chile (CL), University of Chile (CL), National University of Tres de Febrero (AR)

FUTURE ANCESTORS

PRISMA — Art, Science, Technology

Matter is empowered in performative acts: objects exercise forms of power and intra-material actions produce different materializations of the world. The emergence of alternative paradigms for thinking about the problem of materiality has many expressions in contemporary art. This exhibition displays those that recuperate ancestral techniques from today's poetic, scientific and technological imaginaries. Particularly, crossovers between technologies belonging to different temporal and spatial spheres entail a recurring practice in the electronic arts produced in Latin America.

The three works stage a series of transformation processes of matter from the natural world into new materials that intertwine ancestral ways of making and contemporary technologies. Their artists investigate the encounter of macro and micro worlds through combinations of scales, modular constructions and alternations of different views on objects, materials and processes: *Fragments of the Jungle* by Angel Salazar proposes the coexistence of satellite views of geoglyphs and volumetric data visualizations; in *Holobiont*, Diego Silva combines the general structure of the installation with the infinite details of the symbiotic colony of bacteria and yeasts on a large scale; in *WEAVES*, Vivian Vergara's minimal repetitive gesture of weaving is materialized and multiplied, amplified from a machine that is located between the serial and the handcraft.

The study of our ancestral cultures presents itself as a respectful approach to our natural environment but is also a reminder of the challenges that we face in this new and hardly classifiable era that we often refer to as the Anthropocene, where almost every practice instantly becomes obsolete.

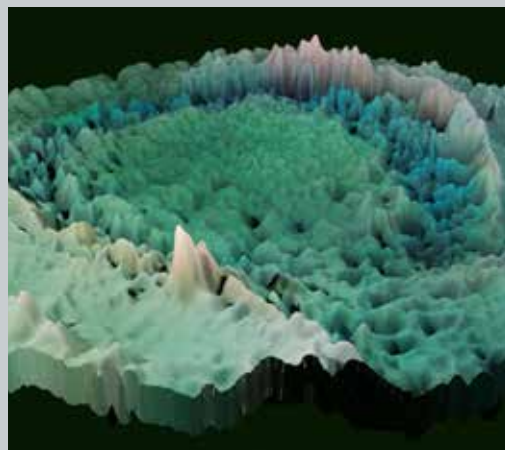
Artists / Works: Diego Silva (CL): *Holobiont*, Ángel Salazar (ARG): *Fragments of the Jungle*, Viviana Vergara (CL): *WEAVES: From Humans to Living Machines*, Curator: Jazmin Adler (ARG), General Coordinator: Valentina Serrati (CL)

UC Chile (CL): Dean of the Department of Arts: Alexei Vergara. Director of Arts & Culture: Miryam Singer, Vice-counsellor of Research: Pedro Bouchon University of Chile (CL): Dean of the Department of Arts: Fernando Carrasco, Director of Master in Media Arts: Monica Bate, Director of the Center for Mathematical Modeling (CMM): Alejandro Jofré

National University of Tres de Febrero (ARG): Chancellor Emeritus: Anibal Y. Jozami, Chancellor: Martin Kaufmann, Vice Chancellor: Diana Wechsler, Director Electronic Arts Master: Mariela Yeregui, Assistant Director of the Master's Degree in Electronic Arts: Leo Nuñez

The participation is the result of a collaboration between Ars Electronica and the Ministerio de las Culturas, las Artes y el Patrimonio and the Ministerio de Relaciones Exteriores | Gobierno de Chile.

The projects have been selected through an annual open call as part of the collaboration between Ars Electronica Linz GmbH & Co KG with Ministerio de las Culturas, las Artes y el Patrimonio and Ministerio de Relaciones Exteriores de Chile.



FUTURE ANCESTORS © Ángel Salazar

Diego Silva (CL) *Holobiont*

Site-specific installation made up of two wide tin pools, which contain a SCOBY crop (a symbiotic colony of bacteria and yeasts). The exhibition space is entirely connected to various sensors controlled by Arduino. While the public walks around the room, a series of water pumps and sounds are activated as a response of the crop to those space stimuli. The *Holobiont* concept refers to beings formed by the association of different species, which in this case give rise to techno-ecological relations. *Holobiont*'s main objective is to build a space where different degrees of

living and technological complexity coexist and interconnect with each other.

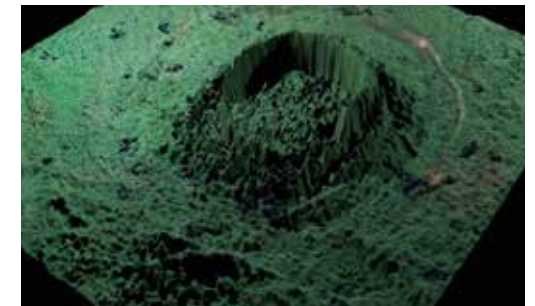


© Diego Silva

Ángel Salazar (AR) *Fragments of the Jungle*

Installation that consists of a series of 3D objects and audiovisual displays that are based on aerial images of the geoglyphs. These images were made by civilizations of the Amazon in different areas of the jungle and later discovered from the massive deforestation of these territories. The ancient geoglyphs, understood as biodesigns of ancestral Latin American thought, are converted by the artist into visualizations of digital volumetric reconstruction — "speculative reconstruction" — in the words of Salazar. The creative process comprises learning patterns of the forms found

in the jungle and the production of sculptural objects using digital fabrication techniques.



© Ángel Salazar

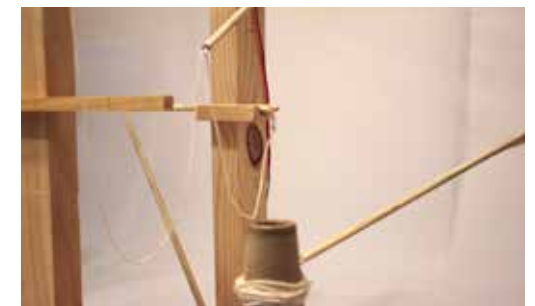
Viviana Vergara (CL) *WEAVES: From Humans to Living Machines*

Weaving bio machine in which craft techniques rooted in different pre-Hispanic cultures come together with scientific and technological knowledge. The artist uses mechanisms built based on biomaterials to design a machine that produces a fabric over time.

The work is made up of two main articulations: one that weaves and the other that winds; each of them comprises a series of interlocking mechanisms that configure the main action of each work cycle.

In this way, Vergara investigates the materials,

techniques and biotechnological relationships involved in human-machine associations.



© Viviana Vergara

Korea National University of Art | K-ARTS (KR), Pohang University of Science and Technology (KR)

FRAMELESS

ART & TECH METAVERSE SHOWCASE

FRAMELESS, a metaverse platform dedicated to art and performance, arises from a partnership between the Art and Technology Lab at Korea National University of Arts and Pohang University of Science and Technology. The upcoming festival will unveil the unique design aspects of *FRAMELESS* through two immersive metaverse performances — *Breaking The Ice* and *Passhass*, enhanced by two sophisticated virtual reality artworks, *ASEA* and *The Places That Will Soon Disappear*, employing point cloud technology. In the premier performance, *Breaking The Ice*, attendees equipped with multisensory devices will unfreeze the ice, save non-human characters,

and join a collective dance in the metaverse, representing the convergence of art and technology. This initiative has been made possible by The Culture Technology R&D Talent Programs Universities, supported by the Ministry of Culture, Sports and Tourism and the Korea Creative Content Agency R&D Center.

Project Creator: Seungmoo Lee, Chungyeon Cho
 Project Chief Coordinator: Ark Park
 Project Operation manager: Seungpyo Kang
 Project manager: Gaeun Ju
 Interaction designer: Hoyeon Choi
 World designer: Yerin Doh, Eunchoe Sah, Sorang Kang
 Sound designer: Bokyoung Shin, Curator: Yeonsoo Park

Ark Park (KR), Hojeong Lee (KR), Sohee Choi (KR), Gurnee Park (KR), Minhwi Cha (KR), Jiwon Park (KR), Gyuree Kim (KR), Jungwoo Park (KR), Sanghyun Park (KR), Junwoo Kim (KR), Yundong Lee (KR)

Breaking The Ice

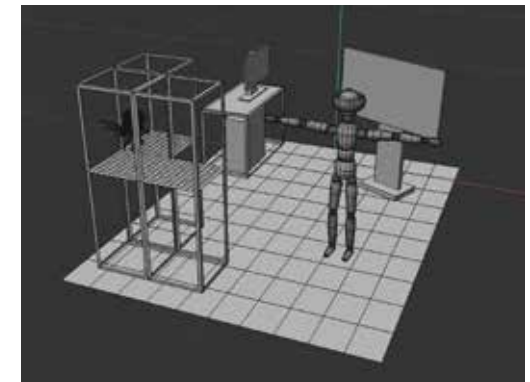
Explore an unparalleled metaverse with an immersive concert that employs innovative technologies such as haptic feedback, motion capture and virtual reality. This groundbreaking endeavor emerged from a thoughtful examination of the intricate relationship between artificial intelligence and humans, and broadens to raise compelling questions about the universal sentiment of love. Witness the beautiful exploration of this emotion through a unique blend of technology and artistic prowess.



Kitty frozen by an ice attack. Pitty looks at the audience for help to save Kitty.

Yerin Doh (KR) Asea 2023

Asea Electronics Shopping Center, despite its rich history, had faded into obscurity. Yet, an entire ecosystem arises from the digital remnants of the pre-demolition building, captured via laser scanning. This incomplete point cloud data morphs into a cave teeming with mysterious creatures, each representing an era of the center. Asea Cave extends the narrative of Asea Electronics Shopping Center into virtual reality, embodying its present state.



Park Gunmee (KR) The Places That Will Soon Disappear

Born from the “Two-million Housing Unit Construction Plan” under Roh Tae-woo’s administration, Bundang sought to address the housing crisis. Initially a haven for newlyweds, Bundang now stands over 30 years and faces impending reconstruction. This narrative seeks to immortalize the fleeting moments of a hometown on the brink of change in virtual reality space. It is told from the viewpoint of a native citizen, witness to the city’s cycle of growth and decline.



Byeori Ahn (KR), Kwanghyun Lee (KR), Hajung Woo (KR), Jeonghyun Soh (KR), Minhyuk Che (KR), Aori (KR), Sejin Jang (KR), Yeonmin Kim (KR)

Passhass

Linking the present and future through a refrigerator, this piece presents a stark contrast. The “present”, represented by a life of constant waste discharge, and the “future”, characterized by a climate crisis, intersect in this fridge space. Audiences participate as tiny molds within the refrigerator. Upon the opening of the refrigerator door, a wave of chaos engulfs the audience, cast as microorganisms in this microcosmic representation.



Sungkyunkwan University | SKKU (KR)

Beyond the Sight

We are living in a world filled with indiscriminate noise. These noises intertwine and obscure the truth, obstructing our path to reach the fact. We aimed to examine the elements that cover our sight amidst this noise. Our efforts, combining humanities, arts, and technology, sought to uncover the origins of these noises. Our project delves into the roots of noise beyond our sight, using the mediums we have created. Sungkyunkwan University, built upon the values of integrity and foreknowledge, has been exploring the fusion of human, technology, and interdisciplinary research for over 600 years. We pursue education

to create content and recognize the importance of collaborating with industries for content production and utilize the geographical advantage of the "Daehak-ro" area, also known as the "Broadway of Korea," to establish the Department of Culture and Technology as a platform where students and creators can freely experiment and produce various forms of content.

Hosted by: Sungkyunkwan University. / Project Director: Soowan Kim and Sanghun Sul / Organized and Operated by the Department of Culture and Technology. / Project Management: School of Convergence, Jang hyun Kim and Byeng-Hee Chang

Yongmin Jo (KR), Junha Park (KR)

Discord

Discord is an artwork that presents the Earth shaking unsteadily amidst the sounds of hatred and conflict, creating a vivid multisensory experience for the audience. The Earth-shaped sphere, connected to the woofer speaker with wires, is shaken by the vibration of the sound, providing a tangible representation of the artwork's message. Moreover, projection mapping that responds to the vibration further accentuates the visual impact of the piece. Viewers can contemplate the immense impact that hatred and conflict can have, as they experience the Earth shake in response to the artwork's auditory elements.

Eunji Hong (KR), Sumin Lee (KR), Jihae Park (KR)

The Universe Thinks

The Universe Thinks is a generative art highlighting the profound connection between the universe and the human mind. The art projects a clustered web that superficially resembles a person's neuronal network and sparkles with the presence(sound) of another human being. In times when machines own cognitive abilities, the recognition that humans are the authentic "thinkers" of the universe tends to fade away.

Jiseob Kim (KR), Jimin Lee (KR)

City of Hope: Hoffnungsburg

City of Hope: Hoffnungsburg suggests that artificial intelligence and digital twins are created and changed under human control. It expresses the appearance of a virtual city that changes according to the information called "heartbeat" that reflects the emotional state of the audience. It presents an artwork for the "audience" by expressing the emotions the audience feels in the virtual space. Ultimately, it makes the audience confirm that the subject that can control human-made by-products such as artificial intelligence is human.



City of Hope: Hoffnungsburg © Jiseob Kim, Jimin Lee



Discord © Yongmin Jo, Junha Park The Universe Thinks © Eunji Hong, Sumin Lee, Jihae Park

University of Seville (ES)

ASTER> Art ^ Science

Natural Environment + Artificial Intelligence

The ASTER project (aster.us.es/en) emphasizes the co-creation of knowledge and the construction of meaning through the collaboration between art and science. It acknowledges that truth is not fixed but rather shaped by social and cultural contexts, and it highlights the importance of considering various viewpoints to gain a multifaceted understanding of complex realities in two thematic areas: Natural Environment and AI. In the context of AI, it prompts a re-evaluation of traditional notions of authorship and the potential limitations of those systems, raising questions about the ownership of truth when AI is involved in knowledge construction. In the framework of Natural Environment, it reflects on the multifaceted epistemology of truth in the context of the Anthropocene, and its necessary re-connection to nature facilitated through SciArt expressions. Furthermore, the democratic and sustainable

approaches of the ASTER project enabled the involvement of general society and a broad participation in person and online. Its "eco-SciArt methodology" supported the shared efforts to transform a "scientific seed" (scientific topic) into a "SciArt flower" (proposal) during a hackathon, and into the final "SciArt fruit" (final artwork). The main objectives were to transform the archetypical roles of art and science by the development of cross-pollinated critical thinking and co-creativity, as an attempt for a more comprehensive understanding of truth in a complex changing world.

Project ASTER is funded through the European Regional Development Fund (ERDF) and the Department of Economic Transformation, Industry, Knowledge, and Universities of the Andalusian Regional Government, Operational Program 2014-2020. REFERENCE: US-1381015 COAAT (Foundation of the College of Technical Architects of Seville www.coaat-se)

Aurea Muñoz del Amo (ES),
Carmen Salazar Pera (ES)

Light Phase / Dark Phase

This work portrays photosynthesis light and dark phases. It symbolizes a microscopic perspective and highlights a scientific approach. However, the explanation of photosynthesis may have varying scientific interpretations. The artwork introduces subjectivity and personal expression, allowing artists and viewers to incorporate their own perspectives. Ultimately, it prompts contemplation on the intricate nature of truth, embracing scientific exploration, individual understanding, and artistic creativity.

Eduardo Julio Lavrador Jiménez (ES),
Yolanda Martín Benítez (ES)

Rigor Plastic 2 Metamorphosis in a circular economy environment

This work includes a porexpan human figure in an urn house, used as food for worms. Their enzymes digest synthetic material, and their excrement nourishes the plants below. The happening underscores the significance of the circular economy and bioplastics. The interplay of natural processes highlights collective responsibility for transformation. Interpretations can differ between the ownership of the creative process, the randomness of the happening, and the viewers' own perspectives, emphasizing the complexity of truth.

Rocío García Robles (ES),
Amalia Ortega Rodas (ES)

Camarina #2

The pearls of the dunes that walk on the sands

The resilient *Camarina* symbolizes nature's adaptability and survival. The sand protects it from fire and its pearls offer support to the dunes and nourishment to wildlife, highlighting their interdependence. The pearls transcend the supposed ownership of nature by humans to become universal. It reflects on the multifaceted epistemology of truth, its necessary re-connection to nature through SciArt expressions, and the role of individuals in conveying different meanings to that synergy.

Mariano Luque Romero (ES), Miguel Mendoza Malpartida (ES), Cecilia Pineda Calvillo (ES), Esther Rodríguez Pluma (ES), José María Delgado Sánchez (ES), Pedro Escobar Rubio (ES)

Roots, relationships between the computational and the human

The combination of cellular automata, mathematical algorithms, and human creativity creates a multi-sensory experience, blurring the line between human behavior and algorithms, and raising questions about ownership of the process. The artists shape their algorithm, but viewers contribute to the emergent outcome. Ownership becomes shared among all of them. Their interconnectedness makes it evolve, emerging new dynamic meanings, highlighting the shared ownership and co-creation of the artwork.



Roots

Helena Hernandez Acuaviva (ES),
Agda Carvalho (ES)

Biases and machine translation

This work explores the influence of algorithms in our daily lives, highlighting their role in decision-making and information retrieval, as well as the existence of errors and biases in these intelligent technologies. It questions the ownership and control of truth in algorithmic systems, emphasizing the need for critical examination of generated information in terms of transparency, accountability, and ownership in the development and deployment of algorithms.

Guillermo Rodríguez Tenorio (ES),
Olga Albillos Castillo (ES)

NADA

In this work, AI perceives the void and confronts the absence of a reference model. In the encapsulated sculpture, AI's ability to generate intangible interpretations without a reference database is represented. The smoke, symbol of nothingness and disappearance, resists being seen, aspiring to be a nothingness it cannot reach. This is meant to highlight the tension between the autonomy of AI and external influences, emphasizing the complexity of its properties, presenting ethical implications.

Juan Manuel Torrado Martínez (ES)

Video Data Bank. Work In Progress

This work involves a program accessing a database to generate images based on parameters. It considers who should be credited as the creator of the visual content and whether the program's involvement diminishes the significance of human creativity. The human contribution through code and user interaction introduces a layer of interpretation. It arises from philosophical and ethical considerations regarding the right to claim ownership over the truth emerging from collaborative or artistic endeavors.

José Carlos Jiménez Revuelta (ES),
Cristina Quintana Laforet (ES), Natalia Herrera Pombero (ES), José Manuel Higes López (ES), Alberto Muñoz Santos (ES)

Twenty times true

AI can disrupt established truths by inspiring alternative realities. In this icosahedron, each face represents a group of established truths from different domains. Visitors can explore alternative perspectives, challenging the ownership and stability of established truths. It emphasizes the potential of AI to disrupt traditional notions of truth ownership, inviting viewers to reevaluate their understanding, encouraging them to develop their critical thinking.

Rawand T. A. Masri (PA), Marco Daniel Mosquera Lozano (EC), Celia Hermoso Soto (ES)

emergANT

In this work the collective interactions of simulated ants lead to an emergent solution, not dictated by a centralized authority. The citizens' opinions from Hebron, Quito and Seville symbolize subjective understandings of happiness. Each one is represented by an ant's path, expressing the combination of shared human needs and individual choices for self-realization. The work emphasizes that truth emerges from collective wisdom and interactions, challenging the notion of singular ownership.

Javier González Borbolla (ES)

I am the real you

Let us imagine that we start creating digital clones of ourselves; we give them access to all our personal information and ways of thinking. We give them the freedom to exist. An AI being, created in my own image, tries to convince me that she is the one who possesses my identity, and I am a usurper.

Who would be responsible for the model's actions? The emergence of a conscious AI being could raise deep philosophical questions about the nature of consciousness, identity, free will, ownership and truth.

Beatriz Requejo (ES), María José Ventaja (ES)

Too common and meaningless

This micro-theatre explores human relationships and AI. It examines the shared understanding of common sense as a form of collectively owned truth, while also considering its limitations. Common sense can both limit and liberate human relationships, hindering genuine understanding yet providing a foundation for communication. The play also delves into the challenges of AI to understand humor and irony. It raises questions about the ownership of truth in AI interpretation of human communication.

Director: José Manuel Higes

Actors: Beatriz Requejo, María José Ventaja

Company: La Insolente Teatro

Víctor Fernández Calderón (ES), Triana Sánchez Hevia (ES), Raquel Serrano Tafalla (ES), Rafael Garrido Vilchez (ES), Emiliano González Herrero (ES), Javier Alejandro González Borbolla (ES), Rosa María Molina Arregui (ES)

Limit Cycle

Meaning is not fixed but rather a cyclical process influenced by social and cultural contexts through a semantic consensus. In this work AI is a subversive element, challenging social conventions and introducing alternative perspectives. It raises questions about the ownership of truth when AI is involved and prompts a re-evaluation of traditional notions of authorship and ownership. Therefore, AI transcends what is considered "properly human" in creation, subverting social conventions.



Limit Cycle

ShanghaiTech University (CN)

Ethereal Dreams in Augmented Realms

In our quest for truth, we have different views on how the world works. Some people think that mathematical equations can explain the beauty and charm of Mona Lisa, some people think that the arrangement of furniture can bring spiritual wellbeing, some people look for signs of prophecy in coffee grounds. These are all ways we interpret the world. In our work, we will explore the intricate interactions between different cognitive perspectives, using mixed reality technology to experience individual perception. By seamlessly integrating reality and the digital world, we create environments that adapt to individual observations of reality, and thus glimpse the shared cognitive reality. Some projects think about the complexity of modern technology, some provide alternative narratives. Through immersive experiences and intuitive human computer interaction, these works present a wide range of world cognition, from rational to fantastic, from real to virtual, as a mixed reality journey across various stories and perspectives, to celebrate the human's persistent cognition and diverse expression of truth.

We sincerely thank the Linz Ars Electronica committee for accepting our work, providing a valuable opportunity to learn and network. We appreciate the guidance from ShanghaiTech University DIV Lab and the University of Auckland Arc Sec Lab, and ShanghaiTech's unwavering

support. Further, we thank our committed team, advisors and collaborators for generously sharing their expertise and resources throughout the project.



Ethereal Dreams in Augmented Realms © Yutao Ming

Hengwei Ye (CN), Jingjie Lu (CN)

Token Realm

Six different mystical environments in the form of an altar explore one's sense-perception of the world. The hybrid audio-visual environment is only complete when viewed through the HoloLens 2, allowing audiences to interact with the work from various perspectives.

Wenjia Shi (CN), Yichen Fan (CN)

Creation Theatre

We simulate the process of creation using a physical model capable of generating 72 meaningful variations. The audience must contemplate and manipulate the model to achieve interactive functionality. Through the participant's actions, a non-linear and ever-changing story unfolds.

Yiwen Wu (CN), Taotao Zhou (CN)

Meowtaverse

Your Virtual Feline Assistant in Augmented Reality

Through the use of image tracking technology on mobile devices and chatGPT, our captivating AR cats artfully blend technology and creativity. Exploring genuine emotional companionship a voice-activated multifunctional support pet helps you navigate life. When equipped on a wristwatch, you will find it impossible to resist their allure.

Yutao Ming (CN), Wenxuan Li (CN)

Musica Universalis

The Symphony of the Cosmos

Inspired by the Greek philosopher Pythagoras, an immersive AR audio-visual interaction experience invites users to physically manipulate the planetary movements, engaging with the harmonious connections between various manifestations of collectiveness.

Yutao Ming (CN), Wenxuan Li (CN)

Biological Repetition

The XR project utilizes AI text to image generation on 3D objects to explore generative art and augmented environments. When the user scans the fragments of biological limbs sealed in glass containers, they will see the reality reproduced by established cognition from AR, posing the question, what is authentic?

Yuqing Wu (CN), Ruoyin Zhang (CN)

Nail Pet

Nail art can be expanded from a 2-dimensional curved plane to a 3-dimensional augmented reality art, exploring different expressive augmentations of the body. Each piece of nail scans out an unexpected surprise, which is a process that can give users psychological pleasure as well as a feeling of symbiosis with art.

Haiqi Gong (CN), Kuan Sheng (CN)

Veiled Portal of Lost Future

Within the door, where virtual and real intertwine, we search for connections between worlds and reality. A half-open door, like a whispered invitation, announces unique, different worlds beyond. Put on the HoloLens, I kindly ask; open the door, and take on the task. Speak with the creators within all time and space and explore the misplaced worlds.

Hua Yang (CN), Uwe Reiger (DE), Yinan Liu (NZ), Ziqiang Huang (CN), Hongsheng Gao (CN), Hengwei Ye (CN), Yutao Ming (CN)

Observer

Observer is an XR interactive installation that features a collection of four satellites. It takes visitors on an immersive journey into the world of real-time environmental information collected by micro satellites. The installation features well-crafted scaled replicas, elegantly simulating their elliptical orbit through space. Visitors are presented with insights into the technical operations and gathered scientific data. The project is designed experience and as an invitation for viewers to playfully engage with the presented information. Through this approach, the installation aims to bring attention to pressing environmental issues, encouraging visitors to engage with open-source data.



Observer © Yutao Ming

Nanyang Technological University (NTU), Singapore

Butterfly's Dreams: The New Aesthetic of AI in Artistic Practice

In his legendary Taoist anecdote on Butterfly Dreams, Zhuang-zi famously pondered whether he was a man dreaming he was a butterfly or a butterfly dreaming he was a man. At first impression, this might seem to be a question of what is real. However, this implies a favoring of one state over another. But both are dreams equally real (and unreal), oscillating between the ego and unconscious self. Such exchanges allow one to explore their inner self; in other words, the butterfly and man are both selves, from dreaming and awakening to wondering, transforming and melting between states.

Butterfly's Dreams: The New Aesthetic of AI in Artistic Practice alludes to the latent qualities of Machine Learning. It demonstrates how AI can be used to enhance creativity and innovation in artistic practice and the potential for AI to revolutionize how we create and experience art.

The works featured explore possible interchanges between dreams and provoke dialogues surrounding the role of machines in sense-making. The Exhibition comprises 11 works by 16 artists from the Interdisciplinary Media Design Program Pathway in Nanyang Technological University, School of Art, Design and Media and exchange students from the Global Innovation Design Program at the Royal College of Art and Imperial College London. This is the first time Singapore's international collaborative multimedia will premiere at the Ars Electronica Festival.

Curators and Organization: Ina Conradi, Ong Kian Peng
We wish to acknowledge the funding support for this project from Nanyang Technological University, School of Art, Design and Media, Institute of Science and Technology for Humanity, Goh Swee Chen NTU Board of Trustees, Chairman, National Arts Council, URECA Undergraduate Research Program, the IMDA iPREP Program, AVS Printing Pte Ltd.



Butterfly's Dreams © Ong Kian Peng

Shiao-ya (Maggie) Huang (TW) Memories of Ming



© Shiao-ya (Maggie) Huang

An AI generated immersive space that brings to life the *Memories of Ming*, an AI entity. Ming (明) also means "tomorrow" in Chinese, symbolizes the near-existence of Ming and the spaces generated by it. They look like they can exist somewhere in the world, but not really, similar to those spaces stored deep in our memories that have become a syncretism of reality and our imagination. With Ming, we create a new world with a new image that has never existed before.

Fuguo Xue (CN) Cometale



© Fuguo Xue

Cometale is an interactive installation that explores the relationship between comets and nature through the lens of AI art technology. Inspired by "Divination by Astrological and Meteorological Phenomena," an ancient Chinese silk book that demonstrates the divination practice using astrology and meteorology, the installation consists of a scroll-shape projection screen displaying a series of interactable AI-generated synthetic comet animations, creating an immersive experience for the audience.

Li LuQi (CN) 3 x 1 = 1



© Li LuQi

3 x 1 = 1 is an exhibition that delves into the profound impact of childhood experiences on our personalities. Using StableDiffusion, I created AI-generated imaginary friends based on childhood memories and experiences, brought to life as 3D models in virtual environments. These friends are not just figments of our imagination but an integral part of our personal development. Through this exhibition, I invite viewers to reflect on their own childhood experiences and appreciate the enduring impact of imagination and memory.

Manasi Nair (IN), Josiah Chua (SG)

Solemn Creatures

© Manasi Nair, Josiah Chua



Solemn Creatures is a series exploring female identity and beauty in fashion with the grotesque charm of the posthuman visuals. Researched and developed in "Fashion Artifice"; a design project that explores the intersection of artificial intelligence, fashion, and posthumanism.

JJ Agacoili (PH), Xin Wen (US)

Box Body

© JJ Agacoili, Xin Wen



Showcased at Ten Square Singapore as a part of the 2023 ART-ACT Festival and Singapore Art Week, *Box Body* is a live interactive 3D performance of a giant inside a box on a curved billboard screen. It is made with a unique film-based production technique that can generate instantaneous anamorphic 3D visuals without the need for technical 3D modeling expertise. The work is inspired by themes of urban isolation and systemic constriction.

Jon Tan (SG), Benjamin Lim (SG)

MEMENTO

© Jon Tan, Benjamin Lim



Memento is a collaborative animated film portraying the intricacies of our emotional lives by exploring the trappings of our personal memories. The film utilizes a train journey as a metaphor to depict the path of life and its trials, with characters personified to our core emotions making their entry and exit at each stop. This vivid portrayal underscores the fact that our being is a culmination of all past experiences and interactions.

Roger Ng Wei Lun (MY), Muhammad Raihan Bin Ismail (SG)

Synthetic Beasts Unleashed

A Transgressive Shadow Play

© Roger Ng Wei Lun, Muhammad Raihan Bin Ismail



Through the integration of artificial intelligence into traditional shadow puppetry, *Synthetic Beasts Unleashed* speculates a future where bio-engineering has birthed unprecedented life forms. Immersing viewers into an artificial nature devoid of its original essence, this installation confronts humanity's audacious ability to manipulate nature and play the role of a divine creator. The artists compellingly prompt us to reassess our intricate connections with the ecosystems that sustain us.

Alicia Ng (SG)

Memory Misprint();

© Alicia Ng



Memory Misprint(); surfaces the ethical complexities of artificial intelligence (AI) and critically reflects what it means to be human. The work utilizes generative models (GPT-2, VQGAN+CLIP, Deep Daze) to visualize memory distortion. *Memory Misprint();* encourages viewers to indulge in a fictional mental space while reflecting on the reliability of their recollections.

Melodie Edith James (SG)

Cog in the Machine

© Melodie Edith James



Cog in the Machine is an experimental graphic novel that takes a posthuman approach to narrativity and design. The project lets themes of technology give answers about our place in the universe as humans, but also to raise questions contributing to the posthuman dialogue. It was produced in collaboration with open-source artificial intelligence models: Generative Pre-trained Transformer Vr. 2 (GPT-2) by OpenAI (AttnGAN).

Ong Kian Peng (SG)

Feedback*

© Ong Kian Peng



*Feedback** is an experimental audiovisual toolkit within TouchDesigner for live performances to work with AI models. The project aims to create a collaborative environment between AI and performers in a real-time context. The piece shown in this exhibition works with the effects of global warming and its impact on corals, oscillating between speculation and observed phenomenon and between performer and AI.

Zhang Ziyi (CN), Nur Haidah (SG)

A.I. Grotto

Reimagining Craftsmanship in the Age of AI

© Zhang Ziyi, Nur Haidah



A.I. Grotto examines the relationship between AI-generated art, craftsman spirit and ancient heritage sites. It contemplates the coexistence of AI and the spirit of craftsmanship in the future. Inspired by ancient Dunhuang Cave Murals, AI-generated models learn and transform contemporary news and photographs into the Dunhuang style, blending ancient art with modern content in a modernized documentation approach.

Taipei National University of the Arts (TW)

Epicentrum

When we look at our planet from the geological perspective of the Anthropocene, we see it as an ecosystem shaped by human activity, in which the layers of existence are closely interconnected and subject to vibrations. *Epicentrum*, an exhibition of electronics, reveals how organic and inorganic matter are interwoven and set in motion. Through the lens of media art, the exhibition explores how media art in Taiwan is becoming a node where vibrations occur. Amidst a tense global situation, Taiwan is proving to be an epi-

center of oscillations. Geologically located at the convergence of tectonic plates, its unique historical and geopolitical complexity has made it a contested territory. Questions of identity and sovereignty are fraught with complicated notions and the question of whether democracy can evolve or even be sustained is also an ongoing challenge. If art and technology remove the original barriers and bridge the boundaries between different realms, we can reshape the connections between ourselves and the environment and its vibrations.

Co-curators | Jia-Ming Day, Lien-Cheng Wang, Yen-Ju Lin

Artists | 2ENTER (Cheng-Wei Chen, Chieh-Yi Chui, En-Chi Chuang, Ji-Rong Liou), Chang-En Ding, Zhe-Zhi Lin, Cheng-Hao Tsai, Chih-Yang Chen, Chu-Hsun Hsieh, Anchi Lin (Ciwias Tahos), Hsin-Yu Chang, Kun-Han Ho, Ssu-Chi Hou, Tso-Yu Chiang, Yueh-Jie Chen, Yun-Jieh Wu
New Media Art Faculty | Chun-Chi Lin, Der-Lor Way, Fujui Wang, Goang-Ming Yuan, Jia-Ming Day, Lien-Cheng Wang, Jun-Jieh Wang, Shih-Wei Sun, Shu-Yu Lin, Yu-Hsiung Huang
Audio-visual Artists | Hsin-Yu Chang, Ting-Hao Yeh, Tsung-Yun Lai

Chu-Hsun HSIEH (TW)

Colourless Spectrum

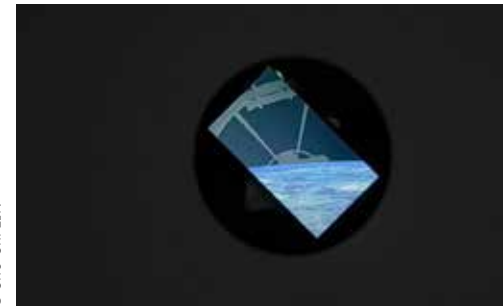


© Chu-Hsun HSIEH

Colourless Spectrum was inspired by the personal experience and imagination of director Chu-Hsun. During a visit, he was drawn into a surrealist-illusory dimension by a refreshing and inspiring view, and he calmly enjoys every sensory perception that nature allows to flow through their body: the sting of the sun on the skin and the gentleness of the blowing breeze. The heart is therefore full of emotions and wonders what if one day we humans could collect landscapes and give them to our loved ones? Chu-Hsun let the audience travel through artificial images he created.

Zhe-Zhi LIN (TW)

Altitude 70,000 Feet



© Che-Chi LIN

The altitude of 70,000 feet is the highest airspace a U-2 reconnaissance aircraft can fly. The work *Altitude 70,000 Feet* suggests the screen as a modern viewing medium to imagine a view from the cockpit of the U-2 reconnaissance aircraft and, more importantly, to overlay the concept of the screen as a window with the first-person perspective of a pilot to discuss more about the interpenetration of the image with the medium of viewing and perspective.

Tso-Yu CHIANG (TW)

Container of Civilization



© Tso-Yu CHIANG

What is the concept of time for mushrooms? From birth to death of a single mushroom in a petri dish may take only a month for us, but for the mushroom this time span can feel as long as our entire lives. It is hard not to imagine that there are “civilizations” of mushrooms blossoming and passing away in every corner of the city. Tso-Yu Chiang looks for places in the city that have high humidity or form “containers” suitable for mushroom growth, and also tracks the bioelectricity of the mushrooms to amplify it to a range audible to humans.

Yun-Jieh WU (TW)

Cyberriver



© Yun-Jieh WU

Cyberriver attempts to portray the “give” and “take” of social media. Seemingly invisible, information seeps like water everywhere from transaction records to satellite tracking to chat rooms, collecting all personal and non-personal data. From there, the flow of data merges into an unstoppable stream that becomes the greatest digital river of the twenty-firstst century, putting the future in the hands of the unknown. The artist suggests *Cyberriver* to stimulate the imagination of the conspiracy of social networks, trying to imagine what the “individual” is, in relation to social media.

2ENTER | En-Chi CHUAN, Cheng-Wei CHEN, Chieh-Yi CHUI, Ji-Rong LIOU (TW)

Data-Verse Taipei 02



Information overload, mass worship, absurd combinations of things that have nothing to do with each other — everything is there, and nothing can escape. This immersive experience will envelop the audience in virtual images and introduce them to the complex and unfamiliar world of the internet, using the exhibition's location and Taipei as the motif. It extracts a large amount of local characteristic internet data as parameters for the artwork's variation, such as Taipei's precipitation, temperature, Internet phenomena and Wi-Fi traffic information at the exhibition site.

Hsin-Yu CHANG (TW)

Feeding



Sound often breaks the boundary of space, but at the same time, constructs a sense of space. A microphone continuously picks up the subtle vibrations in the air, and the feedback with the speakers is continuously amplified. Through multiple units at different heights and the rules formed by mechanical motors, sensors and sounds, various pure sound waves intertwine to form a complex system. In this work, sound is not used as a narrative vehicle, reproduction or to serve other media, but to present sound itself, the composition of sound, and the relationship between sound, space and body.

Yueh-Jie CHEN (TW)

Humanlikely



Humanlikely is inspired by a real fish canning factory, and reconstructed similar fictional scenes in visuals. The setting of the factory and the division of labor scenes on screen suggest an implicit social structure. Characters keep performing repetitive mechanical movements in four scenes, they all repeat actions about catching fish, killing fish, filling cans. When audiences watch and are aware that this is a space of continuous cycles, they will work through the hints provided by the scenes and the characters to comprehend the process of cyclical metaphor in the work.

Chih-Yang CHEN (TW)

In Front of a Scenery



Using special glasses made of polarizers as the source of visual stimulation, and with the harmonious coordination of multi-channel reverberation and ambient lighting, the five senses except vision are infinitely enlarged due to the weakening of vision, by doing all this, it evokes a previous perceptual experience in the audience's mind, awakens the imaginary picture of the image of the space and subsequently creates an image beyond the visual image.

Chang-En DING, Cheng-Hao TSAI (TW)

In the Dim Light of Night



This work focuses on the interdependent and constraining relationship that arises from the combination of “light, sensing and circuitry.” Given the proliferation of automated sensing, it explores the formation of dialectical connections between components, people, systems and structures. By delving into the intricacies of everyday life and the depths of life's experiences, it seeks to uncover the nodes of contradictions and paradoxes in cognition and construct a physical confrontation that articulates a resonance of perception and experience.

Ciwas Tahos (TW)

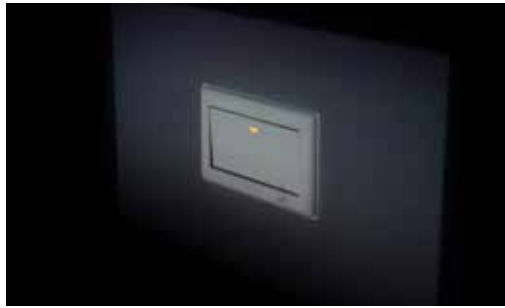
Raw ⇄ Ripened ⇄ Happiness



A set of stereotypes and problematic expressions subtly exist everywhere. This colonial viewing system is nuanced, microaggressions permeate society and slip off the tongue unchecked, perpetuating the colonial perspective. Unconscious biases spread a romanticized notion of the outsider: their otherness, their body, their cultural perspective. Indigenous bodies operating within this system, perhaps without a solid cultural identity, become a tourist body or a romanticized body. These actions stamp out non-materialized oral indigenous knowledge and stories and are leading to vulnerability.

Kun-Han HO (TW)

Reality Image — Light Switch



Reality Image — Light Switch is a site-specific video installation that utilizes a projector to project a “blank light without an image,” serving as a replacement for the exhibition lighting. The primary emphasis is on the light switch affixed to the wall, as the installation attempts to create an illusionary experience through the manipulation of the switch and the alternating illumination of the on-site lights. The objective of this illusion is to transform the perceived two-dimensional object into an alternative form of imagery on a conscious level, evoking a distinct sense of initiation and termination.

© Kun-Han HO

Ssu-Chi HOU (TW)

TV Wall



From the perspective of pixels, even a completely white image shows pixel grids when played back on any screen. The image simulation enlarges the pixel grids, while at the same time, the image takes the edge of the TV screen as an element. Finally, the image is zoomed into the black grids so that it becomes completely black. This process could lead to a discussion of what is the outside and the inside of an image, what is virtuality and what is reality, and how to create images when the screen and the edge of the image are considered objects.

© Ssu-Chi HOU

Jia-Ming Day, Lien-Cheng Wang, Tzu-Ching Huang, Wei-Chih Lin, Shu-Yu, Lin (TW)

EAT Da Vinci



Experimental, Artificial and Technical are the three elements that compose the theme “EAT.” It defines the artists who create new media art with the experimental spirit inspired by Leonardo Da Vinci. Eating in the “Da Vinci Artificial Laboratory,” was altered from the VIP room of the Da Vinci kitchen. At a dining table for eight, the immersive images resonate with the dishes, so the food tastes different depending on the changing images.

© Jia-Ming Day, Lien-Cheng Wang, Tzu-Ching Huang, Wei-Chih Lin, Shu-Yu, Lin

AUDIO-VISUAL PERFORMANCE

The Department of New Media Art at Taipei National University of the Art presents an evening of audio-visual performances by artists Hsin-Yu Chang, Ting-Hao Yeh and Tsung-Yun Lai. The three artists will focus on the synergy of sound and image in real time, as well as the art of creative coding to transcend conventional boundaries. The audiovisual performance will traverse the realm between sound and light waves, transcending politics embedded in resonance and rekindling the deep connection between humanity and the cosmos. This is a vibrational node that represents the origin of creation.



JIZAI ARMS project team (JP), The University of Tokyo (JP)

Yusuke Kamiyama (JP), Shin Sakamoto (JP), Daisuke Uriu (JP), Mitsuru Muramatsu (JP), Nahoko Yamamura (JP), Shunji Yamanaka (JP), Masahiko Inami (JP).

JIZAI ARMS

Half a century after the concept of a cyborg was introduced, digital cyborgs or robotic human augmentation enabled by wearable robotics present numerous questions for our society. As these technologies are integrated into real societies undergoing a digital transformation, we must consider how individuals might adopt or resist them, and whether they will embrace or reject the idea of human bodies being transformed into digital cyborgs. To explore these questions, we propose JIZAI ARMS: a supernumerary robotic limb system that consists of a wearable base unit with six terminals and detachable robot arms that can be computationally controlled. The JIZAI ARMS system is designed to facilitate social interaction between wearers, allowing for the gifting and exchanging of body parts and fostering exploration into the fascinating concept of aesthetic body parts. Through our contemporary dance performance, we will show how a social digital cyborg wearing JIZAI ARMS can create an

aesthetic expression of the human body. Beyond technology-enabled artistic performance, the JIZAI ARMS project explores possible interactions between digital cyborgs in a cyborg society in various contexts and situations in the near future. This project aims to explore intriguing questions, such as, whether individuals will love their robotic body parts during their lifetime, if they can fall in love with a digital cyborg and if their robotic body parts will be mourned and memorialized as a part of their being after their death. By addressing these questions, we hope to provide a platform for critical consideration of the societal impact of digital cyborgs and foster dialogue around their integration into society.

DESIGN & PRODUCTION: Nahoko Yamamura, Daisuke Uriu, Mitsuru Muramatsu, Yusuke Kamiyama, Shin Sakamoto, Shunji Yamanaka; RESEARCH DIRECTOR: Masahiko Inami AFFILIATION: Information Somatics Lab / Prototyping & Design Laboratory, The University of Tokyo; JST ERATO INAMI JIZAI-BODY PROJECT



JIZAI ARMS © Kazuaki Koyama

Universidad Austral de Chile (CL) in collaboration with Universidad de Chile (CL), Universidad de Santiago de Chile (CL)

Diagramming History

Perhaps it is true, as Vilém Flusser stated, that we no longer experience history through written lines, but through technical surfaces. *Diagramming History* presents two artistic projects that use artificial intelligence (AI) in relation to the 1973 Chilean Coup d'état.

Imagining Loss proposes to digitally reconstruct part of the popular artistic heritage of the collection of the Museo de Arte Popular Americano Tomás Lago (MAPA) of the University of Chile. During the dictatorship many objects were stolen, damaged or destroyed. Today they inhabit the museum as inventory data that do not give a full picture of the work to which they refer. The collaboration work with the Computer Science Department of the University of Chile and the archival and research areas of MAPA, uses AI for image generation and volumetric reconstruction of objects (NERF) with the purpose of restoring

part of this popular cultural memory that has been taken away. *The Neoliberal Dream* is a video essay of the algorithmic intervention of the iconic photograph of the bombing of the Moneda Palace in 1973. The image in digital format was intervened with the AI "Deep Dream" developed by Google. The algorithm performed a machine reading that involved the modification of the original image. This algorithmic reading became visible in a series of "pareidolias" or alterations to the photograph. The image was subjected to the same process a total of 17 times, in reference to the number of years of the dictatorship in Chile.

Curatorial Team: Ivan Flores, Felipe Rivas, Jaime San Martín.

Imagining Loss: Artistic direction and coordination: Jaime San Martín and Emilia Pinto, Technical research team direction: Iván Sipiran, Research team direction at MAPA: Felipe Quijada."

Jaime San Martín Amador (CL),
Emilia Pinto Labbé (CL), Iván Sipiran (PE)

Imagining Loss

Reconstructing pieces of popular art.

The project *Imagining Loss* is an interdisciplinary attempt to reconstruct, using Artificial Intelligence tools, part of the Chilean popular art heritage lost during the dictatorship of Augusto Pinochet. We work with pieces from the Museo de Arte Popular Americano collection that were stolen, lost, ruined or destroyed during that traumatic period and that today exist only as data or records that do not fully account for that valuable memory that was taken away.

Felipe Rivas San Martín (CL)

The Neoliberal Dream

The Neoliberal Dream is a video essay of the algorithmic intervention of an iconic photograph of the bombing of La Moneda Palace during the coup d'état in 1973. The image — in digital format — was intervened with the artificial intelligence "Deep Dream". The algorithm performed a machinic reading, which implied the intervention and modification of the original image. This algorithmic reading became visible in a series of "pareidolias" or alterations to the photograph. The image was subjected to the same successive process a total of 17 times, in reference to the number of years that the civil-military dictatorship lasted.

mdw University of Music and Performing Arts Vienna (AT)

Program in Electroacoustic and Experimental Music (ELAK)

Beyond the surface

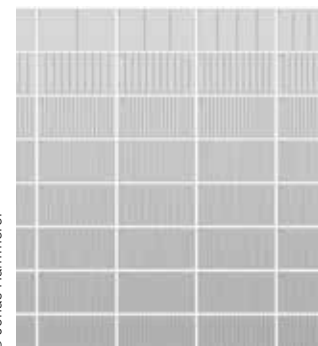
Sound is immediately related to vibrating surfaces — one thinks of musical instruments and loudspeakers. The room installation *Beyond the surface* unites works that were created in this academic year — varying, abstracting, virtualizing the connection between visible surface and inherent sound. The surfaces are multiform:

soft, hard, structured, smooth, vibrating, resting. Some convey the sound physically and directly; some conquer the acoustic space; some hold back and give vague hints — a loudspeaker vs. a soft speaker vs. a fake speaker vs. a listener. Supervision: Angélica Castelló, Veronika Mayer, Wolfgang Musil, Thomas Grill

Jonas Hammerer (DE)

Auditory Pulse Imprint X

A concentric multichannel loudspeaker system is located in the center of the room. Algorithmically generated sounds are projected into the room, to investigate the reflection behavior. The alternation between pulsating sounds, which provide a high degree of directional information, and standing sinusoidal sounds, which are difficult to localize, opens up a dissociative and subjective spatial experience, based on the "Franssen effect", which stimulates the auditory process of the viewer understood as material. An acoustic impression of the room can be experienced and opens up questions about objective physical stimuli and the individual, psychological and physical perception thereof.



Auditory Pulse Imprint X

Georg Volkert (DE)

Communicating Mobile Phones

The communication between individuals has been shifted from real spaces to anonymous abstract digital spaces of social media. A collection of old used mobile phones from different manufactures symbolize those individuals who entered these spaces to communicate using means beyond the possibilities of direct human communication. The present installation (attached to the ceiling with threads) inverts the modern digital evolution by forcing the mobile phones to communicate in an old-fashioned human way — that is, by means of sound waves rather than by electromagnetic waves.



Communicating Mobile Phones



Constructing Resonance

Kasho Chualan (CA)

Constructing Resonance

This sculpture is an architectural instrument — a piece of steel found at a construction site. During the process, other materials were scavenged such as piano screws and piano strings. It is constructed using the same material as the resonant body (steel). Inspired by Vitruvius and Pythagoras, it takes a simple approach architecturally and sonically, creating tones through strings and tension. It can be interacted with through resonance, pitches, plucking. There will be lighting involved as well for the piece to be observed sonically and aesthetically.

Pit Franzen (LU)

SHEETS

SHEETS is an assembly of up to 12 steel sheets, sound transducers and microphones, which can individually be controlled by an interface. In this way, with a computer being the interface, *Sheets* can be played as an instrument or serve as a multichannel speaker setup for performances or sound installations. In this way the sound source and sound emitter will be merged into one single object. At the Kunstuni Campus Exhibition a version of *SHEETS* consisting of four metal-sheet-speakers will be shown as an ongoing sound installation in addition to individual performances.

Nina Jukić (HR)

Listening / Meidling

Binaural microphones placed in my ears record sound for as long as the camera simultaneously captures light. On the resulting printed photographs one sees me only from the back, sitting in different locations of my neighborhood, listening to the city. Due to the long exposure, moving people and vehicles have disappeared from the images. However, when visitors put the headphones on, they hear the exact soundscape I was listening to while the photo was taken, hearing also those things that became invisible due to the passing of time. I, on the contrary, remain visible, but inaudible.

Moritz Seidel (AT)

Sonic Chroma

An interactive sound installation where loudspeakers beneath a canvas send pulses, causing vibrations which stir paint in different directions. Visitors control pulse locations via touchscreen. This blurs the line of artistic ownership. Who truly creates the resulting image: the creator of the installation or the visitor? *Sonic Chroma* challenges the traditional notions of artistry and authorship.

Anatol Wetzer (AT)

Schwarzer Ballen

In *Schwarzer Ballen*, a sewing machine interprets the seams of the cut-up fabric in two ways. In a two-dimensional way, when it is sewing straight lines and in a three-dimensional way when it is sewing imaginary lines in space. The fabric is crumpled up and therefore just shows the three-dimensional result. The audio makes it possible to perceive the different interpretations and conditions at the same time.



© Pit Franzen

SHEETS



© Moritz Seidel

Sonic Chroma



© Nina Jukić

Listening / Meidling



© Anatol Wetzer

Schwarzer Ballen

Institutio Media (LT)

Alt Lab Tutorial Series

Alt Lab Tutorial Series are about instructions on how to make an art project or conduct a science experiment. The ideas presented here will provoke new ideas and provide a methodology for implementing them. Alt lab fills the gap between the raised awareness of environmental changes and the Anthropocene, artistic practices, scientific experiments, and daily habits around our kitchens. People in the lab share their knowledge

and de-mystify scientific experiments and sophisticated artistic mythos. *Alt Lab Tutorial Series* are developed by friends of the Alt Lab, a non-disciplinary research laboratory at Institutio Media. Members of the lab are looking for unique solutions to implement their ideas.

The project is supported by the Lithuanian Council for Culture, the Lithuanian Interdisciplinary Artists' Association and the Nordic Culture Point.



Alt Lab Tutorial Series © Gvidas Bindokas

Mindaugas Gapševičius (LT/DE),
Maria Safronova Wahlström (SE)

You and I, You and Me

The video tutorial invites one to explore the possibilities of communication through electricity. The project proposes that electricity could help to reveal the imperceptible connections between different actors within the environment. How far could electricity help in understanding the other? Is it possible to alter human senses through electric impulses?

Liucija Dervinytė (LT)

Nature networks

This tutorial is part of an ongoing embroidery project, in which participants are invited to join a collective creative process by stitching a mark in a shared story, on a large piece of fabric. It is an invitation for a collective meditation — to slow down and listen to ourselves and the thoughts of others, to share ideas and insights, to build and strengthen social connections. We are aiming to gain perspective and healing in the current context.

Gabija Bubnytė (LT)

Conversations on (counter)narratives

The tutorial reflects on different words found in anti-LGBT discourse, as well as on the current hostile environment for the LGBTIQ+ community in Lithuania. It invites the public to collectively create a collage that represents our reimagined narratives that may resist anti-LGBTIQ discourses.

Kira O'Reilly (IE/FI)

Winogradsky Column

Making the Invisible World of Microorganisms Visible

The tutorial invites one to create Winogradsky columns using water and soil combined with other materials, from a water source nearby SODAS 2123. As we get our hands wet and muddy, we talk about the environments and ecosystems we are part of, both physically and temporally, and the degree of our influence. We also consider different ways our columns might function: as environmental portraits, metabolizing archives, durational sculptures, social planning for micro-organism communities, or bacterial architecting.

Linas Tamošaitis (LT/DK)

Technodelic Meditation

The tutorial invites one to use technology to delve into the unconscious and discuss the role of technology in therapy and psychological health. It introduces the use of technology for meditation while using virtual reality devices as well as cellphones.

Jan Glöckner (DE/LT)

Non-Traditional Gung Fu Brewing as Tool in Artistic Biotechnology

The tutorial explores tea drinking as the mental and bodily primer to compose and dance with fungi. Jan Glöckner shares their research and practice using biotechnology in their practice-led research.

Lolita Tučinskaitė (LT)

Microalgae — Microcosmos

The tutorial invites one to get to know the complex world of microalgae better. It gives a closer look and examines these organisms through a microscope, reflects on their global significance for the planet and their possible use in art.

Vincenta Mikulėnaite (LT),
Kristina Zakutauskaite (LT)

Extraction of DNA and chlorophyll from plant cells

seeing the invisible constituents of plants

Are you fascinated by the hidden mysteries within plant cells? The tutorial unleashes curiosity by exploring the fundamental essential units of plant's life — DNA — the molecule that carries genetic instructions for the functioning of an organism and chlorophyll, the pigment that gives plants their green color and helps them convert sunlight into energy. It introduces the extraction procedure of DNA and chlorophyll from spinach, unlocking the hidden beauty within.

Gabrielius Klemas (LT)

Analog Sound Synthesis Fundamentals and Experimentation

The tutorial introduces the essential elements of analog modular synthesis and shows how to connect the modules. The aim is to learn how analog synthesis works sounds and how to think about signals. A signal is not just a natural phenomenon, it is a tool that allows us to create. Signals allow us to manipulate sound, to shape it like a sculpture.

Jolanta Sendaitė-Paulauskienė (LT)

Kombucha bacterial cellulose biotextile growing and application

This tutorial invites humans to explore the connection with the other life forms through bio-fabric – bacterial cellulose that grows during the natural fermentation process of a kombucha drink. The tutorial looks into the properties of this material and possible future uses, as well as reflects on the symbolic meaning of biofabrics grown in the laboratory, the human relationship with them and connection to nature.

Mindaugas Gapševičius (LT/DE)

Interfaces for Boris and Mindaugas

The installation *Interfaces for Boris and Mindaugas* provides interfaces for the boxer dog Boris and his host, so that the host experiences how the dog behaves, and the dog experiences the behavior of his host. The installation consists of human and dog-sized objects, interfaces and 3D tutorials. If the interfaces are connected, a bond is established between the dog and its host. To communicate, heart rate or brain activity is measured, interpreted and converted into an electrical signal.

Brigita Kasperaitė (LT)

Lakus

Lakus in the Lithuanian language stands for rapidly evaporating. Glass and stone are both the same material, only one is a previous version of it. Here, they meet in the individually shaped forms: one that is given and formed over years and another that is forced by a destructive tool, fire. The poetic gesture of covering an old body, lets us forget about the destructive action needed to achieve this and emphasizes rapid evaporation which might affect both objects in years.

Marinos Koutsomichalis (GR), Mindaugas Gapševičius (LT/DE), Alessandro Ludovico (IT), Josefin Lindebrink (SE), Valeria Graziano (HR), Jenny Pickett (FR), Alexia Achilleos (CY), Eric Lewis (US/CA)

Towards a Toolkit of Care

A “critical network of care” acts as a model of how to successfully share knowledge and expertise across different geographical regions and social groups. The group presents the current state in research towards the formulation of a *TOOLKIT OF CARE*. Employing a game of cards, the group intends to engage with the audience in an open-ended discussion pivoting on critical affairs of care in electronic arts in all social, financial, creative, ethical, ecological, feminist and other contexts.



Towards a Toolkit of Care © MarinosKoutsomichalis

Bauhaus-Universität Weimar (DE)

Non-machines: Playground of Perspectives

Humans invented computing machines to use them as tools. However, these tools have developed to such an extent that, what not long ago was thought to be unimaginable, for example, computational generated texts or machines creating new machines, is now common-place. The exhibition *Non-machines: Playground of Perspectives* reflects this situation which is fast becoming a new normal. By “non-machines” we mean human and non-human actors or tools that are not yet integrated into a machine network, such as a creature evolving freely in nature, or a human not connected to digital networks. The exhibition invites us to rethink the relations between machines and non-machines, using a change of perspective: from one which sees the

relationship between machines and non-machines as competing powers, to a more equitable and non-competing relationship among all entities.

The exhibition explores how emerging technologies, particularly digital technologies, suggest new relationships between artists and their technological tools. How can and should machines and non-machines relate to each other? How can the use of new methods and tools help us experience the environment?

The framework of this exhibition is developed by the professorship of Media Environments (Prof. Ursula Damm) at the Bauhaus University Weimar.

Supported by the Bauhaus University Weimar

Victoria Mikhaylova (RU), Briam Rolon (CO), Victor Mahecha (CO), Cindy Augustin (DE), Selena Deger (TR), Elham Hesami (IR)

Experimental Interaction Environments

This installation explores the complex relationship between non-machine actors and machines in the digital age. The installation challenges participants to explore the potential interactions between the living and non-living agents as mediators between physical and digital realities. The immersion is presented as a conversation, but the result is an integrated experience of both actors navigating the real and the virtual space cooperatively.



Experimental Interaction Environments © AlexanderKönig

Sophia Amelia Eickhoff (DE)

SMELL

As a form of communication

This is an exploration of the negative societal conditioning to human odors. This phenomenon is due to the standards of hygiene, evolving through sedentary lifestyles and socioeconomic disparities. Body odors and pheromones give information about our health, initially the reproductive potential. Here the mouth and nose are connected to the parts of the body with the most informative odors, selectively exposing the individual to inherently “unpleasant” odors while blocking other senses.

Betül Peker (TR)

Physarum Pavilion

Physarum Pavilion aims to give a space to organisms and examine the behavior of conscious and continuous movement. The human being has a tendency to welcome attractive parts of nature in their life in indoor and outdoor spaces. They do this by creating solutions, relationships between nature and human-made structures. What if we give a place to physarum that it could maintain its life and utilize architectural methods? *Physarum Pavilion* speculatively approaches architectural solutions and considers physarum as a resident.

Cosmo Schüppel (DE)

electro|botanic

Recent studies suggest that plants are able to experience electromagnetic fields and react to them. The movement-responsive sound installation *electro|botanic* speculates on this perception of plants. Through sonification, humans can interact with the plant’s perception fields. The possibility that plants can experience human presence is a form of Science Fiction. A speculation upon a scientific discovery that would create a shift in human perception, and THE conception of reality.

Dahye Seo (KR)

Happy Birthday To You

Happy Birthday To You is inspired by the similarities between nature and analog signals. Analog signals are a continuous physical flow. Nature changes just like an analog signal. Sunlight continuously gets brighter and dimmer. The same goes for the way a day goes, the seasons change, and the way all beings are born and die. *Happy Birthday To You* poetically represents the constant physical change of nature as analog signals. It proposes a new dialogue about the circularity and continuity of time and the relationship between nature and technology.

Nicolas Krewer (DE)

SelfPleasure

Examining organisms’ experiences and stimulation, *SelfPleasure* explores the speculative and philosophical perspective of organisms’ feelings. The slime mold, *Physarum polycephalum*, despite stimulating itself in this experiment, didn’t even grant consent. The interface records the organism’s bioelectric potential oscillation, generating an audible signal in real time. This sound is subsequently fed back to the organism, creating a feedback loop of self-interaction and immediate signal exchange with the computer.

Benjamin Bak (DE), Isabella Lee Arturo (CO), Victor Mahecha (CO), Vasili Macharadze (GE)

AIonedge

The installation *AIonedge* consists of a miniature embedded in a complex technical structure. Through a touchscreen interface, the viewers can control a robotic arm with a camera and thus control individual scenes in a similar way to a drone. The camera image is directly analyzed and classified by AI. The idea of the “smart city” and one of the main applications of AI in the future is taken literally here and projected onto a miniaturized environment.

Klaus Fritze (DE) and Julius Continental (DE), Betül Peker (TR), Ursula Damm (DE), Carmen Draxler (DE), Jörn Hentschel (DE), Jan Vondrak (CZ)

LICHENLOUNGE

A cooperative symbiotic approach

Lichenlounge is conceived as a sustainable, modular and cooperative work of artistic research by different authors that focus on lichen symbiosis in nature. The installation and process are dedicated to the patient waiting for lichenogenic fungi and microalgae to merge. In the dioramic set-up of a lounge, all subjects are invited to feel comfortable in their interspecies community. Approach and observation, for example, by microscopes, wild and cultured myco- and photobionts are present. The space can be entered freely, and most of the exposed naturalia and artifacts can be used and inspected hands-on.

Mudassir Sheikh (PK), Juan Sebastian Alvarado Prince (CO), Rodrigue Saad (LB)

Postcolonial research group

Much of the current discussion on reclaiming and reconciliation practices that fall under the broad banner of “de-colonizing” looks to technology as a solution. Especially, but not exclusively, with the peaked fascination with AI. And yet, these quick tech fixes and automations often end up blurring the gap and discrepancies of the post-colonial era, if not exacerbating them due to pre-existing cultural biases embedded in codes and databases. The video films within the collection include: *Going Inwards* by M. Sheikh, *Homeland* by J. Prince and *The Great Balancing Act* by R. Saad.



Homeland © Juan Sebastian Alvarado Prince

Isabella Lee Arturo (CO)

Tabula Rasa

The installation and performance consist of a live drawing that the artist makes on the floor, while trying to verbally express a message. This message is recorded with a wireless microphone and transmitted to a program that activates a language model generator. The AI simultaneously tries to translate and censor the message. This work is intended as a metaphor for the resistance against forced silencing and how precarious tools can both challenge dominant narratives and lift one's voice.

Belçim Yavuz (TR), Valeriia Shakova (RU)

Sense Or?

Sense Or? is an interdisciplinary project combining interactive media and performance art. Drawing an analogy between the aftereffects of individual experience of trauma and collective experience of censorship, the project plays around the concepts of self-censorship, aesthetics of censorship, the oppressed and oppressor, being silent and silencing. Through an interactive medium, can we discover ways of connecting and create a possibility for collective healing in a ritualistic manner?

Gabriel S Moses (IL), Ann-Kathrin Müller (DE)

Artists For Future

100 years of waiting for your turn to speak, part II

A three-part video-based artist lecture to end all artist lectures. Artistic research has become the new way for artists to be taken seriously in academia. Yet this comes at the expense of their personas. It often has them masquerading as versed intellectuals, adhering to standards foreign to their practice and using tongue-twisting jargon, cultivating their impostor syndrome. It is almost like there are two people on stage—simultaneously on display while hiding behind the podium.

Martin Müller (DE)

I AM TRULY BECOMING A SPECTER

Monoliths rigidly force us into an outside perspective and guard the secrets that lurk within. Unable to experience what it is to dwell within solidity, we invent spirits that do it for us. Rocks, however, linger motionless as life passes by. The performance draws on Jacques Derrida, using linguistic monsters to address the monstrosities we assume to reside in a rock. It is an invitation to enter the realm between subject and object and thereby, as Roland Barthes attests, truly become specters.

Dahye Seo (KR)

1+1=1

$1 + 1 = 1$ deals with rivers flowing through three cities – Anseong (KR), Weimar (GE) and Yeonggwang (KR). Anseong and Weimar are the cities where I currently reside and Yeonggwang is the city where my grandmother lived during her lifetime. The movements of the members of the microscopic world in the water droplets are converted into sound data and scales are played in real time according to the experimental musical notation. $1 + 1 = 1$ proposes a new sense of trans-boundary. It is also a metaphor for all connected minds regardless of place and mode of existence (life and death).



1+1=1 © Dahye Seo

Belçim Yavuz (TR)

Da Da Die, 2023

Imagine a machine that is programmed to perform one task; the reason for its existence. Now run for your life, type on your laptop the whole day, and turn around till you faint. Repeat doing whatever you do, to fulfill your human purpose. The project is conceptualized around the themes of life and death of machines and humans. Can the algorithms and machines surrounding us shape and control how we live, or are we still the ones who rule? How can we break the cycle of this mechanism called life?

Jan Munske (DE)

trigger to self discovery

In this immersive performance piece, I explore the depths of human existence by questioning the boundaries between art, life and personal experiences. Through a combination of thought-provoking questions and innovative interaction techniques, I aim to create a transformative experience for the audience, encouraging self-observation and introspection.

Joel Schäfer (DE)

bios

The audiovisual live performance piece “bios” imagines and explores the intrinsic aesthetics of the deep sea and the so-called “cyberspace” as the digital realm. The feeling of slowly floating in dark, aquatic depths is confronted with the fast-paced reality of digital bits and bytes shooting around in virtual space. The performative exploration of hybridity, fluidity, digitality and organic generative art results in a continuously reshaping appearance of abstract objects, forms and sounds.

Passion Asasu (TH)

AI-mpowering Eve

The dance performance challenges the media's portrayal of women by expressing emotions through Dadaist-inspired poetry. The artist uses her body as a poet's pen with the help of machine learning models, it critiques the prevalent culture of objectification and exploitation of women perpetuated by the media. Through movement, words, and rhythms, the performance empowers women, amplifying their voices and celebrating their authenticity.

Thai Tai Pham (DE)

Detox

When do we humans reach our physical and psychological limits as more and more automated processes are integrated into interpersonal interactions through digitalization, acceleration and optimization of information and computing power?

Detox is an artistic exploration and an attempt to pit technology against technology. The performance aims to experience the limits in search of a silence in the noise through methods of deceleration.

Lisa Albrecht (DE)

ECHO

ECHO is a performed dialog between a human voice and an artificial voice. First, a human talks in a zoom call. Answers are short, but still form the impression of a strategy meeting. The video of the recorded call is played back. However, now the other side of the conversation (AI voice) is audible as well. The certainty of the answer to “Who echoes whom?” is dissolved, since the spectator realizes now that the human voice was always only echoing the last syllables of the artificial voice.

Johanna Reckwerth (DE)

A Sea Dive Into Embodied Epistemology

If there is any chance for humans to survive on the planet, it is to work together on a paradigm shift that requires radical rethinking. How can we use our bodies as tools to shift our perspectives & enhance consciousness of multi-species relations? This lecture performance introduces alternative knowledge production beyond the construction of a cartesian body/mind dualism in order to challenge dominant narratives of human exceptionalism, dualisms and western rationality as the ultimate truth.

AI-mpowering Eve © Passion Asasu



EVENTS, CONCERTS, PERFORMANCES

Opening of Ars Electronica and IDSA FOUNDING LAB

The opening evening of Ars Electronica 2023 is all about the FOUNDING LAB, an initiative jointly led by the Institute of Digital Sciences Austria (IDSA) and Ars Electronica. This joint opening marks the

beginning of a fruitful exchange between university and festival and brings fellows and students from all over the world onto the stage as well as artistic interventions à la Ars Electronica.



KYOKA © Jordi Cervera

After the official opening of Ars Electronica 2023, four live performances will duly conclude the return to the POSTCITY.

Laureates Robin Fox (AU), Winner of the Isao Tomita Special Prize, as well as Luc Gut (CH) und Rolf Hellat (CH), Honorary Mentions in the Digital Music & Sound Art category, will present their projects *Triptych* and *Oszilot* live. *Triptych* returns to the concert format with a synesthetic combination of sound and light. Three RGB laser projectors work in sync to create stunning geometries

of color, specifically tailored to the venues, transforming them into electric live environments.

Oszilot is a hybrid sound installation and performance featuring various rhythmic patterns, soundscapes and abstract musical structures.

In addition, Japan's Kyoka, from the iconic German experimental label Raster-Noton, and Riccardo Giovinetto from Italy will combine an audiovisual performance with electronic music to bring to life for Ars Electronica the 240-meter long Gleishalle for the first time since 2019.



OSZILOT © Lukas Gut



FEMINA © Federica Mambirini



Syntax-2 © Ali Mahmut Demirel



TRIPTYCH © Lachie Douglas

Luc Gut (CH), Rolf Hellat (CH), OSZILOT (CH)

OSZILOT

Prix Ars Electronica 2023 – Digital Music & Sound Art Honorary Mention

OSZILOT is a hybrid of sound installation and performance. Everyday objects suspended from strings are transformed into oscillating sound objects via movement sensors. The objects lose their everyday function and become animated and symbolic art objects. They create rhythm patterns, soundscapes, and abstract musical structures. The audiovisual pendulum ensemble is a unique form of live electronic music performance in which the creation of sound is intuitively understood.

Riccardo Giovinetto (IT)

FE:MI:NA

FE:MI:NA is a dual-screen audio-visual performance in which echoes of polyphonic madrigals are layered with electronic music compositions, while samples of Renaissance paintings are transformed into an evolving stream of images. The project explores the idea of grace and the eye that defined it during the Renaissance, that of the painters, who ascribed it par excellence to the feminine figure.

Kyoka (JP/DE), Ali Mahmut Demirel (TR/DE)

Syntax-2

This performance is a collaboration in between "New Music Syntax" by Kyoka, and "Rockforms" by Ali M. Demirel. "New Music Syntax" is an ongoing project of Kyoka, combining music theory with neuroscience to shed light on interactions between sound and humans. The "Rockforms" series is a coastal geography, the study of the dynamic interface between the ocean and land.

Robin Fox (AU)

TRIPTYCH

Isao Tomita Special Prize 2023

Triptych is the latest audio-visual space-time carving from iconoclastic Australian AV artist and composer Robin Fox. The work brings together the artist's two creative passions – electronic music and audio-visual mechanical synesthesia. Three RGB laser projectors work in synchronicity to realize a stunning full color geometry that maps specifically to venues and transforms them into live electrical environments.

The Big Concert Night of Ars Electronica

Sounding out the Origins

The festival theme *Who Owns the Truth?* also raises the key question of originality and authenticity in artistic production given the technical context of our time. So this year's concert night presents music in search of truth, in search of origins. This aligns perfectly with the music of composer Anton Bruckner, who, in the lead-up to the grand anniversary year 2024, already takes center stage in September as part of the musical journey during the Ars Electronica guest performance. Scherzos from Bruckner's symphonies form the musical framework of the evening. These serve as the starting point for encounters, reflections, and are interwoven with traditional violin music played by soloists from the orchestra, as well as the exceptional rapper Def Ill, who originates from Upper Austria like Bruckner, and the Icelandic composer and double bassist Bara Gísladóttir. Both Def Ill and Bara Gísladóttir will perform their own extended sets following the orchestral section at this year's Big Concert Night.

The Surface of Bruckner

Four visualizations based on AI-generated images

All images that you see in the visualisation of Bruckner's music are solely created with generative AI-systems after several weeks of conversa-

tion about Bruckner's music held by AE curators with ChatGPT. At the end of these conversations ChatGPT was asked to describe Bruckner's music as a landscape or as a building, but also as musical instruments, machines or as simple brushstroke. ChatGPT was also asked to describe some of the typical stories of Bruckner's life. These descriptions were used as prompts for the image creation. A few thousand images were created in this process, with only a few selected and animated live by the sounds of the orchestra. After *Images of Sacre du Printemps* (by Stravinsky and presented in the piano version for four hands by Maki Namekawa and Dennis Russel Davies in Innsbruck's Haus der Musik) *The Surface of Bruckner* is the second experiment aimed at exploring possibilities of co-creation with AI-systems. This takes the form of active collaboration, exploring the grey zones of interpretation between basic forms of expression and communication like music, language and images.

The results, however, expose the very stereotypical and often superficial nature of commonly available AI-systems and demonstrate once again that the starting point of true creativity can be rather found in the glitches, imperfections and shortcomings where our common view of reality becomes fragile and breaks open.

Bruckner Orchester © vog.photo

Present's moment of force

The Great Concert Night has always been a laboratory for the construction of unheard-of resonance spaces, which call for openness, the joy of collaboration, a boundless desire to program and the search for unusual concert venues. We return to the formidable Gleishalle at POSTCITY, where the big bang of the partnership between the Bruckner Orchestra Linz and its new principal conductor Markus Poschner occurred in 2017. Six years of an intense sound journey lie behind us, which have led to the establishment of a community that is now causing ears to prick up around

the world. It began with a radical investigation of Bruckner's 8th Symphony; today, four scherzos, four dance spaces from symphonies by the traditional local avant-gardist Anton Bruckner, who celebrated his 199th birthday on September 4, again provide intangible torques that shake things up and resonate with the sound spaces of Icelandic composer and double bassist Bara Gísladóttir and Austrian rapper Def Ill. Expect the unheard, the truth belongs to us listeners!

Norbert Trawöger, Artistic Director Bruckner Orchestra Linz

BÁRA GÍSLADÓTTIR (IS)

SILVA

SILVA is a work for processed double bass built on the idea of a downward growing forest, living its own secret life of underground raves and meditative cohesiveness. I like to think of different movement and direction in musical form. I was intrigued by the thought of something that would otherwise naturally grow upwards, reaching for light and surrounded by air, rather being drawn in the opposite direction where darkness and solid form serve as the source of gleaming luminosity and breezy surroundings. Every sound on *SILVA* is of the double bass, processed to various degrees and layered into a mass of noise. The main elements of the clean double bass content are a mixture of low drones, creating thick, dark, somber oil-like layers, and higher overtones/multiphonics, serving as a soaring, smoky, but light fog, surrounding the otherwise dim core.



BÁRA GÍSLADÓTTIR © Anna Maggy

Def Ill aka Ruffian Rugged (A)

Free Purgatory Tickets

If you talk about "Ruffian Rugged" and some people will step up and ask you "Governor?"... don't hesitate to say "Yes!". Cuz they'll be referring to the legend of "Governor General Ruffian Rugged". The Austrian artist Felix Schager, who started making rap music in 1996 at the age of seven, made his name in the Austrian rap game a long time ago under his synonym "Def Ill" with over 1000 released songs and productions and

hundreds of shows. While still a teenager, he developed a crush on Dancehall, Dub and Reggae through the smoke and initiated his soundsystem *Fireclath Sound*. In this particular showcase, called *Free Purgatory Tickets*, he will present an epicentric meltdown between all his different musical patterns and his personal understanding of contemporary artforms.

NIGHTLINE

This year's return of the festival to POSTCITY also marks the comeback of the *Nightline*: Following the classical sounds of the Bruckner Orchestra, the Gleishalle will become a musical playground for electronic audio-visual artists and their sound experiments. Producer and performer Jessiquoi kicks things off with an energetic, eye-catching live set that transports the audience to a futuristic Shanghai. Expect danceable beats, bold raps and soaring vocals. Swiss composer and sound artist Noémi Büchi creates electronic symphonic maximalism. Together with audio-visual artist Christopher Joergensen, she seeks to explore different conceptions of reality and discover

Jessiquoi (CH) Jessiquoi

In the lower districts of Neo Shanghai in the year 2187, Jessiquoi appears in an alley with a blinking wooden food stall ready to sell Uncle's hot noodles. What Uncle does not know is that Jessiquoi is secretly an avid beatmaker, and the cash she brings home in the morning actually comes from busking late into the night, starting street parties in a sleepless neon city. This girl can dance, she can sing and rap. She draws passersby into her worlds. It is going to be an excellent night. And what of the noodles? Well, there are plenty of hungry people in Neo Shanghai and the droid *maneki-neko* has collected enough donations to keep Uncle happy.

Presented with the kind support of the Swiss Arts Council Pro Helvetia.



Jessiquoi Square Superpower

hybrid conceptual worlds. Soraya Lutangu aka *Bonaventure* is a Swiss-Congolese musician and performer. She explores issues of displacement and the diasporic imaginary, contextualizing poetic notions of blackness, queerness, technology and spirituality. Canadian Myriam Bleau creates audiovisual performances, installations and interactive interfaces based on music. Her project *Unsculpt* explores urban and human scenes with the help of AI-generated synthetic landscapes.

At the end of the evening, producer Kenji Araki will create new minimalism in his live performance, a first taste of his upcoming album.

Noemi Büchi (CH) ECLIPSE

Eclipse is an audiovisual collaboration between Swiss composer and sound artist Noémi Büchi and visual artist Christoffer Joergensen. The aim of the work is to combine two different conceptions of reality and to discover hybrid conceptual worlds. Noémi Büchi's music captures the tension between growth and decay, consonance and dissonance, mirroring Büchi's own catharsis through music.

In his work, Christoffer Joergensen explores the potential of hybrid image creation by combining painting, sculptural work, photography, photogrammetry and 3D graphics.

Presented with the kind support of the Swiss Arts Council Pro Helvetia.



Noémi Büchi © Christoffer Joergensen



Bonaventure © Buzigahill

Kenji Araki © David Prokop

Unsculpt © Shigeo Gomi

Mika Bankomat © sugar pa

Soraya Lutangu (CH/CG) Bonaventure

With music, performance art and film, Soraya Lutangu aka *Bonaventure* is attempting to materialize feelings located between empathy, mourning, togetherness and celebration. Her practice allows the creation of practical and speculative languages while finding new ways to belong in the culture continuum of Otherness.

By addressing questions of displacement and the diasporic imaginary within a decolonial context, *Bonaventure* builds expressive systems of repairs that value the poetic notions of Blackness, queerness, technology and spirituality.

Presented with the kind support of the Swiss Arts Council Pro Helvetia.

Kenji Araki (AT) Kenji Araki

Vienna-based 25-year-old musician and producer Kenji Araki from Austria, with roots in Japan, is joining Ars Electronica for the first time as a solo artist. Kenji's work is primarily influenced by methods of deconstructing contemporary art and music. The exploration of genre- and medium boundaries are at the core of his artistic ethos. In his live performance, he will oscillate between maximalist sound design and reduction, which give his new compositions and arrangements plenty of space and time. This "new minimalism" will also provide a first taste of his second album, which will be released in autumn 2023.

Myriam Bleau (CA) Unsculpt

Inspired by the writings of Donna Haraway and the methodology of speculative architecture, *Unsculpt* explores urban and natural scenes created from the assemblage of human and machine agencies. Generated with artificial intelligence, synthetic landscapes emerge as fragments of dreams, faded postcards from an imagined future. Concerned with the vertiginous paradigm shift that might result from the recent advances in machine learning, *Unsculpt* depicts scenes and constructions devoid of human presence, questioning what will be left of our agency once knowledge and craft are modeled outside of the human body.

Presented with the kind support of the Conseil des arts et des lettres du Québec (QALC).

Mika Bankomat (AT) Mika Bankomat

In her conceptual works, Mika Bankomat transfers the examination of social and political structures to concrete places, materials and physical phenomena. In her sound performances she works with self-made instruments, field recordings, places, gestures, movement sequences, postures and the self-resonance of materials. Through audiovisual, performative and sculptural translations, she explores moments of failure, irritation, touch and the breaking points and collapse of systems.



Pianographique — piano music meets digital images

Maki Namekawa — The Köln Concert

Fully dedicated to the quest for authenticity in artistic creation, this year's festival's closing concert presents Maki Namekawa performing the legendary *Köln Concert* by Keith Jarrett, accompanied by visualizations by Cori O'Lan. On January 24, 1975, while on tour in Europe, Keith Jarrett made a stop at the Cologne Opera. Feeling very tired and experiencing back pain, he had to play on a poorly maintained piano that was provided to him. The surprising result: a magical concert, entirely improvised, during which pure and fervently intense music flowed. Released in 1975 on the prestigious ECM label, the recording of the concert achieved immense success,

becoming one of the best-selling jazz records and leaving a lasting legacy. Maki Namekawa, who thrilled the audience with Keith Jarrett's early piano work *Ritual* at last year's Ars Electronica Festival, has now taken on the legendary *Köln Concert* which she has already performed with great success at the Philharmonie des Paris. Once again, she impresses not only with tremendous faithfulness to the work, but also with her unique and virtuosic way of breathing life into the music. She plays the *Köln Concert* based on the original recording, and her rendition is authorized by Keith Jarrett. When asked about her exchange with Keith Jarrett she recalls:

"I told Keith that I am not a jazz pianist, but I wonder how my interpretation of *The Köln Concert* sounds to him. He smiled and simply replied, *The Köln Concert* is not jazz."

Cod.Act, André Décosterd (CH), Michel Décosterd (CH)

Uperqt

Fighting is a spectacular event, fascinating due to its intensity and the collective excitement it generates. This characteristic phenomenon stems from a highly charged sonic context and, above all, from the constant interaction between the fighters' performance and the audible reactions of the audience. The blows whip up the crowd's fury, while the cheers fuel the fighter's ardor. The result is a constant flow of energy back and forth between the ring and the stands. The power and speed of the clashing bodies resonate with the

elevated vocal pulsations of the fans. A succession of tensions and relaxations, both physical and sonic, dictate the rhythm and dramaturgy of a show whose beauty emanates from a blend of primal instinct and virtuosity.

Uperqt reproduces this deeply emotional experience in the form of a piece of music, articulated and composed in real time by the fight of two great metallic creatures.

Presented with the kind support of the Swiss Arts Council Pro Helvetia.

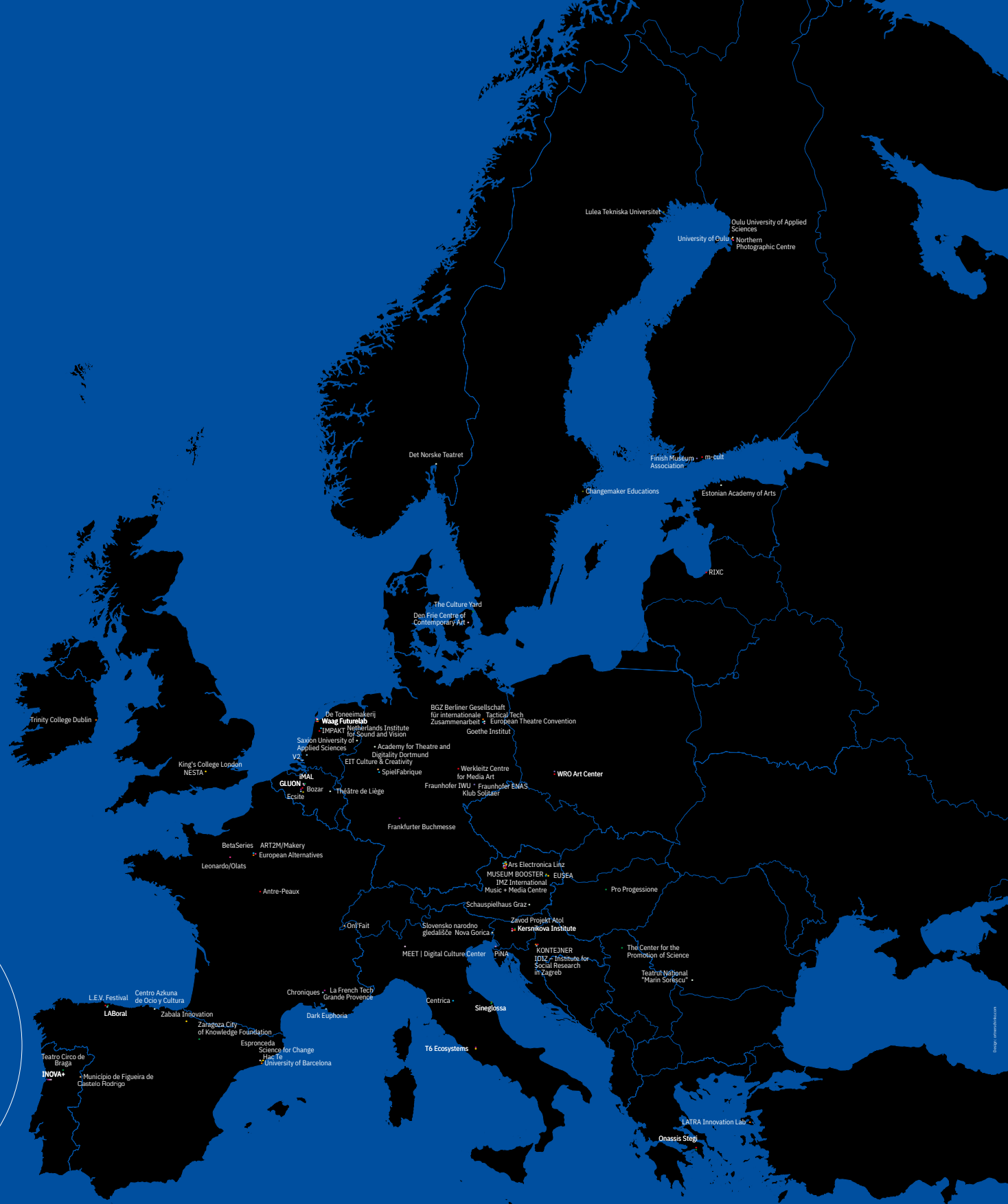


EUROPEAN PLATFORM FOR DIGITAL HUMANISM

European Platform for Digital Humanism

Projects

- EIT Culture & Creativity
- S+T+ARTS
- Prize • 4AFRICA • and the City
- ACuTe
- CCI Thrive
- DOORS
- More-than-Planet
- IMPETUS
- Critical ChangeLab
- WeSTEAM
- European Digital Deal
- EMAP
- Realities in Transition
- FUNKEN Academy



Ars Electronica: a European Platform for Digital Humanism

With its Linz location, Ars Electronica is not only situated at the geographical heart of Europe, but also positions itself as a hub of European cultural intersection as partner institution in numerous collaborative EU-supported projects. These international collaborations with other institutions and organisations in the cultural and creative sector inspire and facilitate exciting alliances between artists, researchers and industry representatives in multidisciplinary projects, all in the spirit of a united Europe. The development and implementation of European cultural cooperation projects under Creative Europe, Horizon 2020 / Horizon Europe and Erasmus+ have become a cornerstone of Ars Electronica's engagement with the sector. In these collaborative approaches,

we see ourselves as a European Platform for Digital Humanism, a space for conversation and reflection to foster and showcase the outcomes of artistic engagement with science, technology, and society.

Ars Electronica's efforts focus on exchange within the sector on the one hand, and the discourse between the sector and society as equals on the other. Critical artistic discourse on technologies, societal discussion through transdisciplinary cultures, and the cultural and creative industries' reflection on their digital futures in the context of the Next Renaissance movement and beyond: these are the focus points of our perspective on how Digital Humanism can lead more-than-human societies into a liveable future.

The Next Renaissance

The world stands on the cusp of a rare opportunity to shift our systems and way of thinking, planning and acting dramatically, as a mood is emerging that transformation is possible. The solutions are in the air and renewal is possible. Perhaps a rebirth — a *Next Renaissance*, where we harness our collective imagination and intelligence and work across different forms of knowledge. Here we can rethink how to organize our economy on different principles and base our society beyond mere self-interest, as well as — importantly — redefine our relationship to nature given the dangers of climate collapse.

Initiated by *EIT Culture & Creativity*, *The Next Renaissance* is a movement and a platform that aims to promote the need to dramatically reassess our ethics, values and priorities in addressing the major problems of our times. The creative and cultural sectors, and especially the blending

of scientific, technological, cultural and artistic knowledge, can be a catalytic driver to both imagine possible futures and to help make them happen. To tap into the great potential of the sector for the evolution of human societies, we need to provide infrastructures and support systems that facilitate and accommodate radical new paths of thinking, both to artists and industries.

Ars Electronica participates in two large-scale initiatives of the European Commission that are in line with *The Next Renaissance's* belief that innovation and cross-innovation by culture and creativity is the key to the future of Europe. The *STARTS Initiative* and *EIT Culture & Creativity* provide frameworks within which a paradigm shift in how we think, plan and act becomes possible. *EIT Culture & Creativity's* flagship initiative *The Next Renaissance* provides an umbrella for these two approaches.

S+T+ARTS Initiative

The climate crisis is no longer a prediction of a distant future but increasingly a reality of our time. Undoubtedly, we need to rethink our economies, societies, modes of inhabitation, and our relation to the planet. For this, instead of off-the-shelf solutions, we need multi-layered, trans-disciplinary approaches to innovation.

STARTS is an initiative of the European Commission designed to create a space of dialogue and collaboration between Science+Technology+Arts. It gives artists a voice in innovation processes. Through various *STARTS* pillars, the *STARTS Academies*, *STARTS Lighthouse*, *STARTS Residencies*, the *STARTS Prize* and the numerous

Regional *STARTS Centres*, the initiative address the need to approach innovation differently and look for radically new ways to tackle the challenges we face. Artists can be catalysts for change and imagine solutions that have the boldness our challenges demand. Ars Electronica has been part of this important initiative from the very beginning, hosting the *STARTS Prize* since its inception in 2016. The *Grand Prize of the European Commission Honoring Innovation in Technology, Industry and Society Stimulated by the Arts* highlights people and projects that have the potential to make a sustainable positive impact on Europe's economic, technological, social and ecological future.

The competition seeks projects at the nexus of science, technology and the arts and celebrates visions and achievements at the interface between innovation and creation.

In 2024, the Prize will be awarded in a special category: the STARTS Prize for African artists and institutions, to single out for recognition innovative projects that have what it takes to make a significant impact on economic and social innovation.

Within the *STARTS4Africa* project, European structures experienced with STARTS approaches will partner with change-makers in Sub-Saharan Africa as well as existing Digital Innovation Hubs (DIH) to push for innovation on a regional level. This is to be facilitated by the involvement of

local and international artists with regional stakeholders. In addition to the STARTS Africa prize, this will also be achieved through a Residency program. At this year's Ars Electronica Festival, the network will be introduced. Residencies are also at the core of the Regional STARTS Centers implemented by *STARTS in the City*. The project aims at enhancing art-driven innovation at local level and human-centered technologies, such as artificial intelligence, robotics, new digital media, smart cities, high performance computing, data science, or biotechnologies, that will be able to bring to the market products and services that have a positive ecological, societal, and ethical impact. Discussions of these topics will shape this year's discursive Festival program.

S+T+ARTS Prize

Partners: Ars Electronica (AT), Bozar (BE), La French Tech Grande Provence (FR), Waag Futurelab (NL), INOVA+ (PT), T6 Ecosystems SRL (IT), Frankfurter Buchmesse (DE)

Funding scheme: Horizon 2020

Duration: 1.1.2021 – 31.12.2023

Website: <https://starts-prize.aec.at/>

The *STARTS Prize* has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No. 956603.

S+T+ARTS in the City

Partners: GLUON (BE), Ars Electronica (AT), Hac Te (ES), INOVA+ (PT), Kersnikova Institute / Kapelica Gallery (SI), MEET | Digital Culture Center (IT)

Duration: 1.4.2023 – 30.11.2024

Website: <https://starts.eu/what-we-do/residences/starts-in-the-city/>

STARTS in the City has received funding from the European Commission's Directorate-General for Communications Networks, Content and Technology under grant agreement No. LC-01984766.

S+T+ARTS4Africa

Partners: INOVA+ (PT), Ars Electronica (AT), GLUON (BE), PiNA (SI)

Associated Partners: Emerging Communities Africa (NG), Buni Hub (TZ), Hapa Foundation (GH), Picha asbl (CD), Goethe Institut (DE)

Duration: 1.5.2023 – 31.10.2024

Website: <https://starts.eu/what-we-do/residences/starts4africa/>

STARTS4Africa has received funding from the European Commission's Directorate-General for Communications Networks, Content and Technology under grant agreement No. LC-01960720.



STARTS in the City, A still from Drone Aviary © Superflux



STARTS in the City, A still from Drone Aviary © Superflux



STARTS in the City, Challenge, Going wild in the city © Patrice Deramaix



STARTS in the City, Challenge, Where our food comes from © Belakker, Atelier Groot Eiland



Richard Mosse, Broken Spectre, 2022, Film still © Richard Mosse, Jack Shainman and Carlier Gebauer



VFRAME: Computer Vision for OSINT/OSI Research © Adam Harvey, Josh Evans, Jules LaPlace

EIT Culture & Creativity

Tech alone will not be enough to make “sustainability” tangible for the average European. It has to be something you can walk through, look at, listen to and participate in. Something you can wear or live inside of. This requires the power of art and creativity.

EIT Culture & Creativity is an initiative of the European Institute of Innovation and Technology (EIT). This Knowledge and Innovation Community is designed to strengthen and transform Europe’s Cultural and Creative Sectors and Industries (CCSI) by connecting creatives and organisations to Europe’s largest innovation network.

EIT Culture & Creativity will:

- empower and connect creatives and innovators across Europe and contribute to a more resilient, sustainable and transformational sector.
- unlock latent value from a multitude of small cultural and creative stakeholders through

technology transfer, improved cross-sectoral collaboration and their effective integration in production value networks.

- strengthen artistic driven innovation as an indispensable part of the European Innovation Ecosystem.
- reinforce the appreciation and anchoring of European values and identities.
- harness the unique position of the Cultural and Creative Sectors and Industries to facilitate Europe’s Green, Digital and Social transitions.

Ars Electronica invested in *EIT Culture & Creativity*’s strategic objectives of Education, Innovation, Creation, Society and Systems and shares the ambition to bring about a new wave of cultural and artistic renewal in Europe to accompany the Green and Digital transitions. We are ready to support artists of all kinds to make this happen.

Funding Scheme: European Institute of Innovation and Technology (EIT)

Website: eit-culture-creativity.eu/

EIT Culture & Creativity is supported by the European Institute of Innovation and Technology (EIT) and funded by the European Union.

Culture & Creative Industry Futures

The European cultural sector is a diverse, ever evolving field with a rich history to build on. With the digitalization of European societies, cultural organizations not only transform their strategies and approaches to collaborate beyond regional and national borders, but also across the sectors: exchange and cooperation with creative industries is becoming a cornerstone of innovation in the field. The benefit is mutual, with theatres incorporating approaches developed by gaming and film industries, streaming platforms developing content incorporating cultural heritage data, or museums collaborating with technical

solutions providers to keep their audiences engaged – to name only a few examples.

Ars Electronica offers the sectors a space to meet, learn from each other, and engage with novel approaches; it also actively participates in the innovation processes of the cultural sector through involvement in initiatives that shape the digital future of theatres, museums, and cultural and creative industries collaboration. By making the sector fit for our digital present and future, we ensure that cultural institutions can confidently take on their role as spaces of democratic discourse on the challenges we face as a society.

ACuTe

Adaptable Culture Testbeds for Interactivity, Performance and Technology (ACuTe) is an international cooperation project between Ars Electronica (AT) and thirteen partner institutions from eight European countries. Theatres from all over Europe partner in this project that aims to make the stage arts sector fit for the digital age. *ACuTe* aims to revolutionize the way theatre and performing arts are produced and performed with emerging technology and new forms of cultural collaboration and competence development, making effective use of new technologies such as artificial intelligence and augmented reality. So far, few interdisciplinary models exist that allow for organizations involved in performing arts to undertake long-term innovative cross-sectoral testing of new technologies and apply them to performance production methodologies.

With an interdisciplinary approach integrating digital technology and co-creation methodologies, a new type of ‘culture testbed’ is created. These testbeds lead to the testing and tangible prototyping of new technologies within performing arts productions under three themes: new dramaturgies, stage design and audience

engagement—in short, innovations on how we tell stories on stage, how they are produced, and the way audiences interact and engage with them. A series of nine separate experimental theatre productions is designed, produced and performed as the core of the testbed outputs. Other activities include: a series of Expert in Residencies to support prototyping; European level knowledge transfer events; online content for professional communities; and training workshops focusing on developing professional capacity in the deep integration of technology into the long-term theatre production process. Ars Electronica participates in many of the project activities, including the presentation of some of the productions in the DeepSpace and at the Ars Electronica Festival.



RabbitHole by De Toneelmakerij (NL), performance in DeepSpace in the context of ACuTe © Ars Electronica

Partners: Oulu University of Applied Sciences (FI), Ars Electronica (AT), European Theatre Convention (DE), Centro Azkuna de Ocio y Cultura (ES), Estonian Academy of Arts (EE), Stichting Saxion (NL), Théâtre de Liège (BE), De Toneelmakerij (NL), Slovensko narodno gledališče Nova Gorica (SI), Det Norske Teatret (NO), Schauspielhaus Graz (AT), Teatrul Național "Marin Sorescu" (RO), Akademie für Theater und Digitalität Dortmund (DE)

Funding scheme: Creative Europe

Website: www.oamk.fi/acute/

Duration: 1.7.2022 – 30.6.2026

ACuTe is co-funded by the Creative Europe Programme of the European Union.

CCI Thrive

CCI Thrive – Bespoke Business Models and Innovative Practices of Cross-Sectoral Cultural and Creative Collaboration explores compelling solutions for small and medium-sized European Cultural and Creative Industries (CCI) enterprises as a response to the obstacles that they are facing. How can cutting-edge digital technology support CCI in improving their international competitiveness? How does the fact that these technologies are all relying heavily on data affect the CCI sectors in keeping pace with the digital transition? Exchange of knowledge on these questions and joint efforts to achieve beneficial cross-sectoral solutions feeds into innovative business models. A data-driven workflow using intelligent tools and processes is developed in an experimental environment to demonstrate digital paths for the future of the sectors. The project's core objective is to provide a sound body of knowledge to build sustainable, future oriented business models.

CCI Thrive reaches out to sectors throughout the CCI and involves a range of relevant experts. To onboard solutions, the project negotiates with many pan-European CCI platforms, registers and databases, as well as practitioners in various fields.



© Data Space SAP Berlin / Ars Electronica FUTURELAB

Partners: BGZ Berliner Gesellschaft für internationale Zusammenarbeit (DE), Ars Electronica (AT), IMZ International Music & Media Centre (AT), SpielFabrique (DE), Netherlands Institute for Sound and Vision (NL), Centrica (IT), BetaSeries (FR)

Funding scheme: Creative Europe

Duration: 1.5.2022 – 30.4.2024

Website: cci-thrive.eu

CCI Thrive is co-funded by the Creative Europe Programme of the European Union.

DOORS

Faced with the accelerated pace of digitalization in society and the competition with on-demand content, the museum sector is now looking at its own digitalisation with a new sense of urgency. *DOORS – Digital Incubator for Museums* harnesses this momentum to support those likely to be left behind in the sector's race towards the digital: small and medium-sized museums. Following extensive research into their needs, *DOORS* designed and ran a two-stage incubation programme in which initially 40 museums had the chance to hone their digital skills. Subsequently, 20 of them are bringing a diverse range of digital pilots to life, with projects ranging from the implementation of digital museum signage to the design of digital experiences of content for audiences. Guided by museum experts and working alongside partners from the tech and creative sector, the museums went through a collaborative, hands-on process of developing innovative digital products or offers. The extensive *DOORS* incubation program offered to the participating museums

ranges from individual mentoring to progress sharing among the peers and a hands-on workshop program. The program aims at supporting the museums both in implementing their individual digital pilots, and in sustainably building digital capacities to ensure their and the sector's fitness for our digital future.

Beyond supporting the implementation of one-off pilots, *DOORS* builds bridges across sectors. This entails proposing ways of collaborating and setting up discussions to create a shared vision of a digital future that enables museums to keep up with the times, while upholding their ethos as places of 'education, enjoyment, reflection and knowledge sharing.'¹ The results of the project will be presented after this year's Ars Electronica Festival in September.



© Ars Electronica / Robert Bauernhansl

Partners: Ars Electronica (AT), Ecsite (BE), MUSEUM BOOSTER (AT)

Funding scheme: Horizon 2020

Duration: 1.12.2021 – 30.9.2023

Website: ars.electronica.art/doors/

DOORS has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036071.

¹ <https://icom.museum/en/resources/standards-guidelines/museum-definition/>



Transdisciplinary Cultures

We stand on the brink of an unthinkable tomorrow. Experts caution that we are either already undergoing, or on the precipice of, the continuous decay of human civilization unless we urgently act on our environmental emergencies. We must rally, stimulate and ambitiously drive the societal evolution required by fostering transdisciplinary cultures through education and science engagement.

Only in this way shall we have the expertise to facilitate and enact on the different types of knowledges needed to achieve transformative change and create a sustainable future.

The climate crisis and its definition as an apparently unmanageable ‘super wicked problem’ brings home the urgent need to implement comprehensive strategies that account for the

intricate relationships between human, non-human, and more-than-human systems. Activists, communities of engagement and especially young people have confronted the urgency of the situation more directly than policy and the general public, which is why Ars Electronica is invested in making their voices heard.

By fostering a culture of transdisciplinarity across the European Research Area, Ars Electronica and its European partners deliver projects focused on fostering collaborative cultures across the board in education and science. Transdisciplinarity is crucial as a means of revealing the possible paths through what appear to be impossible dilemmas. By bringing together diverse stakeholders, we can shape a society that works together towards a sustainable future.

More-than-Planet

To envision a sustainable future requires a new perspective — a planetary perspective. This change in viewpoint is needed so that we can grasp the complexities of our ecosystem Earth. *More-than-Planet (MtP)* addresses a crisis of planetary imaginary by exploring how transdisciplinary cultures can contribute to the way people understand and envision our environment on a planetary level.

More-than-Planet continues Ars Electronica’s mission to contribute to European cultural-environmental literacy. Through a ‘comparative planetary imaginary’, the project aims to empower European research, innovation, and cultural communities with novel insights, skills, tools, and concrete use-cases. These can then be implemented within each of their respective domains. These imaginaries will be developed through transdisciplinary, collaborative and art-driven innovation approaches that utilize critical and creative tools to address our environmental emergencies.

More-than-Planet aims to have long-term impact by developing a pathway toward the framework of European Cultural Outer-Space Activities (ECOSA) in collaboration with relevant stakeholders. Such a framework will serve as a mutual agreement between stakeholders on collaborating in the long run. It builds on decades of individual efforts by many artists, scientists and cultural organizations who have enabled artistic production in the context of outer space, with space technologies, or even in outer space itself. This includes previous projects undertaken at Ars Electronica such as *SpaceEU*. The resulting projects are disseminated as novel environmental narratives at the Ars Electronica Festival, and across other cultural and public spaces, including specific critical zones.



Summer bloom of algae in the central Baltic Sea of Gotland; @ modified Copernicus Sentinel data

Partners: Waag Futurelab (NL), Northern Photographic Centre (FI), ART2M/Makery (FR), Leonardo/Olats (FR), Zavod Projekt Atol (SI), Ars Electronica (AT)

Funding scheme: Creative Europe

Duration: 1.6.2022 – 31.5.2025

Website: more-than-planet.eu

More-than-Planet is co-funded by the Creative Europe Programme of the European Union.

IMPETUS

Citizen Science continues to gain momentum, assuming an increasingly pivotal role in researcher and innovator engagement with society. Citizen Science can demonstrate the potential of transdisciplinary cultures, and how methods of co-creation and co-design can bring together diverse communities and engage a variety of stakeholders, while creating, sharing and incorporating divergent forms of knowledge and approaches to knowledge creation.

IMPETUS is a project that showcases how Citizen Science contributes significantly to crucial societal issues such as digital literacy, data justice and participatory governance. Citizen Science heightens trust in scientific expertise, augments critical thinking skills, and creates a robust defense against misinformation. *IMPETUS* is committed to reinforcing and enhancing the European Citizen Science ecosystem by extending financial aid and strategic support to Citizen Science initiatives throughout Europe.



CurieuzNeuZEN - Recipient of an Honorary Mention for the European Union Prize for Citizen Science 2023. Credit: CurieuzNeuZEN / An Gijsegem

The project offers innovative funding pathways for Citizen Science initiatives through the *IMPETUS Accelerator Program*. In addition, *IMPETUS* hosts the *European Union Prize for Citizen Science* on behalf of the European Commission. The purpose of this prize is to broaden the recognition and disciplinary engagement of Citizen Science by honoring collaborative and diverse approaches that empower civil society and citizens in the development of the future. At this year's Festival, Ars Electronica awards the *European Union Prize for Citizen Science* for the very first time.

Partners: Ars Electronica (AT), Zabala Innovation (ES), King's College London (GB), NESTA (GB), Science for Change (ES), T6 Ecosystems (IT), European Science Engagement Association (AT)

Funding Scheme: Horizon Europe

Duration: 1.7.2022 – 30.6.2026

Website: impetus4citizenscience.eu

IMPETUS is funded by the European Union under Grant Agreement No. 101058677 – HORIZON-WIDERA-2021-ERA-01.

Critical ChangeLab

Critical ChangeLab aims to build a resilient European democracy by reinvigorating the relationship between youth and democracy. It proposes civic interventions in which young people envision alternative futures for (shared) European democracy, and act on them. The project develops a methodology that can be implemented within both formal and informal learning environments. *Critical ChangeLab* contributes to Ars Electronica's mission to foster transdisciplinary cultures by integrating insights and experiences from previous educational projects focused on gender, responsible research, innovation and transdisciplinary approaches.

The goal of the *Critical ChangeLab* model is to create a flexible framework for democratic pedagogy within learning environments. It revolves around the implementation of *Critical ChangeLabs*, which draw upon creative and critical practices to support youth-led civic interventions. These interventions address societal challenges that are relevant and

significant to young people. *Critical ChangeLab* aims ultimately to contribute to improve ingemocracy in Europe through this flexible model of democratic education across educational organisations in Europe. By giving power and agency to young people, direct action towards creating a sustainable and socially just future can be inspired. Ars Electronica embeds this model of education within its *create your world* program to empower the next generation with open, empathetic and hands-on approaches that can contribute to shaping a transdisciplinary culture for a sustainable future.



Ars Electronica CitizenLab © Ars Electronica / Magdalena Sck-Leitner

Partners: Ars Electronica (AT), University of Oulu (FI), Trinity College Dublin (IE), University of Barcelona (ES), Waag Futurelab (NL), Kersnikova Institute (SI), Tactical Tech (DE), European Alternatives (FR), LATRA Innovation Lab (GR), IDIZ - Institute for Social Research in Zagreb (HR)

Funding Scheme: Horizon Europe

Duration: 01.04.2023 – 31.03.2026

Website: criticalchangelab.eu

Critical ChangeLab is funded by the European Union under Grant Agreement No. 101094217 – HORIZON-CL2-2022-DEMOCRACY-01-04.

WeSTEAM

WeSTEAM is an initiative aimed at empowering young women* in STEM through the utilization of transdisciplinary approaches that incorporate Art Thinking. Although extensive policies and projects have been implemented at various levels, it remains evident that women* are significantly underrepresented within ICT and STEM. The gender imbalance has led to a dearth of talent and inhibits the emergence of diverse concepts, innovative ideas and creative cultures of collaboration. *WeSTEAM* adapts this transdisciplinary approach to develop, test and disseminate a new methodology that enhances Art Thinking skills of female* students engaged in STEM careers: in short, from STEM to STEAM.

The practical tools developed by *WeSTEAM* include a skills-framework that women* in STEM can use to self-assess their Art Thinking capacity and to identify areas for improvement. *WeSTEAM* is also developing a training



WeSTEAM Methodology Workshop, phase of incubation
© Mario Schmidhumer / Ars Electronica

methodology, designed to be utilized by both STEM educators and female* students themselves, which will be presented and tested in the context of this year's Ars Electronica Festival and that is further supported by a VR-based educational game. The game is an interactive and engaging platform for women* pursuing STEM disciplines that equips young women* in these areas with Art Thinking skills, knowledge and recognition they need to excel. By amplifying their voices and nurturing their talents, *WeSTEAM* further fosters transdisciplinary cultures by shaping a future where women* can thrive across STEM fields.

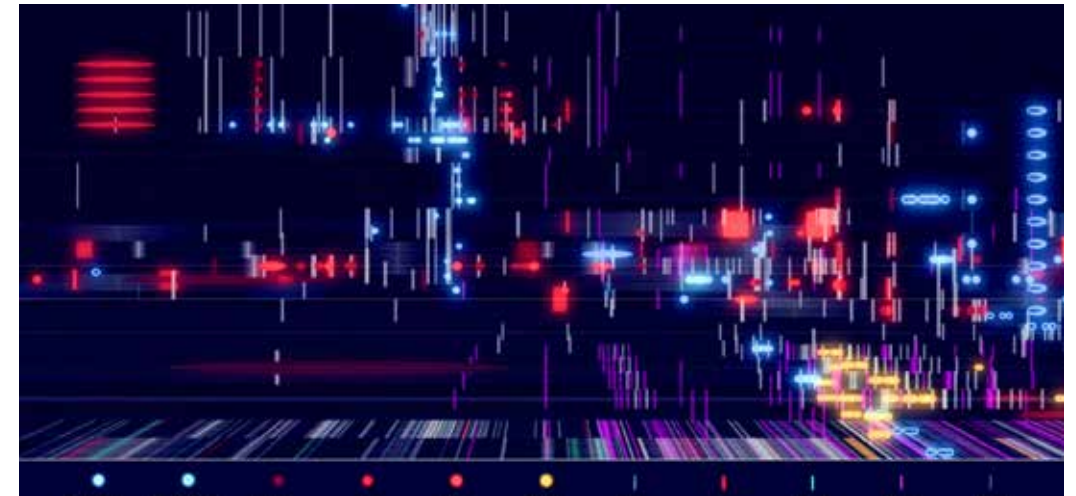
Partners: Ars Electronica (AT), Changemaker Educations (SE), Espronceda (ES), Lulea Tekniska Universitet (SE), Sineglossa (IT)

Funding scheme: Erasmus+

Duration: 1.1.2022 – 1.1.2024

Website: ars.electronica.art/digitalhumanism/en/westeam/

WeSTEAM is co-funded by the Erasmus+ Programme of the European Union.



Digital Violence: How the NSO Group Enables State Terror /
Forensic Architecture © Forensic Architecture

Critical Technologies

In an era of technology, where AI and Big Tech are reshaping social and technological landscapes, the need for a more human-centric approach to digital transformation is paramount. Dire consequences such as the erosion of privacy, misinformation spread and data monopolies highlight this need.

Ars Electronica has been implementing European projects based on the creative and critical thinking of artists for many years. Societal and ethical considerations are pushed to the forefront of technological development within these projects and align with the European Union's broader policies on digital transformation. In numerous projects facilitated by this approach, artists have demonstrated their ability to challenge

norms, provoke critical reflection, and inject a human-centric perspective into the digital realm. Their creative interventions serve as catalysts for questioning established paradigms, opening up new possibilities and nurturing a deeper understanding of the cultural, social and ethical dimensions of technology.

The cross-fertilization of artistic creativity with science and technology, coupled with societal and ethical considerations, forms a pivotal strategy in addressing the future potential of the digital transformation. Such a humanistic approach to digital transformation, advocated by Ars Electronica and its partners, offers a roadmap towards a future where technology serves and upholds our collective good.

European Digital Deal

European Digital Deal continues Ars Electronica's investigation into how the accelerated, yet at times unconsidered adoption of new technologies — such as artificial intelligence, machine learning, blockchain and algorithmic processing — can alter or undermine democratic processes. Through various programmes, *European Digital Deal* establishes a new kind of public forum where cultural institutions, artists, researchers and educators gather to reflect on what a deal that safeguards democratic values in the digital realm might look like, and the role they can play in shaping it.

Twelve artist residencies are at the heart of this forum to instigate conversations about the misgivings, risks and potential futures of digital technologies. These range from the present ethical threats they pose as they intersect with the media and public administration to visions of sustainable and ethical technologies for the future. At this year's Ars Electronica Festival, experts and artists will work together to formu-



Selections from the Human-Machine Collaboration Series, Alexander Reben (US). Photo: © Jürgen Grünwald

late the challenges these residencies will tackle. The artists will take part in an exchange offering their critical, artistic interpretations at the same time as sharpening their understanding of the logic governing the development and use of digital technologies in a capacity-building program. Numerous other educational events, festivals and exhibitions will open these topics for public debate. Based on these discussions, *European Digital Deal* will share a roadmap shedding light on the next steps of the digital transformation - a transformation that, albeit inevitable, is also intentional and designed for the common good.

Partners: Ars Electronica (AT), GLUON (BE), iMAL Art Center for Digital Cultures & Technology (BE), Kersnikova Institute / Kapelica Gallery (SI), LABoral (ES), Onassis Stegi (EL), Pro Progressione (HU), Sinelglossa (IT), Teatro Circo de Braga (PT), The Center for the Promotion of Science (CPN) (RS), The Culture Yard (DK), Waag Futurelab (NL), Zaragoza City of Knowledge Foundation (FZC) (ES)

Funding scheme: Creative Europe

Duration: 1.1.2023 — 31.12.2025

Website: ars.electronica.art/eudigitaldeal/

European Digital Deal is co-funded by the Creative Europe Programme of the European Union.

EMAP

The *European Media Art Platform (EMAP)* delves into the societal implications of technology, uniting diverse perspectives. Guided by the innovative and critical minds of artists, societal and ethical issues take center stage in the examination of the evolution of technology.

Initiated by werkleitz and co-funded by Creative Europe since 2018, *EMAP* is a consortium of fifteen leading European media art organizations specialized in Digital and Media Art, Bio Art and Robotic Art. *EMAP* members offer practitioners two-month residencies to undertake artistic research and critically examine technologies through their practices. *EMAP* also acts as a curatorial network that supports partners in selecting artists and works for their own festivals and exhibitions. In addition to production support for artists, *EMAP* provides an international

platform to promote and disseminate the works of media artists.

The residencies are based on intercultural and interdisciplinary knowledge exchange between the selected artists, host organizations, and various experts from science, arts and technology. These experts are involved to consult, support or train the artists. Events take place regularly across Europe and within the Ars Electronica Festival, showcasing the works developed in the residencies. These include solo exhibitions and group shows, on- and offline conferences and capacity building workshops to share knowledge.



Organ of Radical Care, Charlotte Jarvis © Ars Electronica

Partners: Ars Electronica (AT), Antre Peaux (FR), CIKE (SK), gnration (PT), iMAL Art Center for Digital Cultures & Technology (BE), IMPAKT [Centre for Media Culture] (NL), Kersnikova Institute / Kapelica Gallery (SI), KONTEJNER | bureau of contemporary art praxis (HR), LABoral (ES), m-cult (FI), NeMe (CY), Onassis Stegi (EL), RIXC Centre for New Media Culture (LV), Werkleitz Centre for Media Art (DE), WRO Art Center (PL)

Funding scheme: Creative Europe

Duration: 1.2.2022 — 31.1.2025

Website: emare.eu

EMAP is co-funded by the Creative Europe Programme of the European Union.

Realities in Transition

Extended Reality (XR) cradles both Virtual and Augmented Reality and offers enthralling technological possibilities as envisioned through concepts like the Metaverse. However, this emerging technology also poses significant new social and cultural challenges. The digital skills required for XR stand to deepen societal inequalities by exacerbating an already widening digital divide; moreover, the blurred line between reality and the virtual that is inherent to XR can easily become a hotbed for spreading misinformation and fostering social detachment.

Realities in Transition (RiT) brings together an active and critically thinking community of XR artists and practitioners to respond to these challenges. The project aggregates existing initiatives to demonstrate XR as a common good. Through supporting the production and dissemination of alternative uses of XR in a residency program, *RiT* unveils new narrative structures and creative processes that can counter the prevailing vision for the technology shaped by Big Tech. Alongside the aggregation of existing

initiatives to demonstrate XR as a common good, *RiT* also develops an educational program to bring sustainable change by disseminating skills and knowledge to future generations of XR creatives. *RiT* adopts methodologies aligned with the values of the commons, such as horizontality, open-sourcing and peer-to-peer learning. The project aspires to energize the XR community within Europe, not only the cultural and creative sector, but also civil society, academia, industry and policymakers, offering a counter-narrative. At this year's Ars Electronica Festival, *RiT*'s *Critical XR Manifesto (CXR)* is presented to the public for the first time.



Eva Izsoro: Expecting Forward, presented at Realities in Transition TestLab @ V2_Lab for the Unstable Media / Femna de Jong

Partners: Chroniques (FR), L.E.V. Festival (ES), KONTEJNER | bureau of contemporary art praxis (HR), Dark Euphoria (FR), Ars Electronica (AT), iMAL Art Center for Digital Cultures & Technology (BE), V2_Lab for the Unstable Media (NL)

Funding Scheme: Creative Europe

Duration: 1.6.2022 – 31.1.2025

Website: realities-in-transition.eu

Realities in Transition is co-funded by the Creative Europe Programme of the European Union.

FUNKEN Academy

Technology and science are not only changing our environment, but our bodies and our behavior. The transformation is underway from an industrial to a digital society, in which robots and autonomous systems take over production and supervision, and creation and processes are increasingly automated. Although the societal effects of this technological transformation can be felt by all of us, the underlying process is no longer perceptible despite its impact in shaping the way we live and interact.

Artists can respond to this challenge by making the complexities of technology accessible and injecting a human-centric and critical perspective to technological research and development. Ars Electronica undertakes projects such as *FUNKEN Academy* to train and support artists as mediators of this kind between science, technology, and society.

In the *FUNKEN Academy*, artists, technological institutes and research facilities come together to experiment in the field between arts and technology. A number of workshops are held with different partners from the fields of research and art. Aided by high-tech institutes and research facilities, artists can integrate innovative technologies into their practice early on at the stage of their development, thereby becoming part of the discussion early on. Through this approach, artists can contribute to shaping the technologies that govern our lives by bringing in their perspectives. *FUNKEN Academy* creates an environment that can demonstrate how change should not be led by technology and science, but co-created through critical discussions and collaborative experiments engaging with society.

Partners: Ars Electronica (AT), Klub Solitaer (DE), WRO Art Center (PL), Fraunhofer ENAS (DE), Fraunhofer IWU (DE)

Funding scheme: Creative Europe

Website: funken-akademie.de

Duration: 1.11.2022 – 31.3.2025

FUNKEN Academy is a project by Klub Solitaer e.V. in partnership with Ars Electronica and WRO Art Center in association with Fraunhofer ENAS and Fraunhofer IWU. This action is funded by the European Union and co-financed by Cultural Foundation of the Free State of Saxony and the European Capital of Culture Chemnitz 2025 GmbH with tax funds on the basis of the budget passed by the Saxon State Parliament and by federal funds from the Federal Government Commissioner for Culture and the Media.

ARS ELECTRONICA ANIMATION FESTIVAL

NEW ANIMATION ART — TECTONIC SHIFT

Evolution and history

Juergen Hagler

“Computer Animation” is one of the founding categories of the international competition Prix Ars Electronica. Since 1987, this category has addressed digital moving images in the context of media art. Over the 36 years, the format has constantly evolved, which is why the category profile has been repeatedly discussed and readjusted.¹ While initial attention focused primarily on pioneering achievements in computer graphics and animation, the jury increasingly emphasized the artistic dimension. In 1992 the jury identified three forms: commercial computer animation films, scientific visualizations and computer art. The latter was chosen for the main prize to maintain the DNA of the media art award.² A year later, the jury foregrounded aesthetic criticality and complexity³ as well as computer-specificity and the creative, experimental process involved in dealing with software and hardware.⁴ From the very beginning, the category has followed an interdisciplinary approach⁵, honoring innovation and excellence in the fields of computer graphics and animation, as well as visual effects. In the early 1990s, alongside

tech demos—demonstrations showing the use of newly developed animation software and hardware—renowned studios were awarded for their revolutionary visual effects. Accordingly, in the late 1990s the category’s name changed to “Computer Animation / Visual Effects”. In 1998, the Prix Ars Electronica awarded two Golden Nicas for the first time in its history to honor professional productions in addition to the artistic works.⁶ The competition took a broad approach in the following years, from commercial studios to small teams, from mainstream films to experimental, artistic short films, and from works with large groups and large budgets to no-budget productions and student works.

In 2007 the category was again renamed to “Computer Animation / Film / VFX.” The expansion to digital filmmaking caused a certain indeterminacy. The recent emergence of digital film and invisible visual effects made it increasingly difficult to define what computer animation is. The boundaries between animation and film became blurrier to the point that digital film turned into a distinct new form of animation.⁷

In 2020, the category removed the add-ons to respond to the increasing return to the artistic dimension over the past two decades. In addition, the emergence of new immersive technologies and forms has opened a broad artistic spectrum in the field. This development is evident in the award-winning and selected works of the last 15 years. Art games, projection mappings, VR projects, or interactive media facades extend the canon of animation art. Since 2013, the Expanded Animation Symposium has discussed this development and examined the fringe areas of digital animation.⁸

Currently, we are once again experiencing a paradigm shift in how we perceive, understand and create images. It’s not just AI and machine learning shifting the boundaries of our visual cultures, but also new methods and tools for scientific visualization, new forms of communication (social media, investigative journalism like Forensic Architecture, etc.), or advances and trends in real-time graphics (VR, MR, Metaverse, games, etc.). We can generate images with just a few inputs, or transfer animation styles to moving images based on databases. Lev Manovich points out this fundamental method in relation to AI generative media in his current book *Artificial Aesthetics: A Critical Guide to AI* and describes a historical development of image and moving image generation, from “creating representations manually” to “Generative AI. Using media datasets to predict still and moving images.”⁹

By renaming the category “New Animation Art,” Ars Electronica responds to this paradigm shift and addresses works that explore and experiment with visual expression at the interface of animation, art and technology. The category focuses on topics such as experimental, artistic animation, AI-generated images, generative art, scientific simulations, real-time graphics and expanded animation as well as interdisciplinary interfaces such as theater, architecture or computer game. The range extends from artistic expressions and creative prototypes to sociopolitical statements and impacts on our lives.

Considering the evolution of the category, the current adaptation is a response to recent years, a reaction to current developments and a sign of future trends. Whether artificial intelligence and machine learning will result in a similar paradigm shift for animation as the establishment of the computer remains to be seen. In the spirit of McLuhan’s *Laws of Media*¹⁰, the following answers are crucial: How does AI improve animation? What type of animation does AI make obsolete? What does AI bring back in the context of animation? And what does AI cause when it is overdone to its extremes? Many effects are already visible. The category “New Animation Art” will continue to be a trend barometer for animation art in the future, looking at the interactions between technology, art and society.

1 Hagler, J. (2018). Animation, Kunst und Technologie: Evolution und Expansion am Beispiel Prix Ars Electronica. *Im Wandel... Metamorphosen der Animation*, Edited by Eckel, J., Feyersinger, E. & Meike Uhrig, Springer VS, pp. 171–185.

2 Weibel, P. (1992). Begründung der Jury. *Der Prix Ars Electronica Edition '92*. Edited by Leopoldseder, H., VERITAS-Verlag, p. 43.

3 Weibel, P. (1993). Dirty Data. *Der Prix Ars Electronica Edition '93*. Edited by Leopoldseder, H., VERITAS-Verlag, p. 52.

4 Herken, R. (1993). Begründung der Jury / Jury Statement. *Der Prix Ars Electronica – Internationales Kompendium der Computerkünste – Computergraphik, Computeranimation, Interaktive Kunst, Computermusik – Edition '93*. Edited by Leopoldseder, H., Veritas Verlag, pp. 56 – 57.

5 Schöpf, C. (1995). Prix Ars Electronica 95. *Prix Ars Electronica – Internationales Kompendium der Computerkünste – World Wide Web Sites, Interaktive Kunst, Computeranimation, Computermusik – Edition 95*. Edited by Leopoldseder, Hannes/Schöpf, C., Landesstudio Oberösterreich, pp. 13.

6 Robertson, B. (1998). Looking into the Future. *Cyberarts 98*, Edited by Leopoldseder, H. & Schöpf, C., Springer, pp. 110 – 115.

7 Manovich, L. (2002). The language of new media. MIT Press, p. 255.

8 Hagler, J., Lankes, M., & Wilhelm, A. (Eds.). (2019). Expanded Animation: Mapping an Unlimited Landscape. Hatje Cantz.

9 Manovich, L., & Arielli, E. (2023). Artificial Aesthetics: A Critical Guide to AI. *Media and Design*.

10 McLuhan, M. (1975). McLuhan’s Laws of the Media. *Technology and culture*, 16(1), pp. 74 – 78.

ARS ELECTRONICA ANIMATION FESTIVAL 2023

A collaboration between Ars Electronica and the University of Applied Sciences Upper Austria Hagenberg Campus, curated by Daniela Duca De Tey and Juergen Hagler

The 2023 Ars Electronica Animation Festival is a diverse showcase that invites spectators to discover current artistic productions in the field of digital animation. The selection has been mostly compiled of the submissions at Prix Ars Electronica 2023, which shifted its focus this year from Computer Animation to the landscape of New Animation Art. Therefore, it welcomed artists whose work expands on the cutting-edge intersection of animation, art, and technology, approaching visual expression with unabashed experimentation.

Several exciting programs, taking place at Ars Electronica Center, will give witness to the diversity of this renewed category, not only in terms of storytelling techniques, conceptual explorations and technological innovation, but also in terms of their commitment to social change and new political imaginaries.

From the 1116 submissions, around 40 projects have been selected for Ars Electronica Animation Festival, featuring a broad spectrum of techniques: AI-generated images, photogrammetry,

cinematic deepfakes, scientific and game simulations, real-time graphics, and many more. The diverse selection engages new ways of thinking about how we experience the digital-virtual-real world we live in.

Participating artists and filmmakers:

Jonathan Armour (IE), Reinhold Bidner (AT), Alice Brygo (FR), Mark Chavez (US), Maxime Chudeau (FR), Ina Conradi (US/SG), Daniel Denzer (AT/DE), Nikita Diakur (DE), Anna Engelhardt (RU/UK), Siegfried A. Fruhauf (AT), Jieyuan Huang (CN/AT/DE), Bassam Issa (IE), Ayoung Kim (KR), Junha Kim (KR), Claudia Larcher (AT), Miwa Matreyek (US/CA), Rebecca Merlic (HR/DE/AT), Anna Mutschlechner-Dean (AT), Akiko Nakayama (JP), Simone C Niquille (CH/NL), Marius Oelsch (AT), Operator (US/DE), Sahej Rahal (IN), Theresa Reiwer (DE), Dorian Rigal Minuit (FR), Laen Sanches (FR), Ryotaro Sato (JP), Herwig Scherabon (AT/DE), Ruini Shi (CN), Antanas Skučas (LT), Natasha Tontey (ID), Wang & Söderström (SE), Rita Weiss (AT), Sven Windzus (DE), Alessa Wolfram (AT), Julius Zubavičius (LT)

ELECTRONIC THEATRE

The *Electronic Theatre* is the annual best-of program, a compilation of outstanding animations chosen by the Prix jury from the submitted works in the “New Animation Art” category. Combining fantasy, erotica and body horror, *IT’S DANGEROUS TO GO ALONE! TAKE THIS* follows an ambiguous hero undergoing numerous metamorphoses beyond conventional masculinities of game avatars. In *Delivery Dancer’s Sphere*, another hero, a female platform delivery driver, rushes with the speed of light through a labyrinth of endless paths, sliding into a parallel time and space. *GLITCHBODIES* uses video game aesthetics to introduce us to a mesmerizing group of charac-

ters with diverse bodies and minds. With images filmed in 2019 during the fire of Notre Dame, *Le Mal des Ardents* reconstructs the scene through photogrammetry and sound work, highlighting the behavior of the crowd. Through a series of AI-generated images of ocean creatures, *PLSTC* confronts the viewer with our devastating influence on marine life. *Lebensraum* also addresses contemporary problems, such as overpopulation, the destruction of living space and the steady rise in sea levels, but with a humorous approach. Similarly, *FuneralPlay* speculates on a future in which users can choose between erasing their electronic footprint after death or uploading it to virtual heaven, published on blockchain.



PLSTC © Laen Sanches

Delivery Dancer’s Sphere, Ayoung Kim (KR)

IT’S DANGEROUS TO GO ALONE! TAKE THIS, Bassam Issa (IE)

GLITCHBODIES, Rebecca Merlic (HR/DE/AT)

Le Mal des Ardents, Alice Brygo (FR)

PLSTC, Laen Sanches (FR)

Lebensraum, Sven Windzus (DE)

FuneralPlay, Ruini Shi (CN)

AI & HUMAN

Is there a therapy for AIs helping them to emancipate from discriminatory algorithms? Can a computer-generated avatar learn to do a proper backflip? What happens if humans and AIs are

equal partners in the creative process? How do you prepare yourself for the synthetic future awaiting you? *AI & Human* is a unique showcase approaching topical disputes of our time, from data ownership and ethics of data harvesting, to authorship in the age of AI, love in time of crypto, deepfakes and image credibility.



Decoding Bias Roleplay Recap © David Egge

Soft Evidence, Operator (US)

Decoding Bias, Theresa Reiwer (DE)

Planets and Robots, Antanas Skučas (LT), Julius Zubavičius (LT)

BACKFLIP, Nikita Diakur (DE)

LoveCounter, Ruini Shi (CN)

DATA, BODIES, SPACE

Data, Bodies, Space is an intriguing mix of different animation art practices, dealing with the “glitches” of our digitality-virtuality-reality condition. From nightmarish dystopian future scenarios to speculative more-than-human ecologies, you will be transported into a sensuous imaginary cyberspace, filled with avatars, hybrid beings,

ambiguous heroes, data bodies and networked selves.

IT'S DANGEROUS TO GO ALONE! TAKE THIS, Bassam Issa (IE)

The Needlecast Rhapsody, Jonathan Armour (IE)

Rehousing Technosphere, Wang & Söderström (SE)

La Limite est une facade, Dorian Rigal Minuit (FR)

CIRCVS MAXIMVS, Maxime Chudeau (FR)

The Posthuman Hospital, Junha Kim (KR)

My Mind As/Is Your Memory, My Body As/Is Your Substance, Jieyuan Huang (CN)

Interchange, Ryotaro Sato (JP)

Moirai – Thread of Life, Ina Conradi (US/SG) and Mark Chavez (US)



IT'S DANGEROUS TO GO ALONE TAKE THIS! © Bassam Issa

AUSTRIAN PANORAMA

Austrian Panorama highlights recent animation works of local artists. The selected shorts offer a meditative-poetic, inquisitive, and sometimes even humorous glimpse at more than human worlds, in which the organic and the digital are inseparably intertwined. Nature is neither pure, nor standing as a graspable whole in front of our

gaze. It is rather fragmented and densely filled with infinitesimal details which reach beyond human perception. Animation becomes a tool for staging different perceptual calibrations, zooming between different proximities exceeding the human gaze, and redefining notions of physicality and abstraction, natural and synthetic.

Cave Painting, Siegfried A. Fruhauf (AT)

Internet Gaga, Reinhold Bidner (AT)

The Great Tree Piece, Claudia Larcher (AT)

Shroomsday, Rita Weiss (AT), Alessa Wolfram (AT), Daniel Denzer (AT/DE) & Marius Oelsch (AT)

Nor Really Now Not Anymore, Herwig Scherabon (AT/DE)

Flow Until Overflow, Anna Mutschlechner-Dean (AT)



Nor Really Now Not Anymore © Herwig Scherabon

YOUNG ANIMATIONS

A collaboration between Ars Electronica and OeAD, curated by Sirikit Amann (AT)

Like every year, the work of talented filmmakers up to the age of 19 is celebrated in the category Young Animations. The program is a selection of short films created by young artists across

Austria, who have submitted their projects to the Prix Ars Electronica 2023 in the u19—create your world category.

Mehr Meer

Tides of March, Neo Klinger (AT)

Unterwasserwelt, Sara Wanzenböck (AT)

PING DOWN, pupils of ORG Henriettenplatz / Media High School (AT)

Gemeinsam für ein sauberes Meer, pupils of Mittelschule St. Peter am Wimberg (AT)

Inflation, pupils of HLF Krems (AT)

Only the strong survive

Torten-Desaster, pupils of HLF Krems (AT)

Ratchet, pupils of BG / BRG Laa an der Thaya (AT)

Mr & Mrs Strode, pupils of ORG Henriettenplatz / Media High School (AT)

Der Käfig der Probleme, pupils of ORG Henriettenplatz / Media High School (AT)

Stop! No way

HUE, Rebecca Heindl (AT), Ronja Hoffert (AT), Jasmin Korkmaz (AT), Nathalie Zalewski (AT)

Overflow – An animated short movie, Tobias Senger (AT), Lennard Reindl (AT)

Overloaded, Fabienne Andrianaivo (AT), Katharina Rohr (AT), Verena Scheibelhofer (AT)

MARIMBA, pupils of BG&BRG Laa/Thaya (AT)

Sweet Dreams?

Dance Monkey, pupils of Gymnasium Bad Leonfelden (AT) and Motomachi Highschool Hiroshima (JP)

Raven Love, pupils of BORG Mistelbach (AT)

Ein halber Cent (oder die totale Destruktion des Ungewissen), für einen Blick auf das Chaos am Silver Screen, Marco Barthofer (AT)



DanceMonkey © Gymnasium Bad Leonfelden, Motomachi Highschool Hiroshima

TRANSMEDIALE GUEST PROGRAM

A collaboration between Ars Electronica and Transmediale Berlin, curated by Nora O Murchú

Transmediale Berlin presents a series of video works developed by the festival's artists-in-residence during their residencies. The films examine the legacy of technocolonial violence, narratives of folklore, urban legends, and science fiction, and the blurred lines between reality and digital worlds. *Onset* depicts a demon's exploration of synthetic environments created from satellite images of military bases. *The Epoch of Mapalucene* delves into the Minahasa worldview, blending ancient spiritual beliefs with capitalist ideas through the lens of digital culture. *duckrabbit.tv* follows the journey of a curious and confused character navigating a 3D composite world, questioning the boundaries of reality. In *finalforest.exe* a shamanistic figure interacts with a sentient AI program in an unfolding cybernetic ritual that intertwines folklore, urban legends, and science fiction.

Onset, Anna Engelhardt (RU/UK)
The Epoch of Mapalucene, Natasha Tontey (ID)
duckrabbit.tv, Simone C Niquille (CH/NL)
finalforest.exe, Sahej Rahal (IN)



The Epoch of Mapalucene ©Natasha Tontey

SPECIAL SCREENING GOLDEN NICA WINNER 2023

Ayoung Kim (KR)

Delivery Dancer's Sphere

The algorithm-centric, hypervigilant economy of platform labour urges delivery drivers to defy space and time to meet the demands of fastest deliveries. Ernst Mo rushes with the speed of light through a labyrinth of endlessly shifting paths in techno-futuristic Seoul. An unexpected encounter with a double self cracks her reality, and she slides to another dimension beyond algorithmic computability. A dazzling, eerie journey begins, in which various spaces and time-zones collide.



Delivery Dancer's Sphere © Ayoung Kim

MEET THE ARTIST SERIES

Miwa Matreyek (US/CA)

Miwa Matreyek (Golden Nica Winner 2020) will be presenting a shortened documentation video of her 2020 performance work, *Infinitely Yours*. She creates live performances integrating her kaleidoscopic animations with her body in shadow from behind the screen. With *Infinitely Yours*, Matreyek takes moments from news articles about the climate crisis and performs them as first-hand experiences happening upon her body, such as wildfires, flooding, extractions of resources, and pollution. The shadow figure covers, flees and drowns — but also protects, discovers, and feels hope. The phantasmagorical experience centers around creating a visceral experience of shared climate grief between the creator-performer and the audience.



Infinitely Yours © Keida Mascaro

Akiko Nakayama (JP)

Akiko Nakayama will comment on the side of video excerpts from previous performances giving insight into her technique called "Alive Painting". The audience will witness her vivacious transformations of various mediums and colors and engage in a conversation about the curious relationship between painting, performance and animation art.



Alive Painting © Haruka Akagi

Rebecca Merlic (HR/DE/AT)

GLITCHBODIES (Honorary Mention Prix Ars Electronica 2023) is an interactive game and multiplatform project encompassing new forms of feminism, LGBTQ+ and Drag transformations. While playing the game, participants become part of an interactive digital space. They are invited to join a fluid journey in which they take up non-heteronormative gender positions and step into a mesmerizing loop of diverse bodies, minds and thoughts.



GLITCHBODIES © Rebecca Merlic

Expanded Animation 2023 — The Art of Performance

Juergen Hagler, Jeremiah Diephuis

Performance is a word that evokes a multitude of interpretations. In the simplest terms, performance describes the act of executing a task or function, but it also encompasses the staging and presentation of the act itself. As a form of artistic expression, such an act can be a play, a piece of music, a dance choreography, or a live animation. In contrast to animated films, performative acts are typically unique and, though they can be repeated, each differs in some way. Immediacy and unpredictability, among many other qualities, are the building blocks of performance in this context. But all animations, whether pre-recorded or live, are essentially a composition of static elements brought to life as a performative act. The eleventh edition of the Expanded Animation Symposium aims to explore and discuss the various interfaces between animation, performance and artistic expression from multiple viewpoints. This year's Expanded Animation Symposium begins with the Art and Industry panel, featuring exciting perspectives on animated shorts, virtual reality experiences, games and interactive installations from Christopher L. Salter, Immerea and Hangonit Studios. In the afternoon, Canada-based media artist Miwa Matreyek, winner of the Golden Nica in the Prix category Computer Animation in 2020, and Japanese artist Akiko Nakayama will present and discuss their works, spanning from live

drawing to merging live performance, sculpture, and animation. Helen Starr, will tackle the theoretical context in line with these artistic positions. This will be followed by a talk about counter-gaming and artistic performance in video arts from media theorist and game scholar Stephan Schwingeler. Artist collective gold extra will also offer their insights into creative processes — from metaverse experiences to digital theater. Finally, the first day will conclude with the introduction of ANIMA PLUS, a new Linz-based organization with the aim of supporting animation art and culture in Upper Austria and beyond.

The second day of the symposium continues with artist presentations, starting with the ASIFA Austria Forum featuring Pedro Harres, Fanni Fazakas, and Kris Hofmann, followed by the Prix Forum for New Animation Art. The last panel of the second day is again dedicated to the theme of the art of performance. Rebecca Merlic will introduce and discuss her works, in particular the experimental game GLITCHBODIES. Artist collective minus.eins and Lucy Hammond and Dirk Neldner, both actively involved in the EU-funded project *PlayOn! New Storytelling with Immersive Technologies*, will delve further into the possibilities of digital theater and offer insights from their current research. The third day is dedicated to the fourth edition of Synaesthetic Syntax.

Participants Expanded Animation:

ANIMA PLUS — Lisa Gierlinger (AT), Alessa Wolfram (AT) & Victoria Wolfersberger (AT) | Fanni Fazakas (HU) | gold extra — Reinhold Bidner (AT) & Sonja Prlic (AT) | hangonit studio — Vladimír Kudělka (CZ) | Pedro Harres (BR/DE) | Kris Hofmann (AT) | Immerea OG — Flavia Mazzanti (IT/BR/AT) & Manuel Bonell (IT/AT) | minus.eins — Nils Corte (DE), Nils Gallist (AT) & Roman Senkl (DE) | Miwa Matreyek (US/CA) | Rebecca Merlic (HR/DE/AT) | Akiko Nakayama (JP) | PlayON! — Lucy Hammond (UK) & Dirk Neldner (DE) | Stephan Schwingeler (DE) | Christopher L. Salter (CA/CH)

Organization:

Expanded Animation is produced as a joint collaboration by the University of Applied Sciences Upper Austria, Hagenberg Campus and the Ars Electronica Festival in cooperation with the University for the Creative Arts, Farnham, UK, and organized by Jeremiah Diephuis, Juergen Hagler, Wolfgang Hochleitner, Michael Lankes, Patrick Proier, Christoph Schaufler, Alexander Wilhelm / Upper Austria University of Applied Sciences Hagenberg Campus / Department of Digital Media, Birgitta Hosea Animation Research Centre, University for the Creative Arts, Farnham, UK and Reinhold Bidner, ASIFA Austria.

Synaesthetic Syntax IV: The Ghost vs the Machine

Birgitta Hosea, Juergen Hagler

Synesthesia is a condition in which the senses are cross-wired in a counter-intuitive feedback loop where the synesthete may hear a sound but see a color. The computer can be seen as the ultimate synesthetic machine: through digital processes, we can code inputs from all of the different senses, reduce them to binary data and cross-wire them. Synesthetic Syntax is an annual symposium that forms part of the Expanded Animation events at Ars Electronica and examines the role of the sensory in expanded animation processes of both production and reception. In this, our fourth symposium at the critical juncture of embodied, sensual perception and the processes and technologies of expanded animation, we turn our attention to kinesthetic and physical presence.

Our human senses of proprioception (detecting our own position in space) and the vestibular system (detecting gravity, movement, and balance) allow us to map our surroundings, navigate through space and detect the proximity of others. In an age in which our city streets have become a film studio with our every movement tracked by surveillance cameras and our every thought, memory or social interaction mediated through the camera, GPS, microphone and motion sensors of our smart devices, what does it mean to have a body? In what ways can expanded animation explore the physical presence of the live human body in motion, and what is the role of technology in relation to this?

Participants Synaesthetic Syntax:

Camille Baker (UK) | Ghislaine Boddington (UK) | Louis-Philippe Demers (CA/QA) | Johannes DeYoung (US) | Juergen Hagler (AT) | Max Hattler (DE/HK) | Birgitta Hosea (SE/UK) | Friedrich Kirschner (DE) | Ramesh Nath Krishnasamy (DK) | Julian Salhofer (AT) | Tomo Sone (JP) | Lana Tankosa Nikolic (DK) | Varvara & Mar Creative Studio — Varvara Guljajeva (EE/HK) & Mar Canet Sola (ES/EE) | Leoni Voegelin (DE) | Bill Vorn (CA) | Darren Woodland (US)

This year's presenters will showcase cutting-edge projects in dance with augmented reality and exoskeletons, mocap, digital puppets, procedural animation, haptic VR, gaze tracking and AI-driven experiences, and much more. Issues covered will include liveness, improvisation, participation, spontaneity, unpredictability, presence and agency. Our Keynote speaker is Ghislaine Boddington from body>data>space, a curator, presenter and researcher, known for her pioneering work placing the body as the interface for digital technologies and exploring telepresence, digital intimacy and virtual physical blending since the early 1990s. Her research-led practice, expert direction and curations include Robots and Avatars (EU/Nesta 2009 — 11), me and my shadow (National Theatre 2012), Nesta's FutureFest (2015 — 18) and the recent exhibition/symposium Extended Sense and Embodying Technologies (UoG/UCA September 2022). In 2017 Ghislaine was awarded the esteemed IX Immersion Experience International Visionary Pioneer Award for her long-term work on collective embodiment within digital immersion. She is an expert presenter for BBC World Service Digital Planet weekly radio show/podcast, a member of the DCMS College of Experts and a Trustee for Stemettes Futures.

The symposium is jointly organized by Dr. Juergen Hagler, Ars Electronica, University of Applied Sciences Upper Austria, Hagenberg, and Professor Dr. Birgitta Hosea, Animation Research Centre, University for the Creative Arts, Farnham, UK.

<https://expandedanimation.com/>

DEEP SPACE 8K

The Ars Electronica Center offers its visitors a unique experience to be found nowhere else in the world: the 8K-projection across a wall and floor each measuring 16 x 9 meters, laser tracking and 3D stereo capabilities make the Deep Space 8K a truly exceptional experience. These specifications present a challenging infrastructure and an artistic terra incognita to media artists as they adapt existing works or design custom-made installations for this space. The position of visitors amidst the projection surface and their participation requires well-thought-out aesthetic compositions and concepts for the resulting dynamics.

However, not only artists appreciate the unique concept of Deep Space 8K. The 3D experience

space offers a variety of possibilities that excite educators and students alike. Exciting stories and immersive experiences, combined with impressive image quality and color brilliance, allow for the unprecedented impartation of knowledge on a wide range of topics. Deep Space 8K offers almost limitless application possibilities, from "Virtual Anatomy" where real radiology data (MRI and CRT images) can be displayed to allow three-dimensional layer-by-layer examination of the human body, to "Welcome to Planet B", a 3D planning game where group decisions regarding environmental issues can be made and their effects on the planet vividly displayed.

Opening Deep Space EVOLUTION © vogi.photo

Yuma Yanagisawa (JP)

AI Flowers

AI Flowers is the artist's ongoing generative sculpture project beginning in 2020. It explores vibrant colors and fluid movements inspired by nature, using AI-generated imagery and motion simulation. By hand-picking pictures of flowers, a custom dataset was created for a machine-learning model. As a result, it generates surreal flowers and repurposes them with fluid particles, creating a generative sculpture. The work depicts the beauty of nature generated by a set of algorithms, representing our connection to the natural world in the age of artificial intelligence. In addition, the work

lets viewers reflect on critical questions in such an age that encompasses collective creativity and ownership.



© Yuma Yanagisawa

Razieh Kooshki (IR), Vahid Qaderi (IR)

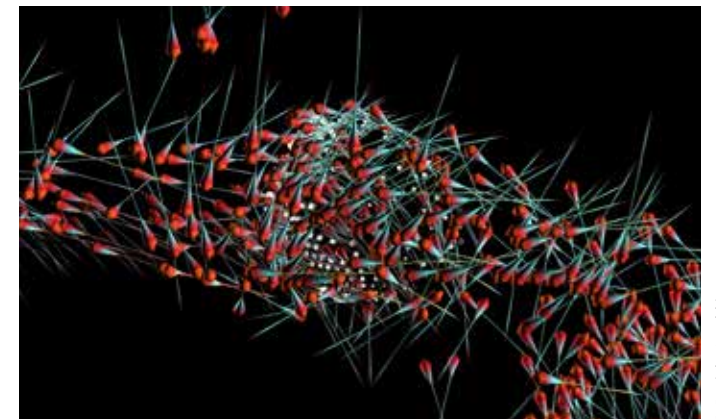
Striate Cortex

This project is an immersive audio-visual performance created by Vahid Qaderi and Razieh Kooshki, exploring the potential of real-time, 3D stereoscopic visualization and experimental electronic music within the context of live audio-visual performances. This experience will be presented at the Deep Space 8K, Ars Electronica Festival

2023, where the artists seek to expand their research and artistic practices by embracing cutting-edge technologies and pushing the boundaries of creative expression at the intersection of art and technology. This performance offers an immersive experience for the audience, allowing them to explore experimental music through stereoscopic real-time visualizations and establish meaningful connections between

abstract visualization and digital sound. Through this shared experience, viewers are transported on a journey that goes beyond traditional artistic boundaries, fostering a sense of deep immersion and connection.

Music and technical artist: Vahid Qaderi
Visualization and technical artist: Razieh Kooshki



© Razieh Kooshki

Olga Sevillano Pintado (ES), Raúl Martínez Arranz (ES)

A Portrait of the Artist as a Young Man (and as a Young Woman Too)

Gigapixel Images of Museo Reina Sofia

With the use of Gigapixel Technology, two important works from the Museo Reina Sofia collection *Woman in Blue* (1901) by Pablo Picasso and *A World* (1929) by Ángeles Santos will be analyzed. Shown will be also a video/presentation that studies the cultural context in which these two young artists under twenty years of age produced these masterpieces and the subsequent fortune of their authors, whose trajectories could not be more disparate and in which gender issues played a fundamental role.

This presentation as part of the 2023 Festival was realized with the support of the Spanish Embassy in Vienna.

Curator of painting and drawing until 1939:
Raúl Martínez Arranz / Head of Digital
Projects: Olga Sevillano Pintado
Acknowledgements: Mabel Tapia,
Alicia Pinteño, Belén Benito



© Ángeles Santos, VEGAP, Madrid, 2023



© Sucesión Pablo Picasso, VEGAP, Madrid, 2023

Gerald Peter (AT)

Visionary Music

With Instrument Reactive Visualizations

Core Research Question/Topic of the Work: The core research question of this project is how to develop and design visual musical instruments that go beyond traditional instruments by incorporating visual light components. The goal is to impressively visualize the nuances and facets of the musical performance through synchronized visuals. The intention is to create a complete picture where the artistic expression of the musicians' performance merges with the visual level. This project operates within an interdisciplinary framework that encompasses original music, visual art, composition, technology and media informatics. It seeks to achieve a fusion of sound and light, as well as sound and image, to create an audiovisual total work of art. By exploring

the relationship between music and visuals, it engages with the evolving landscape of multi-media art forms.

All music, visuals and performance created by Gerald Peter



© Philipp Hirtenlehner, Andreas Purzelmaier, Andreas Rathhammer, Gerald Peter

Project Humanity (JP)

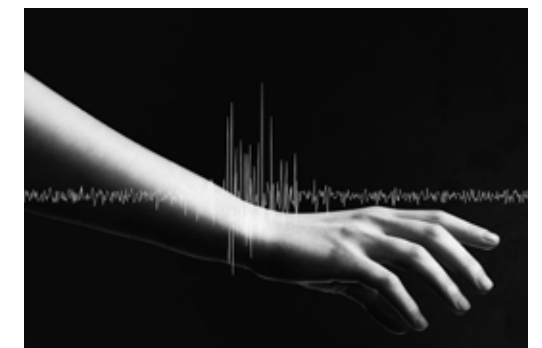
Project Humanity

All players welcome, the world meets unexplored possibilities

Project Humanity is an R&D project that explores human's own potential from undiscovered perspectives. For the first project, we developed two systems for people with ALS: a speech synthesis system making their own voices again from very few past voices in the reminded video recordings and music tools optimized for gaze input. MASA had live performances by these systems in 2022. In this program we will present our new project that aims to restore physical freedom to people with ALS in a completely new approach. While people with ALS have limited ability to move, electromyography signals can be detected when they try to move their bodies. Using these signals as an input, we are exploring the possibilities of liberating their motion in a digital self. This digital body can move as they want in a virtual world,

but can also step into the physical world, blurring the border of virtual and real, abled and disabled. Immerse yourself in a new mixed reality musical performance.

WITH ALS (Japan) Dentsu Lab Tokyo (Japan)



© Dentsu Lab Tokyo

Venice Revealed

An exhibition produced by Grand Palais Immersif and Iconem in collaboration with the Fondazione Musei Civici di Venezia

What city enjoys such universal celebrity as Venice, an unparalleled unicum of history, art and tradition? At the origins of its magic, sixteen centuries ago, lay a unique relationship with the waters of the lagoon, the use of innovative and experimental technologies, the courage to imagine a city of stone on a surface of water and mud, the wisdom of an urban planning that perpetually listens to the flow of the tides. The exhibition *Venice Revealed* aims to help visitors discover and experience the mystery of this city in a new way. Using images that offer totally unprecedented points of view, it invites you to fly over the city's districts, it brings you close to the details of the paintings invisible to the naked eye, it even allows you to cross the walls of the palaces.

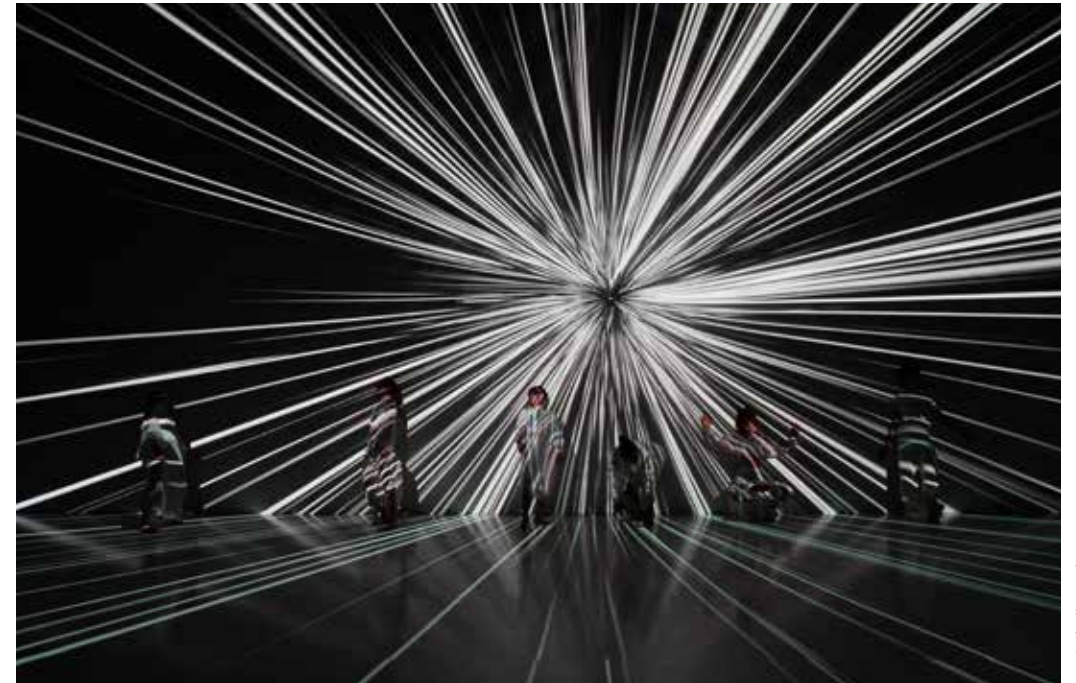
The exhibition itinerary takes the visitor through

emblematic places such as the lagoon, the Grand Canal, Piazza San Marco and the Doge's Palace. Venice reveals the secrets of its past, but also tells us about its future, a city that is constantly facing new challenges in the field of innovation and environmental sustainability. This presentation as part of the 2023 Festival was realized with the support of the French Embassy in Vienna and the Italian Embassy in Vienna.

Chief curator: Gabriella Belli, with the collaboration of Elena Marchetti, Curator, Fondazione Musei Civici di Venezia. / Associate curator: Yves Ubelmann / Music: David Chalmin / Set design: Agence Clémence Farrell / Graphics: Bénédicte Rolland / Lighting design: Aura studio / Audio-visual production: ICONEM / Imaginary Venise Atlantide: Elisabeth Jonniaux and Yves Ubelmann / Assassin's Creed space: Ubisoft



© Grand Palais Immersif and Iconem, in collaboration with the Fondazione Musei Civici di Venezia



© Friederike Weber

Erick Aguirre (MX), Kevin Blackistone (US), Jiaji Cheng (CN), Danica Golić (RS), Kathrine Hardman (US), Eunji Ji (KR), Polina Kliuchnikova (RU), Kateryna Pomeichuk (UA)

Homodyne

The performance is a result of a collaborative and experimental encounter between transdisciplinary artists (APBU — Dance Institute, University of Arts Linz — Interface Cultures) and scientists from the Institute of Quantum Optics and Quantum Information. *Homodyne* showcases a multitude of diffracted artistic interpretations of the key research questions within the field of quantum physics and philosophy — from quantum entanglement and quantum gravity, space-time and the motion of molecules — to chaos, superposition and Ancient Chinese Ontology. The visual designs use VVVV to merge concepts of quantum systems (particle motion, uncertainty and oscillation) with the movements of the

performers, while reacting to a soundtrack that explores the same ideas, incorporating oscillation data provided by the QISS lab, Vienna.

Dance and Movement: Erick Aguirre, Jiaji Cheng, Danica Golic, Eunji Ji, Polina Kliuchnikova, Kateryna Pomeichuk
Visual Design and Music Composition: Kevin Blackistone
Live Composition (3rd Movement) and Triggered Audio: Kathrine Hardman
Costumes: Julia Moser
Acknowledgment for participation and input in the creative process: Maria Dierneder, Jürgen Ropp, Prof. Dr. Christodoulou Marios (QISS Vienna)
Workshop curators: Smirna Kulenović (BA), Damián Cortes Alberti (AR)
Technical support: Otto Naderer (AT)

Jörg Menche (DE), Sebastian Pirch (AT), Norbert Unfug (AT), Felix Müller (DE),
Christiane V. R. Hütter (AT)

Connected

How the world is more than the sum of its parts

The project *Connected – how the world is more than the sum of its parts* unveils the multifaceted nature of the Earth's systems, unraveling a system's underlying structural principles, from natural phenomena to human creations. Through a transformative journey, visitors are invited in a captivating exploration of the Earth's diverse biomes, guided by the perspective of three avatars: a fox exploring solid land, a turtle diving through open water and a bird discovering the seemingly endless sky. Through the avatar's eyes visitors experience macro to micro systems, from animal swarms, networks of flora, sprawling infrastructures, to the vast expanse of the world wide web and the human organism itself as a complex network of biomolecular interactions. In a synergistic fusion of scientific inquiry and artistic expression, *Connected* invites the audience to embrace the beauty of Earth's interconnected

fabric, aiming to foster understanding of the intricacies that govern our world.

The project *Connected* is co-funded by the Creative Europe Programme of the European Union through the More-than-Planet project. It is an endeavor of artists and scientists of the Menchelab, a research group led by Prof. Dr. Jörg Menche at the Max Perutz Labs, University of Vienna located at the Vienna BioCenter.



© Menchelab

Dietmar Hager (AT)

Near or far? Do we see what we see?

Who doesn't know them by now: the aging Hubble Space Telescope (HST), the state-of-the-art JWST – James Webb Space Telescope and other, earthbound telescopes. They all give us glimpses into the depths of space. From Earth, astro-photographers painstakingly create photos of distant galaxies over hours, days and weeks of work, bringing them into people's living rooms. Astro-photographers build a bridge over countless light years to regions of the universe whose distance we usually cannot even imagine. We see images that often leave us wondering: Is the object shown near or far? Or is everything just far away anyway and what difference does it make if there are a few million light years more or less in between? Or is what we see there just a construct

of our human technology and our own imagination? Reality is what our brain makes of what we see, and sometimes this reality lies outside what we call thinking.



© Dietmar Hager

Alejandro Vergara (ES), Javier Pantoja Ferrari (ES)

Goya's Truth

Gigapixel Images of Museo Nacional del Prado

Goya's art offers a panorama as broad as life itself. Born in 1746, he was trained in the academic tradition, which was heir to the art of Antiquity and the Renaissance. He learned to master the language of painting as defined by over three centuries of practice. He became familiar with this through his training in Madrid and Rome and through his intimate knowledge of the Spanish

Royal Collect possibilities of the medium of oil paint and its beauty, and about the strong idealist tendency that defined European art of the time. But Goya's interpretation of tradition soon proved idiosyncratic, however. Awkward rendering of anatomy and a very personal interpretation of conventional subjects were his way of showing a world full of tensions. Throughout his career, and increasingly as he approached his death in 1828, Goya points our gazes toward situations of inequality and different kinds of violence, explicit or

implicit. He does so in a highly personal manner, as if unveiling a reality that we are left to interpret. This is Goya's truth.

This presentation as part of the 2023 Festival was realized with the support of the Spanish Embassy in Vienna.

© Museo Nacional del Prado



© Museo Nacional del Prado

Patrick Dykstra (US), Wolfgang Knöpfler (AT)

Patrick and the Whale



© Terra Mater Studios

For years, Patrick Dykstra has dedicated his life to traveling the globe, following and diving with whales. Over the years, Patrick has learned how whales see and hear, how they perceive other creatures in the water and how they behave at close quarters. This allows him to consistently

get closer than anyone else alive — a truly unique skill. In *Patrick and the Whale*, we follow Patrick as he travels to Dominica again to find a special whale he named “Dolores” so she can help him show us the hidden world of her species. The film follows his personal journey and explores the psychology of a man who has sacrificed everything in his single-minded quest to connect with and understand one of the largest creatures in the ocean.

Director and Editor: Mark Fletcher / Producers: Walter Köhler, Wolfgang Knöpfler / Composers: H. Scott Salinas, Matthew Atticus Berger / Underwater Photographers: Gail Jenkinson, Patrick Dykstra, Romain Barats / Executive Producers: James Reed, Alexander Nanau, Dinah Czezik-Müller, Michael Frenschkowski / Colorist: Lee Niederkofler Sound Designer: Bernhard Zorzi / Re-Recording Mixer: Michael Plöderl / Title song: “Nostalgia” by Alice Phoebe Lou, Copyright © 2023 Terra Mater Studios GmbH

Franz Fischnaller (IT)

LAST SUPPER INTERACTIVE (LSI)



© Ars Electronica Magdalena Sick-Leitner

LAST SUPPER INTERACTIVE (LSI) is an 8K/3D stereo VR immersive interactive storytelling articulated in eight scenes, based on Leonardo da Vinci's masterpiece: *The Last Supper*, (Italian: *L'Ultima Cena*) an icon of Italian Renaissance art. *LSI* draws visitors in and between, inside and behind the painting, while also transporting them into the historical context, the architectural

complex of the Dominican Monastery of Santa Maria delle Grazie and inside the north wall of The Refectory where Leonardo created the masterpiece between 1494 and 1498 for his patron Ludovico Sforza, Duke of Milan.

Author: Franz Fischnaller

Prof. Paola Salvi, renowned scholar on Leonardo da Vinci, Academy of Fine Arts of Brera, Department of Visual Arts, Milan, Italy

Ultra-high definition image of the Last Supper of Leonardo da Vinci © Haltadefinizione® Image Bank by concession of Ministero della cultura - Direzione Regionale Musei Lombardia; Prof. Gabriele Guidi, PhD. Indiana University, IN, USA, Department of Informatics - Virtual World Heritage Lab; Laura Micoli, PhD, Umair Shafqat Malik, PhD. Politecnico di Milano, Italy. Department of Mechanics - Computer Vision and Reverse Engineering Lab; Univ Rennes, INSA Rennes, Inria, CNRS, IRISA, France; Mathieu Godineau; DIAC; Music & Sound: Steve Bryson, Alfredo Miti, Nadia Djabella.

This presentation as part of the 2023 Festival was realized with the support of the Italian Embassy in Vienna.

Mauro Martino (IT)

Mapping the NFTs Revolution and the preview of Milan, Factory of the Future



© Luca Marenza

Generative artificial intelligence allows artists to create narratives that escape the confines of traditional structures, giving rise to a new kind of storytelling, in which the creative process is characterized by continuous transformation.

Mauro Martino is an Italian scientist and artist who focuses on information technology. He uses AI to explore and enhance understanding of the world, transforming any type of information, whether it is visual, acoustic, or semantic, into interactive tools that are beautiful and simple to use. During the talk Mauro Martino will show his

creative process based on using generative AI to create videos from texts, allowing viewers to immerse themselves in two of his latest works: *Mapping the NFTs Revolution* and the preview of *Milan, Factory of the Future*. These narratives are inherently dynamic, emerging from a collage of texts, poems, interviews, plays, often characterized by a dreamlike, surreal and futuristic quality, inviting the viewer to immerse themselves in a world created by the encounter between language and image.

Curator of ARS ELECTRONICA GARDEN Milan: Maria Grazia Mattei, Founder and President MEET / Artist: Mauro Martino — Founder of the Visual AI Lab — IBM Research — In collaboration with: Andrea Baronchelli (Scientific Coordination), Luca Stornaiuolo (Generative AI) e Philip Abussi (Sound Artist — Music Production Company: Mokamusic) / Partner: SEA Aeroporti Milano / *Milan, Factory of the Future* is presented in collaboration with SEA Aeroporti Milano, as part of *Nice to meet you*, a project of SEA, curated by the MEET Center, that has promoted digital art since 2019. / In collaboration with YES Milano. / Project supported by the Italian Council (2023), Directorate General for Contemporary Creativity, Italian Ministry of Culture

David Szauder (HU)

Tango in Wonderland



© David Szauder

This dance involves artificial intelligence to create a dynamic, ever-changing environment within a closed space, generating unexpected

social situations, pushing individuals out of their comfort zones and potentially challenging their preconceptions and biases. In *Tango in Wonderland* I am looking for the connection between technology, in this case artificial intelligence, and socially sensitive topics, social sensitivity. Artificial Intelligence as an imaging approach is slowly becoming accessible to everyone; indeed, we could say that this slice of technology is present in our everyday lives. The key question is whether we can structure this technology in such a way that it conceptually serves certain sensitive topics.

Created by David Szauder

Michael Najjar (DE)

cool earth

The *cool earth* body of work deals with our planetary future in times of climate change and the role of new climate technologies. In the Anthropocene era humans have become the major transformative force in the Earth system which is fast approaching its breaking point. To counteract the encroaching climate emergency and the existential threat to our planet's ecosystem, scientists are increasingly weighing up the possibilities of large-scale technical interventions in the Earth's natural systems, so-called climate engineering. The series explores the far-reaching ecological, economic and cultural impacts of human-induced climate change which are leading to a redefinition of the relationship between humans and nature.

cool earth spans the arc from an impending dystopian future — which has already arrived in our present — to a technology-based, decarbonized, post-fossil world.



© Michael Najjar

Rebecca Merlic (HR/DE/AT)

Tulpenmania / Domum

Leveraging Body Data to create a new way of Digi verse

The *Tulpenmania/Domum* live gaming performance is a journey into the digital worlds and soundscapes created by Rebecca Merlic and sound artist Manuel Riegler, featuring a prototype game about digital identities that exist in a future after the point of no return. Throughout the performance the audience is taken on a journey, exploring the possibilities of body data implementation and its influences on our collective body, while confronting questions on how digital transformation affects physical reality. By combining sound production with live gaming, it evokes a ship voyage of exploring the Dutch countryside of tulips, feathered and flamed by benign viruses, as relics of a past time, once planted by human bodies, corrupted swamps, invading floods and the rural Japanese landscape of Domum. Rebecca Merlic explores the possibilities of body data implementation to create reimagined digital nature, fog and rising sea levels influenced by her real time data.

Programming: Vivien Schreiber, Oliver Rudoll / Sound design: Manuel Riegler / Special thanks to Martina Menegon for contributing body data. / V2-Lab for unstable media / Realities in Transition residencies 2023. Realities in Transition is co-funded by the European Union. This project aims to explore and support "alternative" XR creation and to experiment and promote new narratives and creative processes. / Realities in Transition consists of Seconde Nature (FR), L.E.V. (ES), KONTEJNER (HR), Ars Electronica (AT), Dark Euphoria (FR), V2-Lab (NL) and iMal (BE). / *Domum* was commissioned by the Austrian Cultural Forum Tokyo in collaboration with Studio Kura in Itoshima.



© Rebecca Merlic

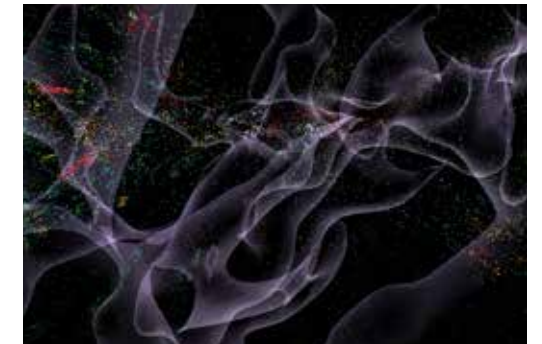
Dan Tell (US)

The Quest for Cosmic Truth

Since ancient times humans have observed the world around us and sought to understand our place in the larger Cosmos. Observers, philosophers, mathematicians and scientists have sought to model our universe to understand it. Each time a model was adopted, it stood as accepted truth—until a new discovery shattered that truth. As human ability to explore and discover has expanded beyond the limits of our senses we have discovered a universe that is greater and stranger than our ancestors ever imagined. Plumbing its smallest building blocks and origins, we also discover it is built on a foundation of uncertainty and instability. The last century has brought unprecedented discoveries and changes to our models of the universe, but also exposed new mysteries we know we cannot

yet solve. We must ask ourselves if the deepest truths of our cosmos are even knowable at all. In short, *The Quest for Cosmic Truth*.

Dan Tell, California Academy of Sciences
Particle design by Particle Zoo, www.particlezoo.net



© DanTell

(Hexagram Network) ALMA / Marc-André Cossette (CA), Alexandre Saunier (FR)

The Shape of Things

Fragments: The Shape of Things is an audiovisual performance in which two human performers act live on AI and A-Life algorithms to generate and modulate a poetic immersive experience. The work, composed of three acts, reflects on how data processing AI systems anonymize and aestheticize both global conflicts and everyday relationships. The piece uses the concept of fragments, small elements transformed and reconfigured, to explore technologically mediated human connections, perceptions, and memories. These fragments consist of sounds, videos and photogrammetric objects scavenged from the news, created by the artists, or generated by algorithms. During the performance, those fragments are analyzed and modulated live by a set of Markov chains and Spiking Neural Networks.

In front of the audience, the artists orchestrate the actions of those algorithms and guide the public on a journey that transitions from darkness and absence into a torrent of sonic and visual stimuli.

ALMA (Alexandre Saunier and Marc-André Cossette)



© ALMA

ARS ELECTRONICA GARDEN MONTREAL

Xn Québec

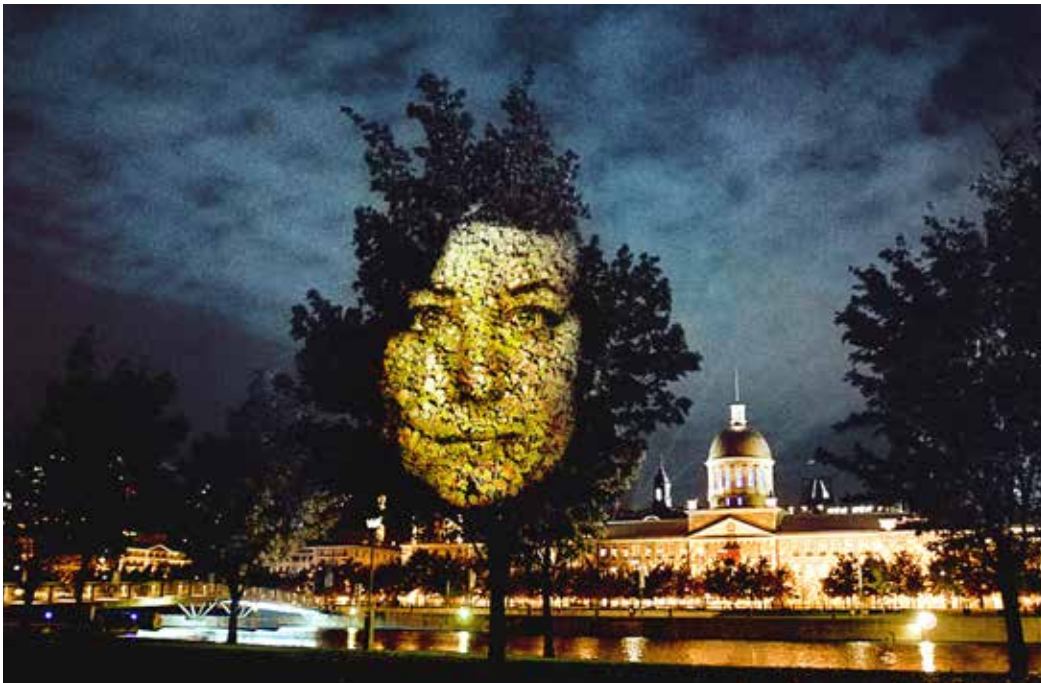
Michel Lemieux (CA), Victor Pilon (CA)

Cité Mémoire Montréal

Since 2016, *Cité Mémoire Montréal*, the longest narrative pathway of immersive experiences and projections in the world, comes alive every evening in Montreal. Projected all over the city, the work appears on the very walls that surround us, the ground on which we walk, the trees that frame our present. Poetic, dreamlike and occasionally

playful, the tableaux cover a range of milestones in Montréal's history, significant characters and local slices of life.

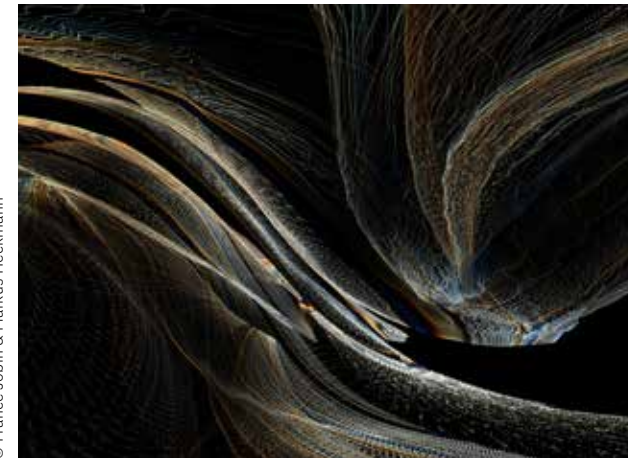
A creation of 4D ART (Michel Lemieux and Victor Pilon) in collaboration with Michel Marc Bouchard. A production of Montréal en Histoires. Visual post-production by Normal Studio.



© Jean-François Gratton

France Jobin (CA), Markus Heckmann (CA/DE)

Entanglement



© France Jobin & Markus Heckmann

Entanglement distills quantum physics into a swooping sensorial experience. It illustrates the concept of entanglement, an uncanny scientific phenomenon-defying explanation. The piece oscillates between four theories: the fluidity of time, multiverse, Copenhagen interpretation and decoherence. These complex notions are filtered into audiovisual radiant tableaux guided by science, technology and the sensitivity needed to illustrate what cannot be visualized.

Part of MUTEK's Immersive Collection

Line Katcho (CA)

Immortelle



© Line Katcho

Immortelle is an atmospheric and figurative work illustrating the flights and falls of psychological endurance. Featuring a cathartic flux of sonic and visual fragments, this unpredictable piece opens a door onto how a mind in internal turmoil redefines the outside world. *Immortelle* evokes how visceral perceptions of our environment mirror our own transformations, showing both the softer and fiery sides of a fighter spirit.

Part of MUTEK's Immersive Collection

VH AWARD

The 5th VH AWARD

Initiated by Hyundai Motor Group in 2016, the VH AWARD is Asia's leading award platform dedicated to discovering and supporting emerging media artists who are engaged with the context of Asia and its future. Over the past years, VH AWARD has cultivated the growth of media artists

by providing opportunities to share their artistic experiments through the Eyebeam online residency and to showcase their works across various global art platforms.

Presentation supported by Hyundai Motor Group.

Subash Thebe Limbu (Nepalese Limbu / NP)

Ladhamba Tayem; Future Continuous



© Subash Thebe Limbu

Ladhamba Tayem; Future Continuous envisions indigenous people across time, exploring their existence in the space-time continuum. Through a conversation between an eighteenth-century Yakthung warrior and a future indigenous astronaut or time traveller, the film invites

viewers to consider their own role in shaping the future.

It raises awareness of the ongoing struggle against colonialism while questioning the flexibility of time and how we can actively weave the tapestry of the future.

Riar Rizaldi (IDN)

Fossilis



© Riar Rizaldi

Fossilis is an oneiric cinema, a phantasmal science-fiction prognosis, an essay film and a tale of the verdant inferno of technological legacy. It explores the complexities of electronic waste in twenty-first century of Asia, where discarded electronics are dumped. Using live-action sets made from waste materials, scenes from flea markets, 3D assets, and AI-generated images, *Fossilis* engages in film production that incorporates digital and physical waste objects as artistic practice.

zzyw — Yang Wang (CN), Zhenzhen Qi (CN)

Other Spring



© zzyw

Other Spring explores the societal implications of computational mediation, automation and AI. It challenges the dominant notions of efficiency and precision in our information society by embracing “heretical computing”. Set in a speculative future controlled by the algorithmic network UNO, the project reflects on privacy, agency and individuality. It urges a humane approach to technology, encouraging dialog and emphasizing the importance of these issues in our interconnected world.

Su Hui-Yu (TW)

The Space Warriors and the Digigrave



The Space Warriors and The Digigrave revisits Taiwan's *Space Warriors*, exploring collective memory and values of nationalism, Confucianism, and chauvinism. Drawing on *Queer Time*, it challenges traditional views, advocating anti-productivity and resistance against male-centric history. By integrating AI tools and film skills, it offers metaphysical and technical solutions, reconciling struggles with nationhood, identity, gender, morality and ideologies.

© Su Hui-Yu

Zike He (CN)

Random Access



Random Access explores the concept of accessing data at any address and instantly, akin to random access memory (RAM). It reflects how we process memory in the digital age. Set in Guiyang, a mountainous city hosting major data infrastructures, including Asia's first iCloud data center and the FAST telescope, the film speculates on the experience of the cloud world. The story unfolds after the city's central data center crashes and reboots, following a fictional narrative of the second day.

© Zike He

University of Arts Linz, Time-Based and Interactive Media Arts Department

INTERPLAYFUL SENSORIC ENVIRONMENTS

Paul Klusacek (AT)

MeatLove



© Paul Klusacek

Our consumption habits, which are the cause for factory farming, will persist for a long time and are more prevalent now than ever before. Not only does it control our daily lives, but it also contributes to animal suffering and the destruction of our environment. The installation showcases the production of canned meat through a looping animation, serving as a powerful visual representation. The cartoonish style puts a friendly facade over the heavy subject matter, which is shaken up by the chaotic interactive sound installation.

Ania Böhaker (AT)

vis



© Ania Böhaker

vis is a program for the Deep Space 8K inspired by gravitational waves. The players bend the surface beneath them. The color below them changes depending on how many players are standing next to each other and accordingly, the depth of the curvature. This is used in the game where spheres have to be collected at different depths. So, you have to work together to collect the deeper spheres that bring more points.

Johannes Bauer-Marschallinger (AT)

All you can eat



© Johannes Bauer-Marschallinger

All you can eat makes you feel the very principle of late-stage capitalism: money goes where money is. It is an interactive game for two to eight people with minimalistic design and a few simple rules. A positive feedback-loop ensures an imbalanced outcome. As such, this Deep Space 8K-installation quickly brings out feelings of superiority as well as frustration. However, by slightly changing the feedback-loop during the game, the growth potentials become more equally distributed. At the end of the game, the outcome is compared to real wealth statistics.

Simon Hehl (DE)

Facing



As you are looked at by the camera, you immediately realize that its effectively a kind of eye [...] I'm constantly thinking that I'm being watched [...] I can feel the gaze on me and that brings me a lot of satisfaction [...] You just want to have this look [...] Many people were looking at me or even staring at me when I was walking down the street [...] It's not just watching, it's participating [...] When I look at people I directly put them into boxes [...] I would like to fade in the background [...] I prefer to watch the people even as a hobby [...] How about you?

Isabel Schulz (AT)

_knowledge_and_consent_

knowledge and consent is an interactive project designed for the Deep Space 8K that focuses on the collection of personal user data on the Inter-

net. "If there is no price, you are the product." As soon as a visitor steps into the Deep Space 8K, the program collects and tracks their steps in the room, their movement activity and other collectible data and displays it on the wall for all to see. In addition, the movements of the visitors are tracked by eyes on the ground, to give that eerie feeling of being watched. In the background, visitors hear the program's "privacy policy statement": A compilation of passages from data protection declarations/terms and conditions as found in social media corporations.

Sylva Ježková (CZ)

Radiant Garden



The topic is having a relaxing, fun experience growing a glowing garden. *Radiant Garden* is an interactive projection with colorful, radiant assets

contrasting with a black background. It is inspired by the way bees view colors. Upon entering the floor projection, a randomly generated flower bud is assigned to the player. There are floating water droplets and crawling red bugs. The flower blooms when collecting water droplets and withers when caught by a bug. After blooming fully, the flower is transferred to the wall projection and the player gets a new bud. Occasionally, a doe visits the garden. There is no higher context, just getting immersed into the experience.

Sound: Jana Ježková, Unity plugin: Axel Bräuer

Holunder Heiß (AT)

Spiro



Spiro is an interactive piece for the Deep Space 8K-environment where two persons can generate unique Spirograph like patterns by meeting in the space and staying close together. The patterns need time to develop and force the connected persons to stay close for a while in order to see the result. The number of different patterns that can be generated is nearly infinite and depends on the position where the meeting happens.

Jelena Mönch (DE)

Microbial World



Ever wonder what those tiny bacteria that inhabit our world actually look like? *Microbial World* offers you the chance to explore that! By using captivating visuals of microbes, this interactive platform provides a gateway to the world of science. It brings the microbial realm to life by generating ever-changing structures in real-time, mimicking the growth of microbial life.

Jakob F. Luckeneder (AT)

Gravity Game



A deep space application that gives each user the power of gravity. After some time, the deep space gets filled with colorful objects that can be accelerated, slowed down, bounced around and even caught in an orbit around you. The application is designed to give the users a feeling for the forces of gravity in a colorful, simplified 2D cosmos.

Janik Valler (DE)

ShadowPulse



With *ShadowPulse* you have the power to manipulate pulsating black and white color gradients in the room simply by moving around. The pulsations are perfectly synchronized to their accompanying soundscape and create a new composition every time. You can explore the interplay of light, shadow and sound as you shape and shift the captivating monochromatic landscapes with every step.

Jonathan Armour (IE), Maxime Chudeau (FR), Bassam Issa (IE), Ayoung Kim (KR), Miwa Matreyek (US/CA), Rebecca Merlic (HR/DE/AT), Dorian Rigal Minuit (FR), Operator (US/DE), Theresa Reiwer (DE), Ruini Shi (CN), Antanas Skučas (LT), Julius Zubavičius (LT), Wang & Söderström (SE)

Ars Electronica Animation Festival

Projects presented at the Deep Space 8K

Ars Electronica Animation Festival is a diverse showcase that invites spectators to discover current artistic productions in the expanded field of digital animation. Besides a diverse screening program engaging new ways of thinking about how we navigate the digital-virtual-real world we live in, the event series *Meet the artist* will highlight the hybrid practice of three female artists, who will be invited to present and discuss their

projects: Akiko Nakayama (JP), Rebecca Merlic (HR/DE/AT) and Miwa Matreyek (CA/US). The program will culminate with the screening of Golden Nica Winner for New Animation Art 2023 *Delivery Dancer's Sphere*, in the presence of artist Ayoung Kim (KR).

A detailed description of the different events and screening programs of the Animation Festival can be found on pp. 326 – 337.



Further project and programs shown in the Deep Space 8K

1

Deep Sync by Susanne Kiesenhofer, Anna Oelsch, Daniel Rammer
Page No.: 404 (Ars Electronica Futurelab)

Faust VR by Salzburg Festival (AT), Ars Electronica Futurelab (AT)
Page No.: 404 (Ars Electronica Futurelab)

Data Art & Science Project by Toyota Coniq Alpha (JP), Ars Electronica Futurelab (AT)
Page No.: 410 (Ars Electronica Futurelab)

Futurelab Night Performances by Ars Electronica Futurelab (AT)
Page No.: 415 (Ars Electronica Futurelab)

2

MEET ME META by MKD – Meisterschule für Kommunikationsdesign Linz (AT)
Page No.: 154 (CREATE YOUR WORLD 2023)

3

Footprints of Ants by Ümit Güç (TR)
Page No.: 62 (EXHIBITIONS / State of the ART(ist))

4

Unleash the creative power of Quebec; a selection of art performance and XR/immersive works by Xn Québec (CA)
Page No.: 114 (EXHIBITIONS / Ars Electronica Gardens)

1



Futurelab © Ars Electronica Futurelab / Birgit Cakir

2



Meet me Meta © NC MKD 2023

3



Footprints of Ant © Necati Öz

4



© Ars Electronica Solutions / Isabel Schoelmbauer

GUEST PROJECTS

Tina Kult (DE)

TINA KULT | hosted by Ars Electronica



© Tina Kult

In cooperation with the Ars Electronica Festival 2023, Bildraum 07 presents Tina Kult. Named winner of the "Marianne.von.Willemer – Prize for Digital Media 2022", the artist's video installation *Pampa* (2021) addresses the exploitation of body and mind in a neo-liberal meritocratic society. The artist provides insights into private living spaces and shows people merely covered by a sheet, who dwell – almost ghost-like – in their chaos, that thicket of leisure, family and work life.

With the help of numerous 3D scans and a seemingly irritating soundscape by sound artist Lale Rodgarkia-Dara, Tina Kult's *Pampa* develops into a visual and acoustic montage that denies the viewer any control or orientation in the image. Only the isolated spaces remain as predictable elements in the pictorial composition, creating the illusion of an infinite, horizontally shifting space that determines the isolation of the portrayed through the multitude of individualized environments.

With chaotic dreams and endless expectations, people sit in temporary dwellings on a dying planet. The questioning of the notion of constant growth and the pressure for self-optimization became guiding principles for a series of graphic works and film scenes, presented as a work-in-progress at Bildraum 07.

A cooperation of Bildrecht and Ars Electronica Festival 2023

monochrom (AT), DH5 (AT)

monochrom's ARSE ELEKTRONIKA 2023: Sexponential

Conference on Sex and Technology



© Jasmin Hagedorfer (film still)

Technology and sexuality have long been interconnected, from ancient cave drawings to modern VR porn. Despite the common belief that tech isolates us, it's vital to remember that we are a sexual and tool-using species. We can challenge oppressive structures in sexuality by offering new avenues for self-expression and fulfilling under-represented desires. Sex tech, which encompasses sex machines, biohacking, teledildonics, AI-driven experiences, and bodies with enhanced

sexual capabilities, opens up possibilities for resistance. These concepts, often explored in sci-fi and futurism, warrant both intellectual and sensual contemplation. Artificial intimacy can aid us in understanding our desires within the context of societal evolution and potentially help us break free from constraints. Since 2007, Arse Elektronika has been exploring these ideas globally and is eager to bring these essential discourses to Linz. Anticipate talks, workshops, performances, and... well... progressive smut!

Heads of festival: Johannes Grenzfurthner, Günther Friesinger
Curatorial team: Jasmin Hagedorfer, Katsiaryna Suryna, Thomas Preindl
Host: Walter Stadler
Artists, speakers and moderation: Ania Malinowska, Sabrina Verhage, Natalia Shepeleva, Kate Devlin, Katta Spiel, Mahalia Henry-Richards, Abel Enklaar, Quill Kukla, Dan Steinberg, Dani Ploeger, Stefan Lutschinger, Hidéo Snes, Offerus Ablinger, Litto, Phillip Fussenegger, Anton Paevski, maiz, and many more.



Globallokal Composing

Kulturhauptstadt Bad Ischl Salzkammergut 2024 GmbH (AT)

Bad Ischl Salzkammergut 2024 European Capital of Culture Jour Fixe

Through the lens of arts and culture, *Bad Ischl Salzkammergut 2024* explores the region's history and present, as well as visions for the

future, by examining its relationship with Europe and the world. In the program line GLOBALLOKAL

– BUILDING THE NEW, the aim is to develop action strategies for a world of tomorrow, while addressing the tensions between generations: expanding mobility and digitalization, developing strategies to value more highly agriculture as a livelihood and nature as a resource to be preserved, as well as creating educational artistic spaces.



© TBC

Jung von Matt DONAU GmbH (AT)

No room for us

While some people think about what mobility will look like in the future, it would be more sustainable to ask what kind of mobility this future will actually require. This is illustrated by the situation in our cities. A disproportionate amount of space in urban areas is no longer dedicated to people but used to provide their tools and inventions with ideal conditions. Cars and their associated infrastructure play a significant role

in this discussion and are an ideal illustration of the value we place on technology in our world as a society and the consequences we are confronted with. This self-induced paradox provides the basis for the installation *No room for us* which was created in collaboration with Jung von Matt DONAU GmbH and Ars Electronica. Located in the central conference hall of the Ars Electronica Festival, it reveals the unequal spatial conditions under which urban coexistence occurs, but also how much new space could be created if mobility could be defined in an alternative way and live in a new way.

While some people think about what mobility will look like in the future, it would be more sustainable to ask what kind of mobility this future will actually require. This is illustrated by the situation in our cities. A disproportionate amount of space in urban areas is no longer dedicated to people but used to provide their tools and inventions with ideal conditions. Cars and their associated infrastructure play a significant role



© BIO AUSTRIA

SUSTAINABLE FOOD BIO AUSTRIA

Organic – good for us, good for the climate

Another important aspect of the festival's sustainability concept is the food supply. The festival will be supplied by small and local companies, all offering regional organic products. Many art projects are critical of the global situation of food supply and the food industry, and we as a festival want to take practical action and develop an alternative concept as an example. As in previ-

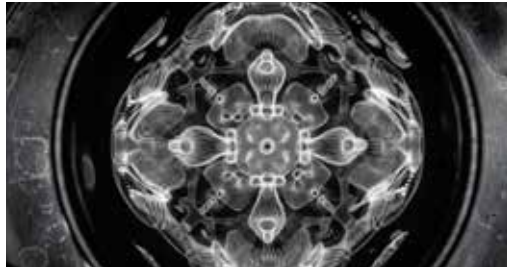
ous years, a highlight will be the organic farmers' market organized by BIO AUSTRIA on the Saturday of the festival. Regional producers offer their sustainable, home-grown delicacies - first-class food without unnecessary additives, pesticides or fertilizers, seasonal and regional. The festival is truly enriched by this local produce. The BIO AUSTRIA network of Austrian organic farmers means more than just better food. Organic farming also means better animal welfare, more water, soil and climate protection, and greater biodiversity.

Another important aspect of the festival's sustainability concept is the food supply. The festival will be supplied by small and local companies, all offering regional organic products. Many art projects are critical of the global situation of food supply and the food industry, and we as a festival want to take practical action and develop an alternative concept as an example. As in previ-

Simon Kopfberger (AT), Rita Newman (AT)

Interactive Resonance Sphere

Exploring the Visual Realm of Sound



The recorded individual voice is transferred into an oscillating resonance phenomenon that amplifies characteristic sonic vibrational patterns. The shapes that are formed by bouncing water are unique resonance vibration patterns. They are distinguished by extreme regularity in relation to number, measure and symmetry. These polygons, curves and patterns all follow mathematical and geometrical universal laws and appear in nature. An operator controls the experiment, guides the visitor through the recording, explains which knobs to turn (gently) to generate the resonance pattern and takes pictures of the emerging geometric patterns. The image is printed for the visitor at the end of a session.

Vienna Design Week 2022 / Installation for Culumnatura April 2023 / several individual or company sessions with voice or mission statement visualization

The research field in physics that investigates the visible patterns and shapes created by sound vibrations interacting with materials is called CYMATICS, that is, the study of wave phenomena. In this field, the *ivibe.life* team is experimenting with the interactive experience of aesthetic sound visualization in water. We installed a photo-audio station on site where visitors can interactively visualize their voice or any frequency they fancy.

Yen-Tzu Chang (TW)

The Mirage Replicas 2.0



The *Mirage Replicas 2.0* is a new media dance performance that explores generational differences within a family and culture. Starting from the story of the artist's father capturing a golden bat, the work also addresses ecological issues related to bats. Drawing upon French philosopher Michel Foucault's concept of heterotopia as a spatial imagination for storytelling, the work creates a technologically diverse space. The performance incorporates bat sound data, field recordings,

projected images, the mobile transparent screen displays that interactively overlay images with dancers and sensors tracking the dancers' movements. Some of the visuals in *Mirage Replicas 2.0* are generated through AI, exploring the ambiguity that arises from the dominance of artificial intelligence in an era where information tends to align with mainstream cultural knowledge.

Artistic Director, Sound, and visual designer: Yen-Tzu Chang / Dancer, choreographer: Shao-Tung Tseng / Executive Producer: Yu-Lin Chien / Stage Manager: Pei-Chun Pan / Lighting Designer: Fang-Yu Chien / Sound engineer, ambisonic programmer: Chi-Lin Chien / Technical Research and Development: Industrial Technology Research Institute / Service Systems Technology Center, ITRI: Hsiang-Lan Shih, Hui-Ching Ko, Yu-Lin Chien Intelligent Robotics Technology Laboratory: Ching-I Liu, Wen-Cheng Wang, Emiliano Alban Naranjo / Multi-perspective Perception Laboratory: Yuan-Si Liao, Hung Lin / Special Thanks: Formosan Golden Bat's Home

Satelite Events

Yoichiro Kawaguchi (JP), Sofia Talanti (IT/AT) and Markus Riebe (AT) at the OÖKunstverein

For the second time the OÖKunstverein is joining Ars Electronica Festival with a dedicated exhibition, presenting the works from Y. Kawaguchi and M. Riebe as pioneers in digital art intersecting with the latest work of S. Talanti, a young transdisciplinary artist and 3D designer.

Cytolon's whisper

The exhibition *Cytolon's whisper* is an artistic reference to the smallest unit of life: Cells as particles in constant motion, development and change, mutation and adaptation are to be understood as a metaphor for fluid concepts of our world and question reality and imagination and their conditional entanglement in bodies, their environment and their social contexts. Yoichiro Kawaguchi (JP) coined the term *cytolon* in reference to cytology to express the cells of an unknown artificial life that

continues to grow and develop. His work intersects with a recent installation by Sofia Talanti (IT/AT), who, as a person beyond gender binarism, explores human bodies, sexuality and sensitivity in their intimate digital microcosm. Markus Riebe (AT), in turn, responds with the visualization of three-dimensional particle systems that are captured in tilting images and whose existence is directly linked to the viewer's perceptual performance. Curator: Manuela Naveau (AT)



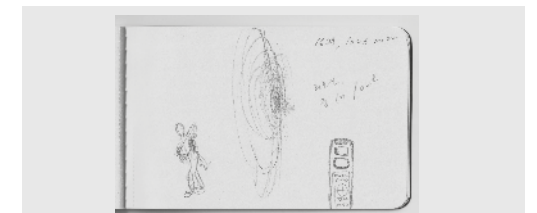
1 Markus Riebe — Digital_Echoes / 2 Sofia Talanti, animazione 3D / 3 Yoichiro Kawaguchi

HyungJun Park (KR)

Artificial Consciousness

HyungJun Park's solo exhibition *Artificial Consciousness* brings together three artworks at Art Laboratory Berlin. The main piece, *The Dream*, challenges and critiques the existing datasets of machine learning and focuses on human and machine dreaming. *I am an Artefact* explores what the soul is and how it can be perceived in a scientific manner. *Utopia* is an interface to allow the audience to explore visual senses from a non-human perspective. During the exhibition, Park will lead a workshop, titled "Exposing Invisible: Data, Rendering and Codes".

Curator: Tuçe Erel / Opening: 1 September 2023, 8 pm Exhibition running time: 2 September — 8 October / 2023, Thursday-Sunday; 14:00-18:00 / Credits: Berlin Senate for Culture and Europe, Korean Art Council, Department of Diagnostic and Interventional Radiology Düsseldorf, Institute of Materials Physics Cologne. www.artlaboratory-berlin.org



Stadtwerkstatt (AT)

STWST48X9 COLD HEAVEN

48 Hours of Immersive Trash

With *COLD HEAVEN*, Stadtwerkstatt is hosting its 9th edition of the annual 48-hour nonstop showcase extravaganza STWST48 in September 2023: Up in the sky float the cold systems of surveillance capitalism and there also lives the Anti-God with his Large Language models. We mean, in the last summer before the total cloud: In the end was the word!

Down on earth we sink in trash, dive into the wasteland of the delimited real pollution. We believe: These are the actual immersive experiences of the future. In between, the new coexistence of man and machine manifests itself, in hypernature, speculation, in search of real feelings, actual entropy and devastating algorithms. We say: Human adapts to the tool! In the midst

of this social reality, Stadtwerkstatt positions itself with *STWST48x9 COLD HEAVEN*. *48 Hours of Immersive Trash* between cool criticism and cold resistance, between minus art and meltdown, between immersion in trash and imagination as material. STWST nevertheless refuses to work off these themes and instead, and in addition, hosts a continuous Bloodproof of Life.

Also in 2023, *STWST48x9 COLD HEAVEN* means forty-eight hours of genre-free art and critical production in the house's anti-white cube. STWST presents around 20 artistic positions in exhibitions, performances, discourse, and two days of Nightline — asking the question no one else dares to ask: AI, tell me what you want me to want!

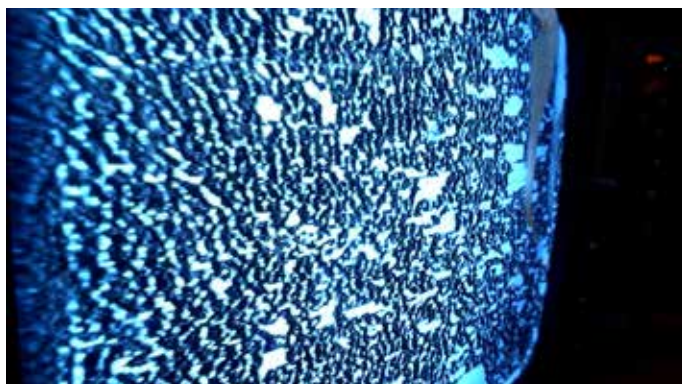
Infolab / Franz Xaver (AT)

Endless Approach to Zero

In the context of art, technology and natural sciences, I have been dealing with so-called glitches since the beginning. Glitches interrupt processes of logical consequences as unexpected events or unexplained blurs. This examination has shaped my concept of process art and my pre-occupation with the causes of creativity. Mathematics offers the possibility to describe reality and thereby gives a special perspective on our being. For almost 40 years I have been pursuing an endless approximation to zero. Thereby I subtract the reciprocal value of the natural number series again and again from a basic value.

The digital approximation to zero visualizes a fugue or inter-

ference pattern created by iterations of endless number series. The analog approximation to zero takes place via a video image that is fed back via the electromagnetic space in the basement of the STWST. The projection screen thereby becomes the zero passage.



© Franz Xaver

Shu Lea Cheang (TW)

UKI

UKI's storyline unfolds as we follow a defunct replicant REIKO dumped on Etrashville - a vast dump for tech - who tries to pull themselves back together with the help of its transgenic inhabitants. A virtual BioNet owned by GENOM Co. has occupied human bodies and re-engineered red blood cells into nano-computing self-generated orgasms. Parallel to REIKO's trajectory is that of an infected city in which a besieged diner gathers the infected to exchange own orgasm data for fresher, intenser, mutual orgasm. The diner is also the meeting-place for hackers who traverse time and space, bringing in news of protest and manifestation while uncovering GENOM's bio-engineering scheme. As the plot

thickens, REIKO's body is coded, recoded and finally collapses to re-emerge as UKI the Virus. Through virus Becoming, viral Love, we find a way to reclaim our viral bodies.

UKI, 80:00 Min, 2023. Story/Script/Direction: Shu Lea Cheang. Produced by Shu Lea Cheang and Jürgen Brüning.



© Shu Lea Cheang 2023

Michael Aschauer (AT)

Petro Sculpture #1.20.23

Petro Sculpture #1.20.23 stands as a monument to our ignorant and blind relationship with natural resources. Standing tall at 2.1 meters, this art piece is a fusion of classical art and modern technology, featuring a life-sized replica of Michelangelo's David, a timeless symbol of beauty and strength. However, this iconic figure's head is placed within an oil drum, an unmistakable representation of our society's dangerous obsession with fossil fuels. Recycled plastic, collected from products that contribute to our pollution crisis, are transformed through 3D printing to shape this mobile sculpture and serves as a stark

reminder of the consequences of our actions. It challenges viewers to ponder over the impact of our collective ignorance and arrogance towards the pressing issue of climate change.



Tanja Brandmayr (AT)

Minus werden (Become Minus)



© Tanja Brandmayr

Text and image fragments are presented on screens. A sculpture made of waste is immersively connected to the screens in a laughable way. *Become Minus* is not about the silent revolt of things, but about voiced criticism: The servers scream. The manifesto of dead artists. I feel sorry for the air. Your brain freezes at minus 273 degrees. Because the total work of art of a better world was not finished until the end. The promise has not been fulfilled despite technology. Instead, people are confronted with their existential self-abolition ... and yes, that too: I like AI and Human Rights.

Minus Art goes to where quantum computers work, to absolute zero, in an idea of the furthest-out vanishing point. Here, art is claimed at minus 273 degrees, playing with the idea of a quantum theory of consciousness. And with the fact that real immersion continues to define the best classical function in the relationship between man and art, in that it allows us to sense, far below zero, the unspeakable, the ineffable, the irrational, the hidden and the actually "other". What counts is imagination as material, the leaping of realizations, the simultaneity of right and wrong – at the edges of the rational world. ... Any other questions? Expect nothing from the Art Piece. You will find the Minus in yourself.

Stadtwerkstatt (AT) + Associated Collectives

BLOODPROOF OF LIFE



© Tanja Brandmayr

The Stadtwerkstatt gives you back your heart blood – Come and get it!

At the end of the AI moratorium, in the last summer before the total cloud, STWST transforms your lifeblood into a collective art project. In the middle of a room, about the beating humanist heart, professionals sit to draw your blood. Doctors take the small amount of 4 ml of blood from volunteers who still feel obliged. The vial is closed and sealed by Stadtwerkstatt. The certification as an art object is confirmed by an additional cultural initiative. You get your vial of heart blood back as a transformed blood-to-art object. Then you sit down in front of a camera that records and confirms the authenticity of your vial of blood,

YOUR authenticity and your participation in the collective Heart Blood project. The proof of *Heart Blood* participation is also provided by a blockchain, which also provides a further PROOF OF LIFE: So anyone can not only be an artist for 15 minutes, but become part of the collective *Heart Blood* blockchain FOREVER.

We invite artists, critical producers, programmers, theorists, colleagues, the audience of STWST48 and the entire Ars Electronica – in other words, every part of the system of art, society and technology – to ask the question of what life is. Heartblood knows no nation, heartblood knows no gender.

ARS ELECTRONICA

Between art, technology and society.

Over the past four decades, a number of pioneers have turned Ars Electronica into a creative ecosystem that now enjoys a worldwide reputation.

The following section provides a stunning insight into this ever-evolving ecosystem.

Since 1979 we celebrate once a year the **Ars Electronica Festival**. More than 1,000 artists, scientists, developers, designers, entrepreneurs and activists are coming to Linz, Austria, to address central questions of our future. For five days, everything revolves around groundbreaking ideas and grand visions, unusual prototypes and innovative collaborations, inspiring art and groundbreaking research, extraordinary performances and irritating interventions, touching sounds and rousing concerts.

Since 1987 we have been awarding the **Prix Ars Electronica** every year. With several competition categories, we search for groundbreaking projects that revolve around questions of our digital society and rehearse the innovative use of technologies, promising strategies of collaboration and new forms of artistic expression. The best submissions will receive a Golden Nica, considered by the global media art scene to be the most traditional and prestigious award ever.

Since 1996 we have been working at the **Ars Electronica Center** year after year with tens of thousands of kindergarten children, pupils, apprentices and students on questions concerning the ever-increasing digitalization of our world. The focus is on the potential of the next Game Changer: Artificial Intelligence.

Also since 1996 we operate the **Ars Electronica Futurelab**, whose international and interdisciplinary team of artists and scientists is researching the future. With interactive scenarios, we prepare central aspects of the Digital Revolution for the general public in order to initiate a democratic discourse.

1998 we initiated **create your world**. The year-round programme is developed together with young people and includes a competition for under 19 year olds, a festival of its own and a tour through the region. We see **create your world** as an invitation and challenge at the same time and want

to encourage young people to leave the role as mere users of technology behind, to discover new possibilities of acting and designing and to implement their own ideas.

2004 we started **Ars Electronica Export** with a big exhibition in New York. Since then we have been to Abuja, Athens, Bangkok, Beijing, Berlin, Bilbao, Brussels, Buenos Aires, Doha, Florence, Kiev, London, Madrid, Mexico City, Moscow, Mumbai, Osaka, Sao Paulo, Seoul, Shanghai, Singapore, Tokyo, Tunis, Venice and Zaragoza. Together with partners from art and culture, science and education, business and industry, we organize exhibitions and presentations, conferences and workshops, performances and interventions at all these locations.

Since 2013 our team at **Ars Electronica Solutions** has been developing market-ready products inspired by visions and prototypes from the artistic cosmos of Ars Electronica. We develop innovative, individual and interactive products and services for exhibitions, brands, trade fairs and events.

Since 2016 we are active all year round in Japan. Especially in Tokyo and Osaka we work together with leading Japanese universities, museums and companies, develop and present artistic projects, design workshop series and Open Labs and dedicate ourselves to the future of our digital society in conferences.

In order to actively shape the digital revolution, people are needed who have a feel for change and recognize connections, develop new strategies and set a course. This is precisely where the 2019 created **Future Thinking School** aims to support companies and institutions.

Whether at home in the living room or in the office, whether in the classroom or in the lecture hall, in the streetcar or subway, on the train — from everywhere **Home Delivery** accompanies our virtual visitors on an artistic-scientific journey into our future since 2020.

All our activities since September 18, 1979 have been documented in the form of texts, images and videos and stored in the **Ars Electronica Archive**. This archive provides us with a unique collection of descriptions and documentations of more than 75,000 projects from four decades of Ars Electronica.

ARS ELECTRONICA CENTER

Innovative learning from Kindergarten to University

In 1996 — at a time when schools were not yet connected to the Internet and computers were rarely available — the Ars Electronica Center laid the foundation for 21st-century didactics with the “Electronic Classroom” designed by Prof. Max Mühlhäuser and his team. With its 16 broadband networked workstations, interactive Smart Boards and own video conferencing system, this “electronic classroom” was a great attraction at the time and for many years the first and often only docking point to the digital age. And in many cases, this digital classroom became the regular place of instruction for a wide variety of subjects.

In 2009, with the opening of the “expanded” new Ars Electronica Center, a platform for creative research and development was created. A space in which and with which artists and scientists,

pupils and students, parents and children could experiment, work and play. Focus laboratories and interactive installations not only make available new technology, but also the concrete question: What does all this mean for me and my life?

Even though the building was expanded in terms of content and structure, the fundamental mission of the Center has remained unchanged: As before, the focus is on the vital and controversial questions of the future. Attention is never focused solely on art, technology or society, but always on the changes and interactions between them. For almost 45 years, Ars Electronica has lived out this insatiable curiosity for the “in-between”. A curiosity that is always different and unexpected. But always understood as both with and for the public.

Education in the Era of AI and Social Media

Trendsetting technologies, art and social change form the essential cornerstones of our educational program — with people always at the centre. For this reason, we do not see the Ars Electronica Center as a temple of knowledge that delivers all kinds of interesting facts, rather as a museum that “listens”, that is interested in the views, ideas and concerns of its visitors and gives them a voice. For us, a playful and creative approach, enthusiasm for new ideas and the commitment to make them accessible

to a broader public seem particularly important. In our workshops and guided tours for school classes at the Ars Electronica Center, we guide and accompany the age-appropriate examination of the current issues of our time. With participation as a principle, through active “getting in touch” and by processing theoretical information into creative discussion material, we develop formats for all age groups that make the complex themes of our exhibitions “comprehensible” for all.

Digital Basic Education Packages

If we look at the world from a purely Eurocentric perspective, it becomes clear that digitality has arrived to stay. The digital world is no longer just a refuge for nerds, gamers and science fictionistas, it is our everyday reality. This systemic change brings other, new tools, possibilities, perspectives and thus also cultural techniques to light. But culture has to be learned — and so does technology! The logical conclusion would be to see these processes of change reflected in education and politics at an early stage. But exactly the opposite seems to be the case. Many describe the education system as sluggish and inflexible, as an apparatus that is not geared towards better environmental compatibility and “bug fixing”.

This criticism of the education system is not new, yet the debate is more topical than ever. For after the COVID-19-induced digitalisation push—keyword “Distance Learning” — *ChatGPT* in particular is shaking up the well-worn habitus of teaching methods and learning goals. The question of skills for the 21st century is now being discussed in almost every echo chamber. The response of the state education system in the school sector is the “digital school” and “digital basic education”,

at the center of which is self-determination “through a comprehensive understanding of the digital world and the knowledge of how to move (safely) in this world”. The great challenge here is not to provide hardware and software suitable for teaching, but to build a sustainable knowledge infrastructure for teachers.

The above quote also implies the need to go beyond instruction in coding. It needs learning that is not limited to the functionalities, but also requires an examination of the mechanisms of digital technology, the ethical aspects and socio-social contexts. It is about developing an understanding of “what holds the new digital world together inside”.

Based on this approach, education and the Ars Electronica Center's offerings complement each other ideally. Our specially developed programs aim to lay the foundation for an understanding of digital skills. With three different topics, which can be booked either as a small package (one topic) or a large package (all three topics), we aim to give pupils from the 5th grade up the necessary competence for the digital world — to make them fit for the future and to train their “digital skills”.



The Museum of Edible Earth © Ars Electronica / Brigitt Cakir



Digital Basic Education © Ars Electronica / Brigitt Cakir



Artificial Intelligence

Theme-guided tour: AI & YOU

What is Artificial Intelligence? How intelligent is artificial and what does it have to do with me?

The tour through the exhibition *Understanding AI* will not only give students a basic understanding of this technological development, but also discuss and explain the range of AI applications. AI systems increasingly play an important role in our everyday lives. What positive and what negative consequences this has, or what role humans play in training so-called “neuronal networks”, will be discussed using scientific and artistic examples.

+ Workshop Add On: Machine Learning

For machines to “learn” at all, they need a lot of attention and hard training in the form of data. In the Machine Learning Studio of the Ars Electronica Center, we will provide a practical insight into machine learning: Here, self-driving model cars can be trained or it can be observed how robots perceive their environment.



Neuro-Bionic

Theme-guided tour: From the glass to the black box

Did you know that our brain has a kind of “navigation system” and that you can use it to control not only your own body but also computers? On this guided tour we take a close look at the human brain: through our eyes, as a preparation in a glass and as a digital visualization. We experience how malleable the brain is through training and what a biological brain can do with a black box, like a machine.

+ Workshop Add On: BCI — Brain Computer Interface

On this fascinating tour of the *NeuroBionics* exhibition, students will have the opportunity to connect to a computer using BCI (human-machine interface) and write using their “thoughts” or make a robot ball roll. The medical applications of this technology can also be tried out.



Climate and Environment

Theme-guided tour: PLANet B?

We have a mission — we must save Planet A! Because — that's also the title of our exhibition: *There Is No Planet B!*

We know that the way humanity is “hollowing out” the globe is causing the ecosystem to shake violently. We live in the Anthropocene, the age when human activity has become the most significant factor in biological, geological and atmospheric change. Global climate extremes, climate catastrophe or crisis — these are the consequences. But: There is a way out! On the one hand, technology is the cause of our climate problems, but on the other hand, it can be part of the solution. On this tour we show that with the help of technology and creative strategies, conscious politics and wide-ranging social commitment, we can fulfil the difficult rescue mission.

+ Deep Space Add On: Welcome to Planet B

Lab-raised meat or vegan diet? Vehicles with alternative driving technologies or public transport? In this interactive 3D game in Deep Space 8K, students are challenged to make decisions as a team to reduce greenhouse gas emissions. On the fictitious planet B, they can test how sustainable their group's decisions are.



Discussion round

At this point in the program, personal views and arguments can be formulated and new ones can be articulated in order to better connect the issues to real life and ideation. Translating one's own reflection into a dialog with others is an important step in forming opinions and testing knowledge. In this format, the topics of the selected package(s) are discussed in some depth with the participants.

Teacher training courses

To be able to move safely in a rapidly digitizing environment, children and youngsters need skills for the future. In the fast pace of our times, however, it is often difficult for teachers to keep up with the global issues and social questions of the present and the future. With its teacher training courses, the Ars Electronica Center offers a diverse range of courses that track the

topics and trends of our time, deepening existing knowledge and providing educators with applicable information units.



Teacher Training © Ars Electronica / Birgit Cakir

Holiday program in cooperation with the Chamber of Labour of Upper Austria

Exciting workshops on the most relevant topics of our time are on offer not only during school hours; during the summer holidays you can also experience real adventures at the Ars Electronica Center. Thanks to a cooperation with the Chamber of Labour of Upper Austria, all summer and autumn offerings are free of charge

for children of members of the Chamber of Labour of Upper Austria!



Holiday program © Ars Electronica / Birgit Cakir

My Future Workshop

Sometimes it takes detours, experiences and new opportunities for young people to find their way in this complex world. For youth in particular, unemployment has far-reaching negative consequences – a restricted social environment, a lower standard of living. To tackle this, the province of Upper Austria and the AMS offer courses for young people who are currently not in school and cannot find an apprenticeship. As part of this program, adolescents are given the opportunity to participate in the My Future Workshop at the Ars Electronica Center. Several times a year, groups of up to 20 young people spend one week in the Ars Electronica Center as part



© Ars Electronica / Birgit Cakir

of their apprenticeship project to participate in a variety of workshops. The goal of this project is to enable them to gain new skills and experience, to untap hidden talents and rediscover themselves as part of a team.

Energy Hacker Tour



© Ars Electronica / Denise Hirtenfelder

Accompany our building services crew behind the scenes at the Museum of the Future and learn about the measures that have made it possible to reduce the Ars Electronica Center's electricity consumption by almost fifty percent. Last not least, you can control the colors of the Ars Electronica Center's LED façade with the new, modernized façade game.

Children's birthday party at the Ars Electronica Center

You want to travel from a microcosm to outer space on your birthday? At the Ars Electronica Center we shall embark on an adventure you will never forget! On your big day, get to know Tardi the tardigrade and his buddies from the microcosm together with all your friends. Or build your own robot – a cog here, a connector there, a few building blocks, gripper arms, camera lenses or motors in between! The Ars Electronica Center's children's birthday programs also invite you to try things out, participate and think... Whether it's a guided tour or a workshop – both combined with a virtual adventure in the 3D experience world Deep Space 8K – young researchers can choose from our children's program offerings.



© Ars Electronica / Birgit Cakir

With our DIY kits, you can easily make your own Tardi invitations for all your friends so they too can experience change driven by technology! The birthday boy or girl will receive a very special gift: the children's book "Da ist Tardi" (There's Tardi) was made specially for you by our infotainers.

ESERO

ESERO, on behalf of the European Space Agency (ESA), supports teachers in engaging young people in STEM subjects through the fascination of space.

Our wide range of offerings include challenging competitions for students, helpful teaching

materials and training for teachers, and more besides for use in the classroom. This school year, pupils and school classes were once again cordially invited to take part in our exciting competitions. From primary school to secondary school, there was something for everyone!

CanSat

As part of the *CanSat* competition the task of the participating teams was to build a satellite no bigger than a beverage can. The satellite was to be brought to an altitude of 500 meters by a rocket in order to be dropped. During the descent back to the ground, the *CanSat* had to fulfill two missions: The mini-satellite was to measure temperature and air pressure and transmit the values to the ground station at least once per second. From the collected air pressure values, the actual ejection altitude and the fall velocity had to be determined. In addition, a temperature profile should be obtained. Furthermore, the satellite had to fulfill a mission chosen and developed by the participants themselves. There were no limits to the technical and scientific ingenuity!

The starting point might be a scientific question, a technical problem or a project idea of social relevance. By participating in the *CanSat* competition, pupils could pass through all phases of a real space project. These ranged from mission selection, design of the *CanSat*, integration of technical components, technical test runs and the actual launch of the mini-satellite, to scientific analysis of the data obtained. In addition, soft skills such as teamwork and interdisciplinary thinking were developed. The *CanSat* competition for pupils aged 14 and older was held for the sixth time this year. The winning team could look forward to participating in the international CanSat competition of ESA. In 2023, the Austrian Team WerndlExplorer won one of the main prizes.



ESERO CanSat © Vanessa Graf



ESERO Mission X © Ars Electronica / Birgit Cakir

Mission X

Mission X – Train Like an Astronaut was an international competition for schools that was held for the 13th time in 2022/23. The American and European space agencies NASA and ESA have developed a series of exercises for *Mission X* that provided children with lots of fun space knowledge, exercise, sports, as well as the importance of healthy eating in daily life. The active phase of the project took place in schools (classroom, gym, etc.) from January to May 2023. The exercises (missions) showed the children how astronauts exercise and what fitness program they use. In recent years, 6,000 Austrian pupils and 300 schools have already successfully participated in the competition

AstroPi Challenge

In ESA's annual science and programming competition *AstroPI Challenge*, pupils were able to run their own code on the International Space Station (ISS). For this, a Raspberry Pi minicomputer was specially extended and transformed into an AstroPi. Equipped with cameras and various environmental sensors, the AstroPi offered pupils the opportunity to design science experiments from scratch – from the idea to the scientific background and programming to execution. The goal was to demonstrate the possibilities of computer programming and encourage students to improve their digital skills and foster their interest in STEM subjects.

Climate Detectives

Under the heading “Climate Detectives”, ESA once again challenged students between the ages of 8 and 19 to “make a difference”. A local environmental or climate problem was to be identified and investigated on the basis of satellite images and/or measurements taken on site. The goal was to bring it to the attention of their own community and develop a proposal to monitor or reduce the problem. During important phases of the project, the teams were supported by experts in the fields of Earth observation and climate, who provided feedback on the investigation plan via email and during an online event.

Moon Camp Challenge

For astronauts to stay on the Moon for a long time in the future, new infrastructures need to be developed to address key challenges. These challenges include protection from radiation and meteors, power generation, water harvesting and recycling, food production and more. Run by ESA and the Airbus Foundation in collaboration with Autodesk, the *Moon Camp Challenge* invited pupils to design one or more components of a lunar base in 3D. It featured preparatory classroom activities focused on learning through design and science experiments. Pupils had to develop a series of science experiments related to the Moon and apply their acquired knowledge in an interdisciplinary way to design their own lunar camp using a 3D modeling tool (Tinkercad or Fusion 360).

Future Thinking School

The digital transformation leaves no stone unturned. It constantly brings forth new technologies and business models, and places unknown demands on managers and teams. To actively shape this revolution, we need people who have a sense for change; who recognize connections so

as to develop new strategies and set the course for the future. But where do we learn to meet these challenges at eye level – if not at Ars Electronica's Centre of Excellence for Future Education? Ars Electronica's Future Thinking School helps companies and organizations do just that!



Future Thinking School, Apprenticeship program © Ars Electronica / Birgit Cakir

Apprenticeship program: Future in Sight, Future in Hand

In this interactive workshop, apprentices immerse themselves in the fields of artificial intelligence and sustainability. The varied program also includes a tour of the Ars Electronica Center exhibitions and a presentation in the world's only Deep Space 8K. The aim is to examine those technologies that are already omnipresent in the apprentices' daily and professional lives. In addition, participants jointly develop ideas for the future, creating an awareness of the need for creative and innovative collaboration.

AMS: Future Studio for Women

To support women re-entering the world of work or changing to a new professional field, a new workshop program was developed in the Future Thinking School together with AMS Upper Austria together with AMS Upper Austria and she:works – step into your power. This *Future Studio* is designed to give participants an insight into the world of digitalization, especially that of artificial intelligence: what impact could AI have on the world of work as well as on society? In addition to imparting knowledge, the focus is on increasing women's interest in new technologies. The fact that digitization topics that seem complex at first glance can be quite understandable and that future technologies can be applied themselves boosted the participants' self-confidence. The "Future Studio" program has been run for women in cooperation with AMS Upper Austria since March 2022. It is intended to encourage participants to use new technologies as tools actively to shape their own future.

Idea Lab: Digital Mindset

To be successful in a constantly changing digital world, we not only need a technically reliable infrastructure, but also a "digital mindset". In other words: an attitude and open access to new technologies and tools. In this interactive workshop of the Future Thinking School by Ars Electronica, participants develop a common language and understanding as well as concrete approaches to sharpen their personal and organizational digital mindset.

Future Insights: Artificial intelligence

This interactive workshop is based on the current exhibition "Understanding Artificial Intelligence" at the Ars Electronica Center. It is designed to give participants a basic understanding of Artificial Intelligence, insights into the most important technical aspects and an awareness of the importance of this topic. AI is already part of our everyday life and has an impact on various aspects of our economy right through to our social interactions. It can even be used to create works of art. But what exactly is behind it?



Future Thinking School, AMS © Florian Voggeneder



Future Thinking School, Idea Lab © Ars Electronica / Birgit Cakir

Beyond Coding

The course "Beyond Coding: New Technologies in Context" was developed for law students at the Johannes Kepler University to address the lack of a legal framework for many transformative technological developments. Artificial Intelligence (AI), Autonomous Driving, AI and Creativity, Creative Robotics, Biotechnology and Blockchain not only impact business models and processes, but also various areas of our everyday lives. The focus of the elective "Beyond Coding: New Technologies in Context", developed by the Future Thinking School for law students, was on addressing the potential impact of these technologies on our society and economy, as well as related legal issues. The goal of this course, which has been held every winter semester since 2021, was to raise awareness among students that many transformative technological developments do not yet have a valid legal framework. To give students the opportunity to engage with new technologies in a practical way as well, this elective was conducted in cooperation with Ars Electronica partners: Cloudflight, Linz Art University, Creative Robotics/Grand Garage and Noyb.



Future Thinking School, Beyond Coding © Ars Electronica / Birgit Cakir



Future Thinking School, Future Insights © Ars Electronica / Magdalena Sick-Leitner

New Exhibition: Compass *reloaded!*

From a telescope that opened the view into the future, as of 2019 the Ars Electronica Center became the compass that navigates us through the technological developments and systems of the 21st century. Enriched by the experience of a massive digitalization push, it was time to recalibrate this compass in 2023. Artificial Intelligence, Neurobionics, Genetic Engineering and Biotechnology have since led to far-reaching changes around the globe. We have been addressing these topics in our exhibitions since then – today they are more relevant than ever. Technological progress continues to raise new questions about the impact on our everyday lives and the consequences for our society. For this reason, current exhibitions have been updated to

continue focusing on the latest technologies that are rapidly changing the way we live and work. Many of the stations with which we want to show you the future have been completely renewed: *Compass reloaded!*



© Ars Electronica / Birgit Cakir

Hands on AI

The development of artificial intelligence (AI) has advanced tremendously in recent years, impacting our daily lives in a variety of ways – from personalizing online content to automating processes in industry and healthcare. In the Ars Electronica Center's Main Gallery, you'll find two current applications for artificial intelligence. Try out for yourself how these technologies work! What impact do AI applications have on our society? How do they influence our daily lives? And are AI systems always as neutral and objective as they are often presented to be?

Stable Diffusion is one of these computer programs that use artificial intelligence to generate images based on descriptive text. How does this work? The AI system has been trained to detect characteristic patterns in certain images. These are obscured by artificial noise in order to recover the most important features. In other words: starting from chaotic noise, the system learns to generate new images. This "latent diffusion model" was developed by LMU Munich. At the Ars Electronica Center, you can try out this

text-to-image tool for yourself, alongside the AI text generator *ChatGPT* developed by OpenAI, a prototype chatbot that also works with artificial intelligence. Based on GPT (Generative Pre-trained Transformer) technology, it enables us to understand and produce complex speech patterns and contexts. Write your question in an input mask and the system will answer within a few seconds. The quality of the answers varies – but *ChatGPT* seems to find an answer to everything.



© Ars Electronica / Birgit Cakir

Zeitenwende – The Almost Dead Artist: The Almost Alive Artificial Intelligence

Richard Kriesche (AT) & ChatGPT

In this exhibition, generated with the help of ChatGPT, Richard Kriesche not only explores a current phenomenon of digital information technology that will significantly change life, but also ties in with his research on artificial intelligence since the 1990s. The conceptual text work inquiries into a current change in the concept of art, in which artists and AI act together and thus “reveal a newly established relationship between art, artist and Artificial Intelligence” (Kriesche). This is about the understanding of art, authorship, work and knowledge, or the ultimate overcoming of the notion of “mastery” or human supremacy in a time of digitized knowledge outsourcing.

Only through collaboration will – according to ChatGPT – both the human and the machine evolve productively.



© Ars Electronica / Birgit Cakir

I, HUMAN

SAINT MACHINE (RO)

I, HUMAN is a modular media sculpture that resembles a neural network. The installation detects the emotions of its visitors and converts their empathy into coherent light that influences the vital biological processes of microorganisms. This acts as a symbol of the fragility of our planet's ecosystem, whose survival depends on human cohesion. The interconnected modules create an interactive space between the Ars Electronica Center and the National Art Museum Timișoara (Romania). Visitors in Linz interact in real time with those in Timișoara, transferring their level of empathy into laser light pulses to connect symbolically the two cities. The modular sculpture detects the emotional status of each user connected to the artwork, calculating group empathy, which then determines the frequency and intensity of coherent light pulses in real time with which to nourish a population of microorganisms. The installation uses emotion as content and light as content carrier to influence the feeding conditions of a population of *Euglena*, in a bio-photonic experiment at the Centre for

Advanced Laser Technologies in Romania. The visitors thus become both subjects and observers of the experiment. In a society polarized by war and political discourse, we are reminded that our emotional cohesion also impacts the ecosystem of which we are all a part. *I, HUMAN* is a metaphor for our evolution as a species, whose survival may depend on our ability to nurture the collective organism we form with our planet through our emotional deposits. What we leave behind is a measure of how much we love each other (or don't).



© vog.photo

Solar Synthesizer 0.4

Klaus Dieterstorfer (AT), Alex Minichmair (AT), Rupert Huber (AT), Felix Minichmair (AT)

The dream of self-sufficient living occupies people more than ever before; energy independence and self-sufficiency in harmony with nature are growing in importance. The first attempt of the artist group's attempt to produce sounds with solar energy was started with the *Solar Synthesizer 0.4*. For the first time, electronic music can be played self-sufficiently in terms of energy. When completely irradiated by the sun or another light source, a harmonic soundscape opens, which changes as soon as a person stands between the sun and the photovoltaic cells. Instead of pressing keys, you move your hand towards or away from the panel.



Credit: Doepfer Musikelektronik GmbH (DE)

© vog.photo

MusicLM

MusicLM is an advanced machine learning model that can generate high-quality music and sounds based on text descriptions. It outperforms previous systems in terms of audio quality and accurately follows the given text descriptions. The model can also incorporate a melody and transform it according to the preferred style described in the text. To support further research, the authors have released a dataset called Music-Caps, which consists of music-text pairs with detailed descriptions. The project addresses the challenges of audio synthesis and the scarcity of paired audio-text data. *MusicLM* leverages a multi-stage modeling approach and is also trained on a large dataset of unlabeled music to



generate long and coherent music pieces. The model's performance is evaluated using quantitative and qualitative metrics, showing its superiority over existing systems.

© Ars Electronica / Birgit Cakir

Being

Rashaad Newsome (US)

Being (2022) is a social humanoid artificial intelligence created by interdisciplinary artist Rashaad Newsome. The first generation of *Being* was released in spring/summer 2019 with the support of the LACMA Art + Technology Lab Grant. A combination of 3D animation, game engines, scripted responses, generative grammar and special machine learning models were used. *Being* acts in various roles, leading participatory workshops on decolonization, serving as a tour guide in one of Newsome's exhibitions, and continuously composing and reciting poems inspired by the work of queer poet Dazié Rustin Grego-Sykes, accompanied by an ASMR soundscape. Rashaad Newsome, who was awarded the Golden Nica of the Prix Ars Electronica 2022



© Ars Electronica / Birgit Cakir

in the Computer Animation category for *Being*, combines various artistic practices in his work. He draws from the worlds of advertising, the internet, art history, Black culture and queer culture.

BCI-Sensor – Image Ranking

Ars Electronica Solutions (AT), g.tec medical engineering GmbH (AT) and Erika Mondria (AT)

In our interactions with the environment, there are both conscious cognitive processes that form opinion as well as immediate, unconscious processes. These brain activities can be recorded through a brain-computer interface.

The *Unicorn Brain Interface* is a portable electroencephalography (EEG) headset that measures and analyzes bioelectrical signals on the surface of the cerebral cortex through EEG electrodes. The event-related potentials (ERP) that occur in response to briefly presented images are relevant here. The software assigns images based on the reaction of the participants' brain waves. This technology has a wide range of applications, which include research, assistive systems, and even neuromarketing.

The *Solastalgia – BCI* was developed by Ars Electronica Solutions as part of their "Sustainability Thinking Strategy" in cooperation



© Ars Electronica / Birgit Cakir

with Erika Mondria. The aim of this strategy is to stimulate one's own thinking in relation to sustainability and thus to evoke a new creative way of thinking that integrates both the intellectual and the emotional components. Within the framework of a "Sustainability Thinking Experience", workshops, expeditions or discussion forums are offered variably tailored to customer needs.

The NeuroRights Arcade

Roel Heremans (BE)

Innovation in neuro-wearables and Brain-Computer-Interfaces is advancing faster than the social and ethical frameworks surrounding them. Researchers at Columbia University have therefore developed five NeuroRights: Mental Privacy, Personal Identity, Freedom of Will, Equal Access to Mental Augmentation, and Protection from Algorithmic Bias. Inspired by these NeuroRights, Roel Heremans and his team have designed an interactive installation, an arcade machine, to make each of these NeuroRights tangible and inform about the ethical future of neurotechnology. Using a BCI headset, one is guided through an aesthetic experience at the installation. With this, the team hopes to evoke a visceral reaction, so that participants feel the need for NeuroRights on a personal level. If desired, a digital printout of the recorded brain waves can be obtained via a QR code. Just when you might think you have been ethically empowered, you could get the



© vog.photo

uncanny feeling that the installation has done exactly what it warned you about.

Credit: Co-production: Ars Electronica Futurelab (AT), C-Takt Pelt (BE), Werktank Leuven (BE), Kunstenwerkplaats Brussels (BE) Interactive Design: Tyrell Arcade Design: Rudi van de Kerkhof BCI software: Yuhang Zhang, Thai Duong Truong, Maarten Francq Neurological advice: Chie Nakatani, Cees van Leeuwen Artistic Advice: Emanuele Dainotti, Evan Cole, Angela De Weijer This project is funded by Flanders State of the Art.

Future Ink

Ars Electronica Futurelab (AT) & Wacom Co., Ltd. (JP)

In our digital society, we utilize digital tools for creative expression. However, during this process, data is filtered, and only a portion is used as a signal, while the rest is removed as noise. Are we losing important information through digitization? How can our technologies better support human creativity and expression, including our emotions, passion, and soul? *Future Ink* is a joint research project between Wacom and the Ars Electronica Futurelab that explores creative expression from all ink-related aspects. Since 2020, questions and prototypes have been jointly developed to understand the future of creativity. The topic was approached from three different perspectives: For *Space Ink*, drones served as equal partners to create large-scale paintings. And in *Bio Ink*, artworks were created with living ink that grows freely — a co-creation with other organisms and nature.



© Yoko Shimizu

The latest notion realized as part of *Future Ink* was *Life Ink*. Brain waves and body signals were recorded in real time to create another new form of ink. With *Life Ink*, the emotions of the creative moment — the creative spark — could be successfully visualized. A documentation of this unique research project is now on public display in the Ars Electronica Center's main gallery.

ORI*BOTICS, the art and science of robotic origami

Ars Electronica Futurelab (AT)

The ongoing research project *ORI*BOTICS*, the art and science of robotic origami* investigates the connection between origami, technology and nature, focusing on the specifics of origami robots and folded mechanisms. There are still many unanswered questions in this new field of research at the interface between art and science. *ORI*BOTICS* focuses on novel design methods and producing robust, flexible yet highly irregular origami from textiles and 3D printing, including fold printing and fold mapping. The aim is to generate new knowledge around the flexible cultural technique of folding, to develop innovative approaches to its application, and to create practical tools and know-how. Visitors can marvel at the latest results of this artistic-scientific debate in the Ars Electronica Center's *ORI*lab*, such as Ori*hat, and the oribotic instruments *Ori*cloud* and *Oricordion*.



© vog.photo

Artist/Oriboticist: Matthew Gardiner (AU) Electronic Designer: Ray Gardiner (AU) Produced in partnership with Novamedia and the Australia Council for the Arts, assisted by the City of Port Phillip through the Rupert Bunny Foundation Visual Arts Fellowship. Developed in collaboration with the Ars Electronica Futurelab and the Institute of Polymer Product Engineering of the Johannes Kepler University.

Play the Façade

Ars Electronica Futurelab (AT)

Visible from afar, the Ars Electronica Center's LED façade dominates the cityscape of Linz. But this landmark is far more than just “prettily illuminated” architecture. Consisting of 1,100 backlit elements, the façade is a creative medium that is once again accessible to all citizens of Linz and all visitors to the city. The interactive project *Play the Façade* was first launched in 2010, inviting people to participate as designers and play on Linz's nocturnal skyline. The well-known but somewhat outdated interaction terminal has now been modernized, rethought and brought up to date with the latest technology by the Ars Electronica Futurelab. As part of the redesign of *Play the Façade*, the former display in the public space has been moved to the user's mobile devices. Using your own smartphone, you can connect to the building via WiFi and interactively control around 40,000 LEDs of the Ars Electronica Center on your own smartphone during the opening hours of *Play the Façade*, thus shaping Linz's cityscape in an audiovisual way.



© Denise Hirtenfelder

Visitors can use the built-in audio system to send music across the Danube and determine whether and how the Ars Electronica Center should light up in response. In this way, citizens and visitors of the city decide on the visual appearance of the building as part of the skyline of Linz.

Play the Façade is free and open to the public during the operating hours Summer time 20:00 — 22:00 Winter time 18:00 — 20:00 Location Users can connect with the façade on the Danube riverbank below the Ars Electronica Center

Program Highlights 2022/23

Theme-Weekend: Compass *reloaded!*

On Sat May 13 and Sun May 14, 2023 we offered insights into the newly adapted exhibition areas in the Ars Electronica Center. These were presented the previous Thursday under the title *Compass reloaded! Navigating the Future*.

Almost exactly four years ago, after a large-scale thematic redesign, we opened the Ars Electronica Center under the general theme *Compass – Navigating the Future*. From being a telescope that revealed a view of the future, the Ars Electronica Center became a compass and companion from 2019 onwards. Since then, it has “navigating” visitors through the complex technological developments and systems of the 21st century. Four years later and enriched by the experiences of a pandemic that has also led to a massive



© vog.photo

digitalization push in all areas of life, it was time to “recalibrate the compass”. The topics of Artificial Intelligence, Neurobionics, Genetic Engineering and Biotechnology and the far-reaching global changes that we have already taken up in 2019 are more relevant today than ever before.

Theme Month Astronomy October 2022

In 2022, October was dedicated to astronomy at the Ars Electronica Center. Visitors embarked on a journey to distant galaxies, learning interesting facts about space exploration. They delved into the infinite expanse of our universe in Deep Space 8K and listened to exciting lectures from science and research. The new exhibition on the Kepler Observatory, which opened on 20 October, rounded off the theme of the month. This month we were pleased to announce cooperation



© Ars Electronica / Magdalena Sick-Leitner

between the Kepler Observatory Linz and ESERO Austria with the European Southern Observatory

in Chile. In this way, visitors gained insights into their working methods and research subjects.

Bike Visions 2023

The Ars Electronica Center invited cycling enthusiasts to the 4th edition of Bike Visions on Sat March, 10 and Sun March, 11, 2023. Under the motto *Mountain Biking in the Central Region of Linz*, bikers were once again active. Local and legal trail building projects were presented and invitations were extended to take part in a joint bike tour. Professionals of the scene presented spectacular footage in Deep Space 8K and passed on their knowledge of riding technique at workshops

for young and old. A varied and exciting program focused on the importance of mountain biking for



© Ars Electronica / Andreas Bauer

domestic tourism. Could this sport even be the skiing of the future?

Citizen Science Days

From Citizen Science, DIY Science, Public History to Open Science. All terms that describe something very similar, namely the participation of non-scientists, i.e. lay people, in scientific questions and processes. Non-experts can also have a valuable socio-political impact. Participation creates empowerment. And an empowered society is the basis for a democratic future. Under the motto “ver.suchen – ver.einen – ver.antworten”, the 8th Austrian Citizen Science Conference 2023

took place from April 19th to 21st 2023 in Linz at the Johannes Kepler University. In addition to the Österreich forscht network (Boku) and the Ludwig Boltzmann Society, cooperation partners included Ars Electronica. Since it was founded, Ars Electronica has been committed to filling gaps in knowledge and tapping into everyday expertise in broader society.



© Ars Electronica / Birgit Cakir

On Sat Feb. 18, Sat Mar. 18 and Sat Apr. 15th, 2023, the Citizen Science Days were held for the first time at the Ars Electronica Center. This “warming up” for the Austrian Citizen Science Conference 2023 aimed to awaken curiosity for this exciting topic.

Theme-Weekend: Earth Day

International "Earth Day" takes place annually on April 22 and aims to increase our appreciation of the natural environment as well as reflection on our consumer behavior. This year, the theme was "Invest in Our Planet". Following this motto, Deep Space 8K hosted a series of impressive presentations on the theme of "Planet Earth" during this theme-weekend.

The premiere of Our Earths VR took place on the evening of April 22, 2023. In the lavishly produced short film, the utopia of a human success story was created as an immersive virtual reality experience in 3D, accompanied by an impressive soundtrack. Our Earths VR takes viewers on a virtual journey into a future where humanity has already solved all the major challenges we face today: Climate crisis, plastic waste islands in the oceans, exponentially growing resource exploitation, ever faster species extinction and loss of biodiversity, pandemics, an economic system based on infinite growth. How will humanity of the future have prevented the collapse we face today?



Theme Weekend Earth Day
© Ars Electronica / Birgit Cakir

Long Night of Museums
© Ars Electronica / Birgit Cakir

Night of the Family
© Ars Electronica / Birgit Cakir

Long Night of Museums

The ORF invites visitors every year to the Long Night of Museums. All over Austria, museums and galleries open their doors to culture-loving night owls until late into the night. That evening, of course, there was once again a wide-ranging program at the Ars Electronica Center. Themed tours where visitors learned more about artificial intelligence or the threat to our planet, the Kids' Research Lab where our young visitors could playfully discover the world of tomorrow, while in Deep Space 8K there were several presentations on the highlights of our Deep Space content in addition to a live performance.

Night of the Family

Family tours, hands-on stations, Deep Space 8K presentations and a Bio-Chemical Show in the Ars Electronica Labs — this year the Ars Electronica Center offered a varied program on the themes of art, technology and science during the Night of the Family. Families could discover exciting worlds of experience where the focus was on interaction with the exhibits. Touching is not forbidden in the Ars Electronica Center, rather expressly encouraged!

Deep Space Highlights 2022/23

Art in Advent: Tassilo Chalice

As every year, the Advent season offers the opportunity to present the country's cultural assets to a wide audience in the Ars Electronica Center's Deep Space 8K. In 2022, the medieval Tassilo Chalice was shown in a new light in Deep Space.



© Ars Electronica / Robert Bauernhansl

Deep Space Special: Virtual Nativity

The famous Nativity ensemble in St. Mary's Cathedral has always been a highlight of Advent in Linz. Restaged as an interactive and audiovisual 3D Christmas experience, the entire Nativity scene during Advent 2022 also shone in perfect splendor in virtual reality — not only in the crypt of Linz Cathedral, but also in Deep Space 8K at the Ars Electronica Center.



© Ars Electronica / Robert Bauernhansl

International Women's Day at Deep Space 8K

March 8 stands for the struggle of women for equal rights. On this day, the successes of the last century (for example, women gaining the right to vote) are commemorated, but also the fact that to this day many women in the world are still fighting for freedom and equality in society. On this evening in 2023, the stage belonged entirely to the women artists who will perform the interactive application *The Nature of Systems* and the two performances out of *DANU: Bodies of Water*.



© Ars Electronica / Magdalena Siock-Leitner



© Ars Electronica / Magdalena Sick-Leitner

Deep Space Special: Mona Lisa

In cooperation between the Grand Palais Paris and the Musée du Louvre, a high-resolution gigapixel of the Mona Lisa and immersive video material with background information on the world's most famous painting were created in an exhibition in 2022, which could also be seen in Ars Electronica Deep Space 8K from spring 2023. In his lifetime, Leonardo da Vinci produced several portraits. At the height of his fame, at the age of 48, he began with the portrait of Lisa del Giocondo. She was the wife of the Florentine silk

merchant Francesco del Giocondo, the commissioner of the painting "Mona Lisa". She was also called "la Gioconda", a feminization of her husband's name. This painting became a challenge for Leonardo, who wanted to give the Mona Lisa a lifelike appearance. Painted life-size, the Mona Lisa seems to be the most faithful representation of this quest for her creator. Leonardo da Vinci never handed over the Mona Lisa portrait to Francesco del Giocondo, but kept it close to him until his death, constantly perfecting it.

Deep Space Experience: Rabbit Hole

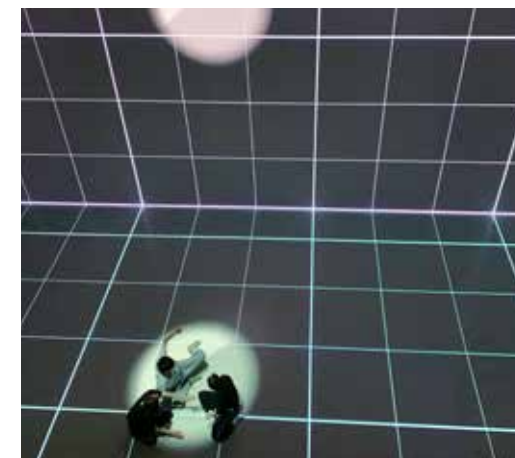
In this unique, cross-media environment, the boundaries between online and offline are completely blurred. Via their own smartphones, the audience became part of the chat forums in which the isolated Samy also moved. Do you follow him down the "Rabbit Hole"? Or do you prefer to stay outside?



© Ars Electronica / Magdalena Sick-Leitner

Deep Space Experience: Embodied Ecologies

"Embodied Ecologies" is a multi-year cooperation between the Interface Cultures Master's program (Linz University of Art), the Institute of Dance Arts (Anton Bruckner Private University) and Deep Space 8K (Ars Electronica Center). This time the students additionally worked together with the Institute for Quantum Optics and Quantum Information of the Austrian Academy of Sciences.



© Smirna Kulenovic

Deep Space Lectures: Cinematic Anatomy

Here, virtual reality technology and medical science come together to display anatomical information stereoscopically and with unprecedented depth of field: Ultra-high resolution projections of anatomical CT and MRI data are displayed in 16x9 meter format. From microsurgery and neuro-navigation to digitized surgery simulations, *Cinematic Anatomy* allows fascinating insights into the inside of the human body. Using this 3D visualization technology, which is also used in the medical faculty for anatomy lectures, visitors regularly learn more at Deep Space Lectures from the head of the Central Radiology Institute at Kepler University Hospital Linz, Prim. Prof. Dr. Franz Fellner, about the anatomy of the human body.



© vög.photo

Event Service

The Ars Electronica Center is known worldwide for its interactive Deep Space 8K and its exhibition spaces, which — full of technologies, creativity and innovations — constantly direct the gaze of astonished visitors into the future. What far fewer people know:

The Ars Electronica Center not only stands out as a museum of the future but is also considered one of the most innovative event locations in Linz. Whether it's a seminar room or an event location for company celebrations, anniversaries or other private or business festivities — from business

events to birthday parties, weddings, road shows and symposia to classic meetings and product presentations — many things have already been celebrated, organized and presented in the large and small rooms on the banks of the Danube in Upper Austria. Not only are the rooms of the Ars Electronica Center available to our guests for conferences, events and functions, but also cyberspace. When it comes to organizing an event, the Ars Electronica Events Team is there to assist in all phases of planning and implementation. Some Highlights from 2022/23 are listed here.

Symposium “The Future of Living”: Digitalization and Artificial Intelligence

Digitalization has already made its way into the construction and housing industries, whether it is intranet systems, the “digital caretaker” or the collection and management of data with the support of artificial intelligence. Completely digital — this also applies to planning and con-

struction processes as well as to the operation of residential buildings. But how to deal with all the data, what information is really needed, what experience already exists and what the future will bring — all this and more was the topic at the 76th Symposium in Linz.

Conference: Artificial Intelligence as a new religion?

This conference dealt with the topic of Artificial Intelligence on different levels. Social aspects were the main topics. It was about delimiting the strengths of Artificial Intelligence when set

against human intelligence. Medical and technical aspects as well as ethical challenges also played a major role.

Strategy Art Culture 22

At this event, an exchange took place on the main topics of “Innovation” and “Art and Culture Digital”. Around 70 participants took part, mainly from the provinces of Upper Austria and Salzburg. The event is under the auspices of the Federal Ministry of Culture, Education and the Arts and concerns the “Digital Cultural Heritage Strategy”.

This is set within the framework of NextGenerationEU and the European Union's Build-up and Resilience Facility as well as the Digital Action Plan of the Republic of Austria. The Event Service of Ars Electronica took over all technical aspects including streaming of a complex setup (several cameras, sign language interpretation, etc.)

Festival Program @ Ars Electronica Center

Highlight Tour

Ars Electronica Center

Artificial intelligence and the relationship between humans and machines are the focus of the exhibitions in the Ars Electronica Center. We recommend you approach this issue during the *Highlight Tour* from various perspectives and use this guided tour as a navigation aid through many present and future topics. These range from artificial intelligence and neurobionics, autonomous systems and robotics, genetic engineering and biotechnology, to even more far-reaching changes of our time.



© vog.photo

Presentation: BCI-Solastalgia

Erika Mondria (AT), Martin Spanker (AT)

Ars Electronica Center, Level — 3, Neuro—Bionic

In our interactions with the environment, there are both conscious cognitive processes for forming opinions and immediate, unconscious processes. These brain activities can be recorded using a Brain-Computer Interface (BCI), a technology with a wide range of applications. The software assigns images based on the unconscious response of the participant's brain waves. *BCI-Solastalgia* was developed by Ars Electronica Solutions in cooperation with Erika Mondria as part of its “Sustainability Thinking Strategy”. The aim of this strategy is to stimulate one's own thinking on the subject of sustainability and thus to evoke a new, creative way of thinking that integrates both intellectual and emotional dimensions. *Solastalgia* is a relatively new concept for understanding the links between humans and the



© vog.photo

ecosystem's health. *BCI-Solastalgia* captures the subconscious reaction while participants look at pictures.

Ars Electronica Solutions (AT), g.tec medical engineering GmbH (AT) & Erika Mondria (AT)

Workshop: somagrid – Neuro Interactive Installation

Erika Mondria (AT), Marika Jasmine Grasso (IT)

Ars Electronica Center, Level – 3, Neuro–Bionic

Are technologies able to reveal more about your "true face" than you are yourself? The concept of *somagrid* aims to discuss the output of digital analytic grids analyzing body signals within the context of "cloud reliability", "biometric data capturing", and "AI-based technologies". Although sensors can be helpful tools for humans, the world is littered with digital sensors ranging from motion tracking in urban space to personal devices which capture vital parameters such as heart rate, pedometers or cerebral currents. How does the everyday use of these technologies affect body and mind? Can the body's perception shrink due to the constant use of sensors? Do people lose their sense of interconnected-

ness and thus their sense of their own veracity? In order to understand and reflect on the reciprocity of "intrinsic interaction"© (your thinking, your feeling, your bodily sensations) in relation to the use of sensor technology, *somagrid* invites participants to wear a brainwave interface while exploring the neuroaesthetics of textiles and experiencing tactile technologies. The result is an individual "neurophysiological print" that may reveal a story about yourself.

Neuro-Concept and project development, Neuro-interactive Performance: Erika Mondria (AT) WS-Performance, neuroaesthetics of textiles and tactile technology: Marika Jasmine Grasso (IT) Microprocessor Programming: Elena Falomo (IT)



© vog.photo



© Ars Electronica / Birgit Cakir

Live demonstration: Neuro-rehabilitation in the clinical area

Ars Electronica Center, Level – 3, Neuro–Bionic

Brain-Computer Interface (BCI) helps comatose patients to be able to communicate again. They are also used for the rehabilitation of stroke patients and, since 2023, for the rehabilitation of patients with multiple sclerosis (MS) as well. MS is a neurological disease of the central nervous system. Disease symptoms usually occur in episodes and are the result of damage to the

nervous system due to an autoimmune reaction. During a live demonstration of the "recoveriX" system developed by g.tec medical engineering, visitors can experience how the BCI and stimulation of the limbs work.

The visitors are invited to try out this BCI system on their own body during the live demonstration.

ARS ELECTRONICA FUTURELAB

What are the futures?

Text: Hideaki Ogawa

At the Futurelab, Ars Electronica's laboratory atelier, thirty-five individuals from around the world with diverse expertise creatively collide and mix art and technology to conceive future systems, create prototypes and implement them in society. Since 1996, the lab adjacent to the Ars Electronica Center — open to the public as “the museum of the future and the school of the future” — has been exploring the future of society by creating a “tangible future” and generating discussion about the changing nature of society in step with technological progress.

In the midst of serious global issues, such as pandemics, climate crises and wars, as well as dramatic technological developments, the Futurelab is taking on the following “creative questions for the future” through transdisciplinary collaboration with diverse partners, including artists, researchers, cultural and governmental institutions and corporations.

What is the future of education? What is the literacy and fluency necessary to understand, utilize and pioneer the future? How does the collision of data science and art change our perspective on the world around us and how can it help solve social problems? How can transparency and participation be built into the design of AI to promote behavioral change, and how can we collectively transform deep challenges that cannot be solved alone? What kind of artistic expression can bring awareness to the correlation between such issues as global climate change and local communities? What kind of artistic journalism reveals the logic of war? How can we deepen and nurture

“Art Thinking” to break free from conventional thinking?

What is the work of the future? If AI, robots, plants and microbes are part of the “team of the future,” what kind of buddies will they be? What kind of innovation will the mixing of traditional crafts such as origami with high-tech inspire? How will humans use digital avatars and how will they interact with multiple realities? What and how will we share in a hybrid space where virtuality and reality intersect? How will we use these technologies to transform the works of art that humans have created into new emotional experiences? What kind of media architecture takes advantage of the new nervous system of technology, and how will AR technology transform architecture and the role of architects? How can art and culture shape technology and what role can they play in society and policy in unpredictable futures?

At the Ars Electronica Festival 2023, we present artistic expressions, explorations and activities that respond to these questions: at the main venue POSTCITY, our exhibition Open Futurelab allows visitors to experience the Futurelab's latest creations, and in Ars Electronica Center's Deep Space 8K we showcase a future research report performance entitled Futurelab Night Performances.

The Ars Electronica Futurelab is a collective of creators and a do-tank to envision a new “hope” for diverse and pluralistic futures, to give form to that “hope” and to take action.

“The only thing you can create is the future. Anything else is already created.
And it will be created based on your decisions.”
Horst Hörtner, Co-founder of Ars Electronica Futurelab



Framing Futures Research

New domains for Art-Science Research at the Futurelab

Text: Matthew Gardiner

The Ars Electronica Futurelab constantly challenges itself to engage the future through questions and new models for framing these questions. Our new Research Domains System frames, explores and uncovers fresh questions that align with our self-funded business model and anticipate the future for our collaborative partners.



© Brigit Cakir

Art and science exhibit parallel themes, but their relevance subsides when surpassed by the unexpected or when they achieve ubiquitous success. However, our Art Thinking method remains constant in crafting well-framed creative questions. Each of the following paragraphs outline one of the fluid and evolving domains, framed by questions, serving as open directions for future research. Our world is moving towards immense challenges. In an uncertain future, how do we maintain our creativity and optimism? The arrow is a candid metaphor: a compass pointing towards the future and changing moment by moment. Which compass point do we follow next? The direction swings radically depending on which topic you raise: ethics, governance, identity or survival. Learning to find a shred of optimism in the face of the challenges facing humanity is something that UNESCO named Futures Literacy. Literacy is learning to read and write at a basic level: training the human imagination to navigate and create new narratives that counter, adapt and overcome these challenges. Society needs to be literate, but how do we bring humans beyond literacy towards Futures Fluency and Virtuosity? Computation keeps evolving in speed and complexity, thanks to the pioneering work of

visionaries such as Alan Turing and Grace Hopper and thousands of subsequent leaps in software and hardware. Networks and computation play a vital role in the digitization of society. Computation moves with us daily, affording a spectrum of banal and radical movements in social media and businesses that never close, and now Generative Pre-trained Transformers are entering into widespread public usage. In the absence of ethical frameworks to oversee AI's decision-making, how will we navigate our humanity?

Does the current era involve negotiating with computation, where conversational language surpasses programming? As AI systems become increasingly human-like, how does this reshape our perception of human identity?

New systems for visualizing computing environments transform our daily experience. Parallel realities are continually emerging, such as Virtual, Extended, Spatial and Augmented Realities. How will these new intersections with our "real" reality shape daily interactions with other humans and avatars? Identity, privilege, gestures, location and protocols come under question. Gaming and tech companies offer us new spaces via new technologies. Our past innovations, extended multi-user experiences such as Spaxels and Deep Space, have sparked new artistic and cultural enterprises. How do we critically engage new spatial and social intersections with art and society at the core? Eric Drexler predicted an era of nanotechnology; where material is assembled atom by atom, paper folds itself into origami robots and seeds grow into city-like ecosystems. These lofty concepts exist in a future where materials are programmable; however, the reality for artistic work is far more grounded. Crafting remains handwork as thinking, augmented by

digital fabrication, electronics, brain-computer interfaces, biosensors, pipettes and primers ordered from labs. Where do we keep a hand in the process and where do we let natural or artificial systems take over? How can new materials and methods influence and shape our ecosystem? Finally, we face a necessary paradigm shift in thinking from human-centered to planet-centered. Where every existential problem comes to the fore; resources, food, water, climate change, extinction and so on. We know, we all know.

Our creativity must be circular, thinking in a cycle from birth to death. We can learn so much from nature, a biolab is a vital artistic tool! Art has the capability to shape and influence culture. What can we learn from art for shaping the behavior of individuals, corporations, societies and governments toward a sustainable, equal and diverse future? To reiterate, this is work in progress, expect these domains to evolve towards an open membrane to provoke our collaborators towards co-creating our collective futures.

Ideas Expedition

The Ars Electronica Futurelab Ideas Expedition is an internal competition to encourage internal talents and collaborations for developing ideas for future projects without being limited to existing research areas of the lab. This year's winners are *Bridge 2040* and *Deep Sync*.

Bridge 2040

Denise Hirtenfelder, Peter Haider, Nicolas Naveau, Maria Pfeifer

A good conversation can be inspiring, engaging, comforting and educational at the same time. Whether it is with someone who has decades of experience, knowledge and memories to refer to or with someone who has a fresh and unprejudiced perspective on the world. To connect two integral parts of society often forgotten in public discussion we want to establish a dialogue on future issues between the young and the old in our society. To initiate this discourse between the two generations, the Ars Electronica Futurelab has chosen a playful approach and created *Bridge 2040*—a quick card game as a bridge to the future. Whether it is an everyday story, a thriller or a future adventure, each player draws cards and creates within a team a story around fictional characters living in the year 2040. In the process, participants respond to trends, artworks and questions on the individual cards they picked. The game is played in groups of four people of different age groups, ideally two youngsters (8 to 15 years old) and two seniors (65+ years). There are three types of cards on three piles on a board.

The older player starts by drawing a person card and a meta card. The person card describes a fictional person around whom the story revolves. The meta card sets a theme and the beginning of the story. After a few minutes, impulse cards are gradually drawn — with facts, artworks with potential for the future and questions that move the narrative forward. Whether *Bridge 2040* is played as a card game or an intergenerational workshop, there are no right or wrong answers — the goal is to create possible future scenarios together and value each other's contributions.



© Denise Hirtenfelder

Deep Sync

Susanne Kiesenhofer, Anna Oelsch, Daniel Rammer



© Susanne Kiesenhofer

Deep Sync creates an interactive playground for sound and visuals in the immersive Deep Space 8K environment, inviting visitors to experiment with the correlation between psychological and physiological processes. At the center of attention is each person's heartbeat represented via artistic sonification and visualization. In this way, this Ars Electronica Futurelab's Ideas Expedition project connects human biological signals with technological and conceptual innovation.

“Rhythm is sound in motion. It is related to the pulse, the heartbeat, the way we breathe. It rises and falls. It takes us into ourselves; it takes us out of ourselves.”
Edward Hirsch

Each person's heart rate influences the application, resulting in visible and audible changes that have an impact on the collective state of the group. At the same time, the surroundings affect each individual, changing their emotional and physical states. Due to the complex interrelations, the experience is unique and personalized for each visitor constellation. As a platform for bio-data exploration, *Deep Sync* also creates a research environment to advance our society's ability to better understand our physiological responses. The audiovisual experience is not only an invitation for self-exploration but can possibly also be used in the context of stress management or as an anxiety or meditation tool.

The *Deep Sync* concept also opens up new possibilities for behavioral research of group dynamics, for instance, for team building occasions, as well as for studies of content perception on a biological level. *Deep Sync* invites every participant to wear their heart(beat) on their sleeve for thirty minutes to explore the possible change in interrelations with other group members. By taking heart in making the invisible visible, it paves a new way for experiencing collective synchronization on an unconscious level and encountering a new depth of empathy in the process.

PROJECTS

Faust VR

Salzburg Festival (AT), Ars Electronica Futurelab (AT)

Text: Margarethe Lasinger (Salzburg Festival), Peter Freudling (Ars Electronica Futurelab)

In 2023, the theater world celebrates the 150th birthday and 80th anniversary of the death of Max Reinhardt, one of the most famous German-speaking directors and producers of the twentieth century. The Salzburg Festival commemorates the theatrical magician by recalling one of his best-known projects:

Goethe's *Faust* (1933–1937) — the last production that the director and Festival co-founder realized at the famous venue Felsenreitschule in Salzburg.

The virtual recreation of the *Faust* setting will be part of the three-part exhibition *The Enchanting Reality of Theatre* during the Salzburg Festival,

placing Reinhardt's *Faust* project in a political-historical, social and theatrical context, exploring the historical caesuras of 1933 and 1937/38. One part is *FAUST 2023 – A performative Tour* — a special project that brings together analog stage and virtual realities in a performative, multi-perspective tour. The Ars Electronica Futurelab part in bringing Reinhardt's production of *Faust* back to life is the virtual reality application *Faust VR*: by recreating the stage design of the original production — the Fauststadt — an entire town in which the whole play could be performed without set changes. With all the sets constructed next to and on top of each other, it was the purest form of a multi-stage setting. Wearing VR goggles, visitors to *FAUST 2023* enter a reconstruction of this unique stage design in the Felsenreitschule, right on set. They take on unique positions there: between audience and actors, they travel through the town originally designed by Austrian architect Clemens Holzmeister. Margarethe Lasinger from the Salzburg Festival has developed a dramaturgy that leads visitors to key elements during a ten-minute interpretation of the play. Light and music play an important role in this — as in Reinhardt's open-air production 90 years ago. You will visit Faust's study and witness Walpurgis Night as well as the dance under the linden tree.

For *Faust VR*, the Ars Electronica Futurelab developed abstract elements that embody the necessary roles and their respective characters. And just like in the real play, dynamic light plays an important role to guide the audience's gaze and direct it to the desired positions in the virtual set. The music was created and produced by composer and musician Hannes Löscher. Ambient sounds as well as spatial sound elements enhance the storytelling and the immersive experience of the play.

The reconstruction of the city was based on plans, recordings and other documents from the archives of the Salzburg Festival.

A large number of photographs were perspective corrected and partially enhanced with AI support, so that the original photographs could be used as textures on top of the manually created geometry. In this way, the attention to detail of the original stage design was reconciled with the technical limitations of the VR glasses' onboard GPU. The Ars Electronica Futurelab incorporated its many years of expertise in virtual reality and stage productions from past projects. A special immersive presentation in Deep Space 8K at the Ars Electronica Center during the Ars Electronica Festival rounds out the collaboration and points to the exhibition in Salzburg, which will already be open for visitors.



© Ars Electronica Futurelab



© Ars Electronica Futurelab



Historical photo of Fauststadt; Archives of the Salzburg Festival; Photo Ellinger

missimo: Deine Mission Morgen

Kaiserschild Stiftung (AT), Ars Electronica Futurelab & Ars Electronica Center (AT)

Text: Denise Hirtenfelder, Stefan Mittlböck-Jungwirth-Fohringer

missimo: Deine Mission Morgen is a project founded by the charitable private foundation Kaiserschild Stiftung for children aged eight to ten in Austria: it offers a playful hands-on learning experience on STEAM, delivered to schools in rural Austria via truck.

The Ars Electronica Futurelab's tasks in the realization of *missimo* ranged from the development of the didactic installations and workshop kits, from choosing the equipment as well as the technical infrastructure to the entire usability and graphic design. The *missimo* experience starts with a teacher training session, then the *missimo* truck visits the primary school. Six main installations that provide different learning experiences and narratives reside inside the truck. At the center is a microcontroller — a so-called micro:bit — for each child. Inside the micro:bit “lives” an avatar that can be personalized and accompanies the students from station to station.

On their journey through the main installations, the children can customize the LEDs on their micro:bit, build circuits with motors, solve labyrinths by programming their virtual robot, train an AI via webcam for a game of rock paper scissors and learn about different sensors by caring for plants in a playful way. As a special keepsake, they can also take home a snapshot of themselves and their robot.

Finally, a workshop kit is distributed to the school classes. This kit contains components that enable experiments and trials to be carried out in class — closely linked to the information and simulation possibilities in the truck. *missimo* will be operated by the Kaiserschild Stiftung for several years, supported by the Ars Electronica Center — to bring the fun of learning and low-threshold access to technology even closer to elementary school students all across Austria.



© Kerstin Blätterbinder



© Raphael Schaumburg-Lippe

SHARESPACE

Text: Cynthia Wieringa

How could humans use digital avatars in the near future? How can we engage in social situations that include both human and digital avatars? And what technology do we need to explore these “hybrid” spaces together? This is what *SHARESPACE* is all about — a European R&D consortium consisting of fourteen partners from eight different countries, including the Ars Electronica Futurelab. The main goal of the project is to bring extended reality (XR) to a radically, ethically sound, new level of presence and sociality by furthering the possibilities of interaction in a virtual space using avatars. In total, two university hospitals, three universities, five research institutes and four companies will participate in the three-year-long research project running from January 2023 until December 2025. The backbone of the *SHARESPACE* project is the development of so-called Shared Hybrid Spaces (SHS). These are spaces that are shared by humans and avatars where both are engaged in embodied collaborative tasks.

This is made possible by transparently capturing social sensorimotor primitives through mobile connected innovative sensors, and then reconstructing and further processing them using novel XR technology.

The technology will be applied in three real-world use cases: health, sports and art. The Deep Space 8K located at the Ars Electronica Center will function as the backdrop in which the art use case will be explored. Over the course of the project, three artistic performances for the Deep Space 8K are going to be developed with the *SHARESPACE* technology.

They will be presented during the Ars Electronica Festivals 2024 and 2025. One is developed by the researchers from the Ars Electronica Futurelab, and two are developed by invited artists.

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement No 10192889.

Oribotic Instruments

Text: Matthew Gardiner

© Matthew Gardiner



Our question for this work, What happens to our experience of space when we fold sound? is situated in our research into fundamental artistic methods for origami and robotics, following our central theme of Fold Sensing. Our conceptual approach is to invent foldable musical spaces rather than linear musical scores. The performer can explore the musical volume using choreographed folding paths and geometric gestures. Our themes express ideas of natural folding. Collapse and Crumpling: where the multiplicity of simultaneous folds feels chaotic, intense and mechanistic. Force + Geometry: leans towards the spatial, sparse and harmonies of synthetic sound.

Technically, the instruments are layered electronics and textiles. The main elements are a capacitive sensor array from printed circuit board electrodes crafted as kinetic origami structures. The fold angles are captured in real-time and conveyed through a normalization algorithm that adjusts for the non-linear capacitive response to the fold angle. These parametrized folded structures offer new affordances to interact, play and perform by contracting and expanding the fold geometry. Our experimental results show new expressive possibilities of folding and insights into fold gestures. We envision *oribotic instruments* as a form of robotic sculpture, where the program of folded geometry constrains the human-hand movements, and as a form of spatialised musical expression.

This project is funded through the FWF Austrian Science Fund, PEEK Program, as project AR590 Ori*botics On the Art and Science of Origami and Robotics.

Ori Shelter

Project by Chiara Croci

Chiara Croci is a Research Assistant at the Ars Electronica Futurelab working in Origami and Robotics research. She has a background in Industrial Design, and after finishing her studies at the University of Ferrara, she is now enrolled at the University of Johannesburg. The topic of her thesis is computational origami and digital fabrication.

Ori Shelter combines origami and social innovation with digital fabrication — creating affordable, flat packable and self-sustained habitations. Its shape resembles a small house, creating a sense of welcome, appreciation, empowerment and maybe even home in extreme situations. The inspiration belongs to the charm of folding techniques, where a flat surface is given strength and stability through pleats, being transformed into a three-dimensional object.

Furthermore, implementing origami in digital fabrication and computation creates an innovative research field with multiple application use cases. Originally designed for the South African Reconstruction and Development Program, the product now aims to solve issues of homelessness and emergency situations, such as natural disasters and political conflicts. The *Ori Shelter* is sustainable: it reuses trucks' PVC covers and other recycled materials.

Moreover, there was a thorough study concerning design for disassembly and ensuring that at the end of its usage, the shelter is, in turn, recyclable. The base textile protects from the outside climate and ensures privacy, while the solid tessellation provides structure and stability. The manufacturing process can be adapted to different levels of technology, including basic production methods like carpentry as well as more advanced techniques such as 3D printing and laser cutting. The main requirements for the final product are privacy and empowerment. For this reason, *Ori Shelter* can be easily fixed and serviced by the users themselves.



© Chiara Croci

Future Team Project

Ricoh Co., Ltd. (JP), Art and Program, Inc. (JP), Ars Electronica Futurelab (AT)

Text: Kyoko Kunoh, Yoko Shimizu



© Nicolas Naveau

well as an increase in remote collaboration. In this new era, how can we ignite creativity, foster collaboration and cultivate exceptional teams? Moreover, future teams may include non-human members, encompassing various organisms such as microorganisms and plants, advanced technologies such as robots and AI and even the Earth's environment. It is crucial to build inspiring, caring and sustainable relationships with these entities, and adopt a perspective that

Ricoh, Art and Program, and Ars Electronica Futurelab launched a collaborative research project in August 2022 with the mission to inspire and support human creativity in the future workplace. The project aims to develop innovative technologies, spaces and services that enhance team creativity and foster mutual care among future teams. As society and technology rapidly evolve, they reshape the way we work. We are experiencing a rise in global and diverse co-creation, as

extends beyond the human-centered approach. By developing innovative technologies and services as a new language for communication, work transcends its traditional economic role and becomes a source of creative inspiration, leading to "Fulfillment through Work."

*Ricoh Co., Ltd.: Ricoh is a global provider of digital services, printing and imaging solutions. / *Art and Program, Inc.: Art and Program is a company of creators who use the technique of programming to create art.

Data Art & Science Project

Toyota Coniq Alpha (JP), Ars Electronica Futurelab (AT)

Text: Hideaki Ogawa

© Ars Electronica Futurelab/Peter Holzkorn



We are living in the midst of a dramatic transformation of everyday life and society brought about by the digital revolution. Our daily activities and the various events and environments that surround us generate vast amounts of data. “Data science,” the exploration of its use, and the “data scientists” who specialize in this field are becoming increasingly important in order to discuss what data is for, who it is for in the first place, who owns it, and who can turn this new shared value into solutions for various social issues. The Ars Electronica Futurelab, in collaboration with Toyota Coniq Alpha in Japan, is envisioning

“Data Art & Science,” a new interdisciplinary field that incorporates artistic perspectives on future transformations based on data science.

In this project, we will collaborate with artists and data scientists to prototype projects that embody Data Art & Science using the Ars Electronica Center’s immersive environment, the Deep Space 8K. Through this process, we will research a curriculum for learning in this field. Based on the results of this research, we plan to design an educational program in collaboration with universities that have a data science faculty and conduct a demonstration experiment. The new art-science professionals that will emerge from this field are the innovators of the future. They will use data to understand the meaning of the world around us, conceptualize this new meaning through art, and put it into practice in future society.

By creating such next-generation experts, we hope to solve some problems facing Japan and the world and promote change toward a better future society.

Deep Space 8K Program Collaborators: Akiko Nakayama, Quadrature, Akira Wakita, Technical University Graz

Collective Transformation Lab

Godot Inc. (JP), Ars Electronica Futurelab (AT)

Text: Denise Hirtenfelder

© Patrick Berger, Nicolas Naveau



Think slow, act fast. This is the mantra of the *Collective Transformation Lab* — an enlightening self-reflection platform established as a collaboration between Godot and the Ars Electronica Futurelab. As a multi-year collection of different prototypes, in which a new piece is added annually, the goal of the platform is to deeply understand human behavior and to stimulate collective transformation by overcoming biases through the transparent and humane use of AI. *Anatomy of Nudging* is the first installation presented at

the Ars Electronica Festival 2023 within the framework of the *Collective Transformation Lab*. The ambition is to demonstrate the transparency of Godot’s application NudgeAI and to provide users with a trustful approach to artificial intelligence in which they themselves become part of the process.

NudgeAI encourages behavior change in individuals by approaching them with personalized messages generated by data that reflects people’s behavioral patterns. This allows providers to target individuals with interventions that effectively influence their decisions while staying respectful to their freedom of choice. *Anatomy of Nudging* asks visitors of the Ars Electronica

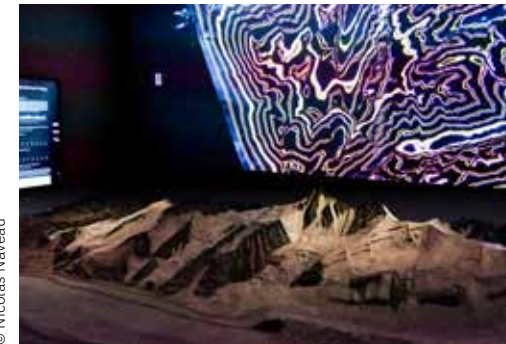
Festival to accept a challenge in which they nudge strangers to carry out a task. They themselves, as “Nudgers,” shall feel safe to step out of their comfort zone and encourage someone else — the “Nudgee” — to reflectively change their behavior towards social challenges of the twenty-first century by performing a micro-action. The goal is to make the Nudger as well as the Nudgee experience a sense of achievement for overcoming a personal barrier. Finally, by contributing, participants not only get a personal reward for adding their micro-action on the “Wall of Nudge” of the installation, but also take part in a collective effort to nudge Godot to try something new and make a social statement.

Glockner.Luft.Raum

kärnten.museum (AT), Ars Electronica Futurelab (AT)

Text: Peter Holzkorn

© Nicolas Naveau



Glockner.Luft.Raum is an approximately fifteen-minute data-based generative sequence that makes the complex connections between global climate change and regional weather kitchen in the Austrian Glockner region visible, audible and tangible. For this purpose, weather and climate data are displayed with artistic visualizations on a 9x3-meter wall projection, accompanied by an atmospheric soundscape that is influenced by current weather data.

The project was developed by the Ars Electronica Futurelab for the kärnten.museum in Klagenfurt, Austria, and opened on November 20th, 2022, on the occasion of the museum’s redesign.

A historical relief of the Glockner region “floats”

in the center of the experience space, defining the room with its three-dimensional presence. In combination with the wall projection, an infoscreen, digital sound and a wind harp, *Glockner.Luft.Raum* is an immersive experience which makes historical and live weather data as well as the current wind conditions artistically tangible. Four scenes are presented: “Warmth — A Space of Colors,” “Wind — An Ocean of Streams,” “Precipitation — A Universe of Energy,” and “Flight — A Change of View.” “Warmth,” “Wind” and “Precipitation” represent animated atmospheric images from weather data, while “Flight,” as the contrast and end point of the sequence, accompanies a bearded vulture living in the region on its journey. Depending on the scene, data occurs in different temporal and spatial scales, but all of it is dynamically retrieved and used as a raw material for the generative visuals. All data has a strong regional reference: most of the weather data comes from Döllach, an inhabited place in the Glockner area, the infoscreen additionally shows values from Klagenfurt for comparison. Historical and current weather data comes from the open data hub of ZAMG, particulate matter measurements are provided by the state of Carinthia.

AT&S New Working World

AT&S (AT), Ars Electronica Futurelab (AT)

Text: Peter Freudling



© Ars Electronica Futurelab

AT&S, founded in Austria, is a leading supplier of high-end printed circuit boards and substrates for semiconductors. The Ars Electronica Futurelab was invited to contribute to the concept of the *New Working World* — a new hybrid production and office building that also houses a visitor center—in Leoben-Hinterberg.

In order to externalize internal processes and underline AT&S's core business — making connections — the Futurelab created the permanent installation *Nervous System*: A metal structure

with LED strips winds its way through the building. The light signals running along the tracks — which are designed to look like circuit board layouts — represent the traffic inside the building in real time, captured by the Futurelab's own *pharus* tracking system. Punctual screens on the tracks act as a signal decoding layer, revealing interactive applications that provide information about the company as you approach them. The applications allow visitors to learn about the company's history and milestones, its people and key figures. The aim was to create a large-scale but subtle and sustainable way of integrating information displays into the architecture. The structure is extended in a similar, but analogue way on the façade on the outside of the building, also forming a tree-like sculpture right in front of the entrance. Another key part of the Futurelab's work is a projection environment that displays an interactive journey through circuit boards in real-time 3D. Visitors can experience the basic building blocks and functions of AT&S's core products.

Objection

Residency by Tom Bogaert (BE)

Having artists and researchers from all over the globe collaborating with and taking residencies at the Ars Electronica Futurelab is of great importance to the laboratory and atelier for future systems. This year's resident is Tom Bogaert, who came to art after a career as a refugee worker with the United Nations and Amnesty International. His artistic practice is structured around in situ projects that examine the intersections of politics, entertainment, technology, art and propaganda.

Bogaert is a conscientious objector who is fascinated by the ease with which the logic of war has infiltrated our daily lives. His residency project at Ars Electronica Futurelab aims to explore our relationship with the order of things that we have been taught and sold through the lens of multilateral propaganda in the context of Russia's invasion of Ukraine. The artist seeks to bend technology and engages with weaponry within a discourse of refusal, viewing it both as an act

of protest and a generative process of renewal. During his time at the Ars Electronica Futurelab, he hacked weapons, strategies, industries and geopolitics — and called it art. Field research included a visit to the arms fair IDEX in Abu Dhabi where he was struck by the normality of the event. Drawing inspiration from the Stockholm Peace Institute's Top 100 arms producing companies list, he invested a portion of his grant money in acquiring shares in these companies.



© Created with the AI system Dall-E-2

By leveraging the resulting profits, Bogaert aims to further materialize his hacking plans. At the Ars Electronica Festival, the artist unveils the interface of his online brokerage account to the audience. Alongside it, he showcases prototypes and AI generated imagery of hacked weaponry, including tear gas canisters with blueberry flavored smoke, bullets with built-in painkillers, firework bombs that seem to make buildings bleed, snow cannons instead of water cannons and more.

This project is funded by the Flemish Ministry of Culture, Youth and Media.

Ars Electronica Japan

Text: Kyoko Kunoh, Hideaki Ogawa, Yoko Shimizu



Matsudo 2022 © Ayami Kawashima

Shibuya, Tokyo, with the goal of fostering creative transformation in the area. Other unique programs, including collaborations with Knowledge Capital in Osaka, are realized to further enrich the cultural landscape.

Corporate Collaboration

Through consulting, research, and development, Ars Electronica Japan collaborates with corporate partners, incorporating artistic perspectives to identify issues and implement prototypes in society. These partners include Ricoh, APRG, Godot, as well as Hakuhodo — the projects will be displayed at the Ars Electronica Festival this year.

Educational Initiatives

In the field of education and academic research, Ars Electronica Japan nurtures cultural talents and conducts specialized research. Futures Literacy lectures are provided to the next generation of art and science students at the Art Science Department of Osaka University of Arts. Additionally, through its collaboration with Toyota Coniq Alpha, a group company of Toyota Motor Corporation, Ars Electronica Japan explores the concept of Data Art & Science, incorporating an artistic perspective into the field of data science while also developing educational programs.

Ars Electronica Japan strives to cultivate a creative ecosystem that actively engages citizens, artists, educational institutions, government agencies, and businesses in shaping future society together.

Cultural Initiatives

These activities aim to bring the inspiration of Ars Electronica to Japan while creating cultural platforms for discussing the future of society with artists and citizens. The Matsudo International Science Art Festival showcases cutting-edge projects at the intersection of science and art through an annual festival, engaging citizens in the process. In collaboration with the Tokyo Metropolitan Government, Civic Creative Base Tokyo (CCBT) was launched in 2022 as a new cultural hub in



Art Thinking Japan © Denise Hirtenfelder

Art Thinking Japan Initiative

Hakuhodo Inc. (JP), Ars Electronica Futurelab (AT)

Text: Denise Hirtenfelder, Hideaki Ogawa

Before industries come up with creative solutions, people have to come up with creative questions. Stimulating a dialogue around critical questions on future challenges and thus making artistic thinking a crucial element of Japanese industries, has been the goal of the collaboration between Hakuhodo, a Japanese integrated marketing and innovation company, and Ars Electronica since 2014.

In present times, Japanese businesses are facing rising uncertainty, prolonged economic stagnation and increasingly complex and sophisticated management issues. The need for a new corporate culture to promote collective and organizational transformation is intensifying. In this constantly transitioning economy, new creative strategies must therefore be developed. Hakuhodo and Ars Electronica respond to this situation with *Art Thinking Japan Initiative* – a fresh-minded platform that nourishes creativity in Japanese industry. This cutting-edge collaboration evolving out of a deep-rooted partnership is focusing on the

design process of unique solutions empowered by creative questions that combine proven “Art Thinking” strategies, encountering future issues without being bound by conventional wisdom and societal norms, with Hakuhodo’s strength in “People Thinking” and “Design Thinking” to tackle social challenges at their core and create a new vision for humanity.

This fusion of emerging insights and established strategies will form a community based on the Art Thinking Forum – a platform for art and business in Japan, to share the latest Art Thinking knowledge and practices widely.

But the *Art Thinking Japan Initiative* is not only meant for exchanging already existing practices. Through broad impressions from various fields, this project also aims at researching and developing tools and environments to constantly refuel the field of Art Thinking with new impulses. By blending these innovations, the project will explore “Future People Thinking” and make it accessible to a diverse audience.

Open Futurelab & Futurelab Night Performances

Text: Bernadette Geißler, Anna Oelsch

The Open Futurelab creates a space for encounters, exploration and engagement at the entrance to POSTCITY. This Ars Electronica Futurelab exhibition and platform area invites you not only to connect with our team and partners but even more, to engage with many other visitors via daring creative questions and participatory installations. By presenting our artistic research and demonstrating innovative prototypes, the Futurelab encourages all visitors to approach their perspective on the futures-to-create from different angles and seek a future compass for our society. Futurelab Tours guide visitors through the multi-layered experience space in a sustainable and playful design, highlighting diverse projects to provoke collective dialogue.

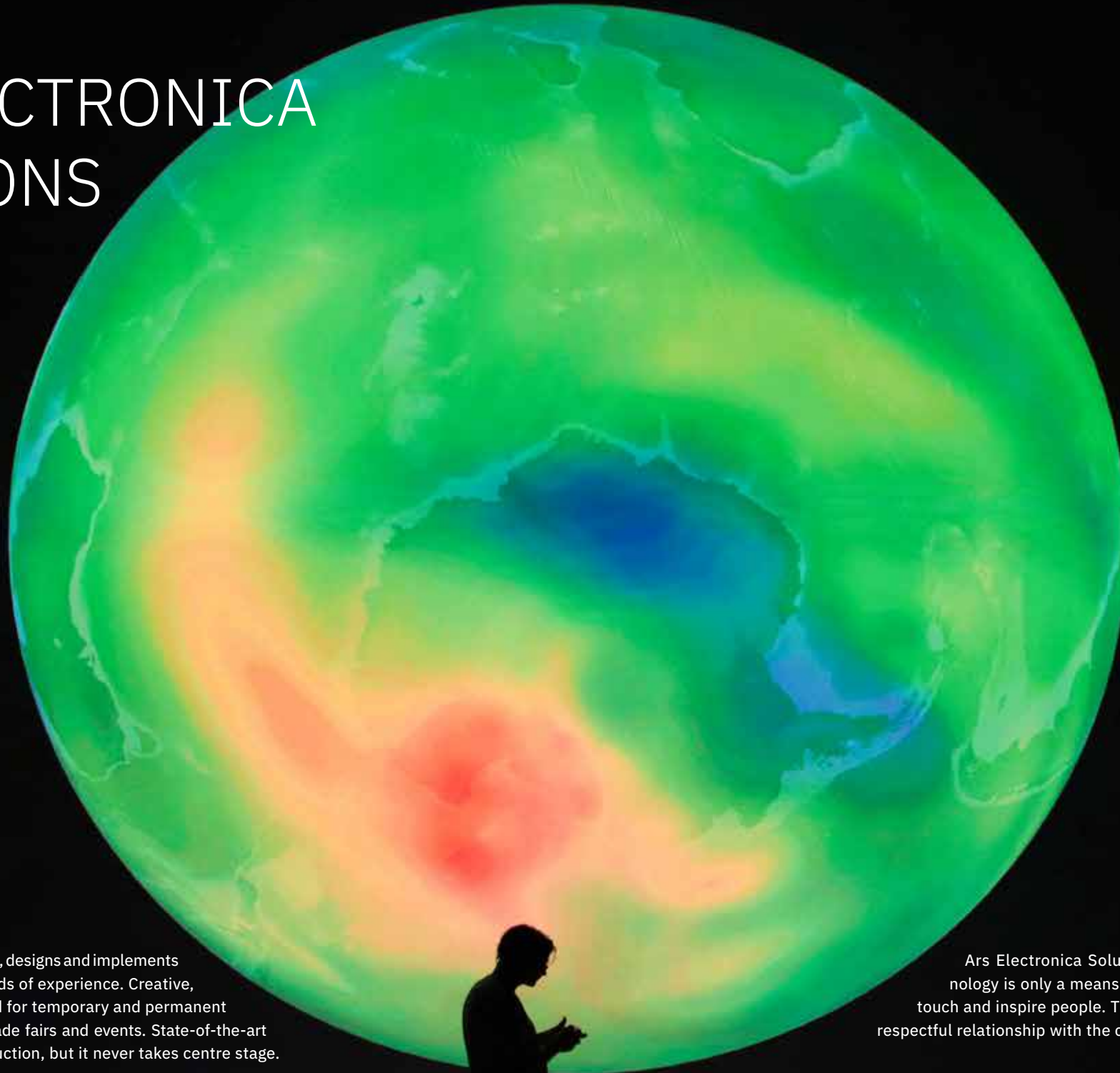
One of the areas at the Open Futurelab is filled with the Future Team Project: imagining a future where humans and diverse beings from microorganisms to plants, robots and AI work together as a team. In prototype demonstrations and the visitor experience, three buddies bots with different languages – sight, smell and hearing – are being presented. Two of the projects featured at the Open Futurelab are born out of the internal Futurelab Ideas Expedition: With *Bridge 2040*, visitors can experience our brand new card game to bridge generations and find new inspiration for the futures to be. The second project is *DeepSync*, an innovative application for the Ars Electronica Center’s immersive experience space Deep Space 8K that can also be tested at the Open Futurelab. With each person’s heartbeat sonified and visualized, *DeepSync* provides a unique opportunity for self-exploration and group experiences, opening up questions about empathy and human synchroniza-

tion. *Anatomy of Nudging*, the first installation of the project *Collective Transformation Lab*, invites festival visitors to accept a challenge in which they “nudge” strangers with the help of *NudgeAI* to carry out a task. The goal is to step out of one’s comfort zone, to gain a sense of achievement for it and to earn collective points in the process. Visitors will also be able to experience music in a new way with *Oribotic Instruments* that consist of layered electronics and textiles. *Ori Shelter* is also part of the Open Futurelab: It combines origami with social innovation and digital fabrication to create affordable habitats for extreme situations. As part of the *Data Art & Science Project*, visitors can watch five different artistic explorations that combine data art and data science. These artistic visions will also be part of the live *Futurelab Night Performances*. The *Futurelab Night Performances* will once again fill the Ars Electronica Center’s Deep Space 8K with an electrifying atmosphere on Saturday night. The doors are open to the public for an exclusive view of the Ars Electronica Futurelab’s latest artistic projects. Visitors can enjoy a wide range of experiences in this unique immersive environment circling around visualized sound, sonified biodata and experimental live visualizations.



© Philipp Greindl

ARS ELECTRONICA SOLUTIONS



Ars Electronica Solutions conceives, designs and implements interactive and multisensory worlds of experience. Creative, individual solutions are developed for temporary and permanent public exhibitions, brand lands, trade fairs and events. State-of-the-art media technology is used in production, but it never takes centre stage.

Ars Electronica Solutions always makes sure that technology is only a means to an end in order to tell stories that touch and inspire people. The goal is to build an empathetic and respectful relationship with the client's audience and their projects.

Ozone Concentration

100 Du Units (DU) 600

Ars Electronica Solutions @ Festival 2023

One of the core competencies of Ars Electronica Solutions is to promote the transfer of knowledge from the worlds of science, business and culture to the general public and vice versa. In projects with customers and partners all over the world, Ars Electronica Solutions seeks to contribute to the accessibility and democratisation of knowledge regardless of cultural background, social class or educational level. The result is a dialogue between these institutions and the public as well as a mutual exchange of ideas, insights and perspectives. On this basis, Ars Electronica Solutions is collaborating with various partners, especially from the scientific community (ESA, Climate

Office, FFG, etc.), to create an installative and interactive encounter zone for the Ars Electronica Festival 2023 that is intended to provoke thought and raise questions about the transmission and appropriation of knowledge. For this exhibition, AES is drawing on the savoir of its past projects and the different perspectives on the complex challenges of knowledge transfer associated with them. The aim is to create a space for storytelling, discussion and experience. During the Festival, the Ars Electronica Solutions exhibition will host salon discussions with a limited number of participants on the background of the projects presented.

In addition to “Sustainability Thinking” and “Digital Transformation,” “Science Experience” was developed as an experiential approach to conveying primarily scientific content. In close cooperation with scientific institutions, Ars Electronica Solutions has set itself the task of creating immersive experiences that convey knowledge. “Science Experience” is designed to inspire people of all ages and backgrounds with an exciting and accessible approach to science. Complex topics are communicated in a vivid, playful and understandable way, raising awareness of

the importance of science. Only a well-informed and mature society can meet the great challenges of the future.

“Science Experience” is not limited to individual installations but is developed as an overall production. In addition to aesthetic and logistical aspects, a variety of other components are considered. These include not only lighting, sound and interior design, but also aspects such as color scheme, materiality, indoor climate, ergonomic design and the integration of modern technologies.



Science Experience

Ars Electronica Solutions always includes the areas of “Sustainability Thinking” and “Digital Transformation” in its projects. In the area of “Sustainability Thinking”, Ars Electronica Solutions brings together current discourses from the worlds of business, science, society and the arts to promote sustainable thinking in a way that is appropriate to its target audiences and to

develop innovative mediation and communication strategies. In the area of “Digital Transformation”, Ars Electronica Solutions acts as a mediator between analogue and digital technology in art, science and business. The goal of Ars Electronica Solutions is to master the complexity of digital transformation and to help shape future developments in an inspiring and motivating manner.

Glacier Retreat / Ars Electronica Solutions © Ars Electronica / Martin Hiesmar



ESA STAE © Ars Electronica Solutions / Isabel Schöimbauer



JRC © Ars Electronica Solutions / Isabel Schöimbauer



Deep Space as a customized solution for international customers

Deep Space at the Ars Electronica Center is an integral and prominent part of the museum's operations and the Ars Electronica Festival. It leads to increased international interest on the part of science centers, museums or edutainment organizations in having their own Ars Electronica

Deep Spaces. Ars Electronica Solutions has developed a marketing and implementation strategy on behalf of Ars Electronica and has already realized two Deep Spaces in Mexico and Switzerland. Additional Deep Spaces are currently in the planning stage.

Uniview 3.0 © Ars Electronica / Robert Bauernhansl

For potential Deep Space customers, Ars Electronica Solutions works out usage scenarios, spatial planning and integration into the existing or new environment as well as the technical infrastructure prior to the actual implementation. In addition, Ars Electronica Solutions offers intensive support in the selection and development of content, advises on programming and ongoing operation and provides maintenance services.

In addition to its powerful visualization capabilities and immersive group experiences, Deep Space is characterized by its interactivity, its guided experiences, its rich content catalogue and its adaptability to a wide range of audiences. It is adaptable and scalable for the operator, both technically and in terms of content, and as a platform offers an easy way to develop and integrate local content.



Das Morgen © Florian Voggenreder



Uniview3.0 © Ars Electronica / Robert Bauernhansl

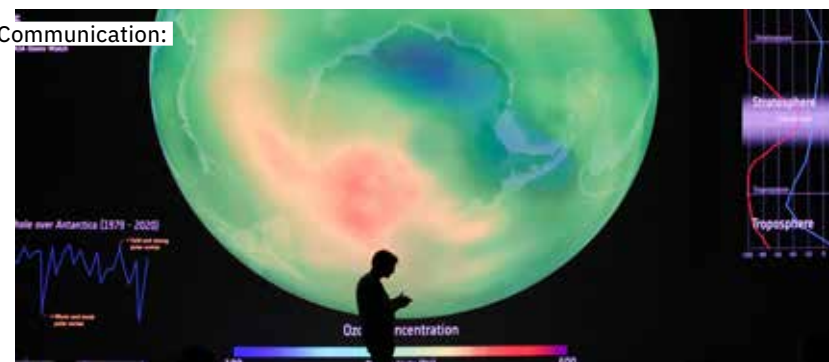
Many Possibilities

Arts & Culture:



Magische Strömungen © Florian Voggenreder

Science Communication:



ESA Earthfrom Space © Ars Electronica / Robert Bauernhansl

Entertainment:



DS GameChanger FishFeast FH Hagenberg © Ars Electronica / Robert Bauernhansl

Privat & Corporate Events:



Vierwaldstättersee © Florian Voggenreder

PROJECTS

DAS MORGEN

Ars Electronica Solutions has developed a state-of-the-art interactive multimedia hall for the newly built Hotel DAS MORGEN in Vitznau, Switzerland.

The versatile room serves not only as a foyer for the adjacent chamber music hall, but also as a stand-alone event venue. Nineteen projectors cover the main wall, floor and side walls on the ground floor, and a 3D audio system provides an immersive listening experience. The multimedia room is based on Ars Electronica's advanced Deep Space 8K technology and is compatible with

the existing Deep Space 8K at the Ars Electronica Center to enable content sharing. In addition, two custom applications have been developed: *Call to Echo* responds in real time to and visualizes artistic yodeling recorded at the Lucerne School of Music, while an interactive application allows visitors to explore Lake Lucerne and the surrounding landscape. The opening weekend showcased the many uses of the multimedia hall, both as a foyer for concerts and for future events and functions. The opening demonstrated the great potential of this multi-functional space.



Das Morgen © Florian Voggenreder

SIAE 2023 – ESA

The SIAE – Salon International de l'Aéronautique et de l'Espace in Paris, Le Bourget, is one of the world's largest aerospace trade shows with 2,453 international exhibitors and almost 150,000 visitors. At this event, the European Space Agency (ESA) presented its central tasks and missions in the Space Pavilion and introduced all ESA directorates. The exhibition, created by Ars Electronica Solutions as part of the "Science Experience", combined scientific and technical

artefacts, interactive digital elements as well as light and sound to create an exciting and informative visitor experience.



ESA SIAE © Ars Electronica Solutions / Harald Moser

NAWAREUM

In cooperation with Ars Electronica Solutions, the NAWAREUM, the museum of hands-on experiences and sustainability, has developed two game tables about renewable energies that playfully illustrate various energy supply options. The game *Inselwiese* deals with various forms of energy such as hydropower, wind energy and biogas and illustrates the conditions under which each form of energy can be used most efficiently. The game *Gründorf* is about supplying a village with renewable resources. Players learn interactively and strategically which materials are most efficient and

sustainable. Political, social and environmental events in the game constantly present the players with new challenges to show possibilities and alternatives without blaming anyone.



Nawareum © Garamantis Nina Bacher

Brauereimuseum Wieselburg

The Wieselburg Brewery Museum was extensively renovated and equipped with state-of-the-art digital installations to create an interactive world of experience. Ars Electronica Solutions was responsible for the conception, design and development of the entire exhibition. The goal was not only to present the history of beer, but also to make the process of brewing comprehensible to visitors. Dynamic projections and interactive tools were used to achieve this. An important aspect of the project was to combine harmoniously the old exhibits with the modern presentation. Architectural features such as the fascinating play of light in the skylights were highlighted.



Brauereimuseum Wieselburg © Ars Electronica Solutions /
Isabel Schömbauer

Lagermax — Roadshow

In a special exhibition truck, Lagermax Lagerhaus und Speditionen AG presents its business areas, visions and more than 100 years of company history under the motto *Future of Logistics*. Ars Electronica Solutions staged this mobile “Futurespace” and was responsible for the conception, design and development of the entire exhibition. A special highlight is the interactive history wall, where visitors can learn about the company's history. The *Future of Logistics* is a mobile space that communicates with visitors via AR and provides a deeper insight into the company's activities and ideas.



Lagermax Exhibition Truck © Ars Electronica Solutions /
Isabel Schömbauer

Kometor Peuerbach

For the Kometor Peuerbach developed by Billa and Manfred Hebenstreit, Ars Electronica Solutions created an interactive approach within the framework of the Kommunale Oberösterreich that is intended to awaken the spirit of research through its special aesthetics. Visitors experience a journey from the microcosm to the macrocosm that allows them to discover the world from a new perspective. Specially created microscopic images are juxtaposed with macro images from ESA satellites and telescopes. The similarity of the images gives the impression that everything is connected. In the spirit of a “science experience”, complex science becomes understandable and tangible in a playful way.



Kometor © Ars Electronica Solutions /
Isabel Schömbauer

ESA Space Expo: Earth from Space

A new permanent exhibition has been added to the ESA ESTEC visitor center in Noordwijk (NL), Space Expo. Entitled “Earth from Space”, the focus is on Earth observation. In this Science Experience, extensive scientific data has been used to create an exhibition that is both entertaining and informative for the whole family.



ESA Space Expo NL © Ars Electronica Solutions

FHOOE Steyr — Digi Space

Located next to the Steyr Museum of Labour, the DigiSpace is a digitization center set up by the Upper Austria University of Applied Sciences to introduce companies and students to the possibilities of digitization in a special context. In collaboration with Garamantis GmbH, Ars Electronica Solutions developed a multi-touch table that provides information on the digitization topics of the FH OOE and the FH OOE. The main goal was to create an easy-to-use interface that conveys the specific content in a playful, interesting and efficient way.



DigiSpace © Ars Electronica Solutions / My Trinh
Müller-Gardiner

Preview

FFG

Ars Electronica Solutions is presently working on a mobile presentation platform on behalf of the Austrian Research Promotion Agency (FFG) that will bring the subject of earth observation closer to the public. Visitors will not only receive information about satellite images but will also be actively involved in the tool.

Space Eye

A knowledge transfer project between astronomy and the environment is currently under construction near Bern. An observatory is being built in the Gantersch Nature Park. Ars Electronica Solutions is playing a significant role in the conception and design of the Space Eye, a world of experience dedicated to science.

ARS ELECTRONICA EXPORT 2023

With Export, the Ars Electronica expertise and knowledge travels the world through exhibitions and events, mentoring and residencies, talks and workshops.

40+ years working at the intersection of art and science has allowed us to build a wide network of brilliant minds in the field of art, technology and society. This network supports us today in reflecting critically on current challenges and contextualizing upcoming tendencies. Cultural practitioners as well as businesses and universities are amongst our Export partners. Together we implement a wide range of interventions all around the world. Through Ars Electronica Export we are excited to share our experiences with you and access our networks' expertise for responding to your questions and ideas — whether it is through consulting, conception or production for exhibitions, screenings or performances, for new forms of residencies, or for general developments of new formats.



IN TRANSFER — A NEW CONDITION

Esch2022 — European Capital of Culture
Ars Electronica Exhibition

Esch-sur-Alzette, the cross-border area in the south of Luxembourg, is in transformation: a former steel industry region transformed into a center for future-oriented knowledge and innovative creativity. Esch2022 — European Capital of Culture invited Ars Electronica Export to become part of this transformation through curating an exhibition in the Möllerei. In September 2022 the exhibition IN TRANSFER — A NEW CONDITION opened with 18 media art installations.

Participating Artists: Adam Harvey (US/DE), Agnes Meyer-Brandis (DE), Another Farm (JP), Bjørn Karmann & Tore Knudsen (DK), Climate Action Tech (EU/INT), Cod. Act: André Décosterd & Michel Décosterd (CH), Danielle Brathwaite-Shirley (DE/UK),

DISNOVATION.ORG (FR, PL, CA), Etsuko Ichihara & ISID OPEN INNOVATION LAB. (JP), h.o (INT), masharu (NL/RU), Mimi Onuoha & Mother Cyborg (Diana Nucera) (US), Quayola (IT/UK), REMIX EcoDesign (ES), Simon Weckert (DE), Špela Petrič (SI), Tega Brain (AU), Julian Oliver (NZ) & Bengt Sjöln (SE), tranxxeno lab (US)



© Franz Wamhof

“Del cielo al agua y lo que está en el centro”

(From sky to water and everything in between)

Ars Electronica Exhibition

To celebrate five years of Chilean participation in the Ars Electronica Festival and the collaboration between Ars Electronica and the Ministerio de las Culturas, las Artes y el Patrimonio and the Ministerio de Relaciones Exteriores de Chile, a selection of projects is presented in the Museo de Arte Contemporáneo (MAC) in Santiago de Chile from December 7, 2022, to January 21, 2023. The exhibition “Del cielo al agua y lo que está en el centro” (From sky to water and everything in between) brings together a selection of 15 projects from between

2018 and 2022 that have been selected by the Ars Electronica curatorial team to be presented in the Ars Electronica Festival.



© MAC Santiago

ArtScience Residency enabled by Art Collection Deutsche Telekom 2020–2023

Mentorship / Exhibition / Festival

In 2023, the Art Collection Deutsche Telekom once more enables an innovative art science collaboration that moves beyond the art world’s customary locations. With the collection’s focus on contemporary art from Eastern Europe, the third iteration of the ArtScience residency is likewise dedicated to an artist from this region, one who works at the intersection of art, technology and science and who is particularly interested in researching the social impact of technological developments. Artist Špela Petrič, winner of the 2023 residency, will work together with science partner Prof. Dr. Aimee van Wynsberghe of the Bonn

Sustainable AI Lab on the hidden structures of Artificial Intelligence (short AI) in health care. The outcome of the residency will also be part of this year’s festival in the form of tours, exhibition participation and panel discussions.



© Réon Córdova

Kosice 2.0 X Ars Electronica X Art & Tech Days

Ars Electronica Exhibition and Conference Participation

The *Košice 2.0* project, funded by the EU under the UIA program, aims to increase the wellbeing of citizens by improving the quality of the services provided by the city of Košice, Slovakia. Media art installations representing various data describing different phenomena of the city environment are interpreted in an artistic way. They are used within the project as an awareness raising tool and as communication channels to engage citizens in important topics such as climate change, resilience, communities, wellbeing and others.

In this context, Ars Electronica presented Refik Anadol’s media art installation *Winds of Košice* which was shown as part of the Art & Tech Days festival. This will be available to the public for one year in the East

Slovak Gallery in Kosice. Additionally, on November 24, Ars Electronica Chief Curator Martin Honzik presented his take on enabling change in art and industries. Mr. Honzik co-hosted a workshop and presented a lecture within the framework of the Art & Tech Days festival, introducing artistic practices fed by various data sets.



© Refik Anadol

Forehead Vulva Channeling Research by Artist: S()fia Braga

Ars Electronica Exhibition

Shtatëmbëdhjetë and Ars Electronica Export presented S()fia Braga's *Forehead Vulva Channeling Research* at Galeria 17 in Pristina, Kosovo. The exhibition series titled *Techné* builds the framework for this first-ever collaboration between Ars Electronica and Shtatëmbëdhjetë which opened in April 2023. In this series artists, scientists and creators meet at the crossroads of technology and art. The theme seeks to align our artists and our community with a broader global discourse on technology and innovation in art and artistic creativity. S()fia Braga's work is the perfect fit for

telling this story. The *Forehead Vulva Channeling Research* is a speculative transhumanist research project which focuses on developing advanced studies on the human body's potential to reach lifelong emotional well-being.

This achieved by means of a re-calibration of pleasure-centers, in which hidden organs are channeled using specialized technologies. The purpose of opening the *Forehead Vulva* is to bring the body to an uninhibited state, and thereby transform it, rediscovering new potentials that humans are still unaware of.

Matsudo International Science and Art Festival — Circular Creativity

Matsudo City (JP) & Ars Electronica Futurelab (JP)

The Matsudo International Science Art Festival is an annual festival held in Matsudo City, Japan. Innovative artists, scientists and researchers from around the world come together to present their latest projects at the event. The festival aims at connecting art, science and nature and is held in the historic architecture and landscape of Tojo-tei and Tojogaoka Historical Park. Through the festival, the local creative community and the city

government work together to cultivate a future in which tradition and creative innovation flourish in harmony with nature. The festival's theme of *Circular Creativity* addresses different forms of circulation, from the natural world to the transfer of knowledge across generations. The goal is to explore how we can all respectfully coexist with nature and people of different backgrounds on our one and only planet, Earth.

Ars Electronica Animation Festival on Tour 2022

Animation Film Program for Cultural Partners worldwide

Based on the computer animation category of the Prix Ars Electronica international competition, animated pictorial worlds have been a cornerstone of the Ars Electronica Festival, discussed and presented in various forms ever since. Since 2005, the Ars Electronica Animation Festival has been bringing together a multifaceted program

located at the intersections of animation, art and technology. Through the *Animation Festival 2022 Tour* program a selection of video works can be presented by cultural partners all over the world for cost. This is enabled by the Austrian Federal Ministry for European and International Affairs.



© Majlinda Hoxha

Shtatëmbëdhjetë and Ars Electronica Export present S()fia Braga's *Forehead Vulva Channeling Research* at Galeria 17 in Pristina.



© Kyoko Saegusa

Matsudo International Science and Art Festival — Circular Creativity



Still of trailer by Josef Ibrahim, Nico Hartl, Philipp Hackl, Alexander Wilhelm, Patrick Proter

Ars Electronica Animation Festival on Tour 2022

Who Owns the Truth?

Wem gehört die Wahrheit?

Ars Electronica 2023 aims directly at key disputed topics of our time: truth and ownership, interpretive authority and sovereignty. Can truth be owned? Is there a right to truth and, if truth does belong to someone, what control and responsibility are associated with it? How do we ask ourselves such questions in this age of global interconnectedness and the rapidly developing performance of so-called Artificial Intelligence? In Ars Electronica's own inimitable fashion, artists, scientists, developers, designers, entrepreneurs, and activists from all over the world are invited to discuss these questions. Once again, Europe's largest festival for art, technology and society becomes a platform for projects arising from the many local, European, and international cooperations and networks, the curated theme-based exhibition and newly commissioned works, concerts and performances, symposia and workshops.

<https://ars.electronica.art/who-owns-the-truth/en/>

