



ARS ELECTRONICA 2024

Festival for Art, Technology & Society



HOPE

who will turn the tide

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Edited by Gerfried Stocker / Markus Jandl

HOPE

who will turn the tide

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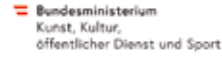
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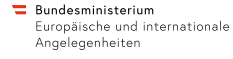
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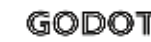
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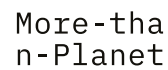
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Gerfried Stocker (AT)
Co-CEO / Artistic Director Ars Electronica

HOPE

who will turn the tide

Optimism is not the belief that things will somehow work out, but rather the confidence in our ability to influence and bring about improvement. And that perhaps best describes the essence of the principle of hope, not as a passive position, but as an active force that motivates us to keep going despite adversity.

But don't worry, this year's festival will not be an examination of the psychological or even evolutionary foundations of the principle of hope, nor will it be a reflection on our unsteady fluctuation between hope and pessimism.

"HOPE" as a festival theme is not a resigned statement that all we can do is hope that someone or something will solve our problems, but rather a manifestation that there are actually many reasons for hope. This is expressed in the subtitle "who will turn the tide", which does not claim to know *how* the turnaround can be achieved, but rather focuses on *who* the driving forces behind this turnabout are.

The festival's goal is to spotlight as many people as possible who have already set out on their journey and whose activities—no matter how big or small—are a very concrete reason to have hope. Believing in the possibility of change is the prerequisite for bringing about positive change, especially when all signs point to the fact that the paths we are currently taking are often dead ends.

But belief alone will not be enough; it requires a combination of belief, vision, cooperation and a willingness to take concrete action. A willingness that we need, even if we are not yet sure *how* we will turn the tide, *how* we will solve the problems, and *how* we will deal with the effects of the problems that we are (no longer) able to solve.

What we cannot afford is to wait to make the necessary changes until we have found these solutions. What we also cannot afford to do is believe that technology will solve our problems; because that would mean once again that we not only don't understand our technologies, but also that we understand our problems even less.

This is exactly what Ars Electronica's thought model, which has been successful for 45 years, puts in the spotlight: the synopsis of art, technology and society, the alternatives and new perspectives that open up to us, when we also use the means of art and the eyes of artists to look at the social and cultural aspects of technological development.

Yes, technology will not solve our problems, but a lot of technology will be needed to address the problems. But this requires a different understanding both of technology and of our responsibility for using technology.

But such visions must not be used as an excuse

not to act; they must not tempt us to sit back and wait for the "super technology that solves everything".

"HOPE" as the festival motto also poses an important question about the role and tasks of a festival in challenging times and is seen as a clear statement against the stupid, short-sighted pseudo-concepts and fake arguments of populist politics, against the nonsense-causing cries of the mass media swamps (analog and digital), as well as against meaningless whitewashing and ignoring things.

To some, this appears to be a "crisis of imagination" because they no longer see large, spectacular plans for the future. But what has changed is not the power of imagination, the visionary courage, but the perspective. The spectacular and radical ideas are suddenly no longer concerned with growth, but with reduction. The diagram that shows the dramatic curve in which we must reduce CO2 emissions in the next few years has become a new icon, the radicalness of which also shows how radical our ideas must be. What courage it takes to even think about this radicalism without losing heart.

Hope is the opposite of fear, but there are many reasons to be afraid. The Ars Electronica Festival 2024 will show that there are also many reasons for hope—people, many people, who have started

Believing in the possibility of change is the prerequisite for bringing about positive change, especially when all signs point to the fact that the paths we are currently taking are often dead ends.

working to bring about change with their ideas, projects, actions and attitudes.

Young architects who no longer want to build new houses but rather renew the existing infrastructure; villages that successfully practice zero-waste; industrial designers who base their concepts on reuse instead of recycling and not only think about new materials, but also design the necessary changes in the design of the products; African open source communities of computer scientists who do not want to leave powerful AI systems in the hands of just a few large corporations.

But also technical visionaries who are developing new, more efficient forms of energy generation; economists who design new models of a socially and globally fair distribution of work and profits in a future characterized by automation and digital systems; people who are not committed to the dismantling but to the further development of democracy; seniors who fight together with their grandchildren for the human right to climate protection; artists who design gardens for insects, etc., etc., etc.

First you are amazed at how much is already happening around the world, and then hope arises.

HOPE—who will turn the tide.

CONFERENCES, LECTURES, WORKSHOPS

Improvement
is a continuous
effort with ups and
downs—by recognizing
this, we may stay hopeful.
Looking for easy or fast
solutions is the demise of hope and
the beginning of disappointment.

— Agnes Aistleitner, Theme Symposium speaker



FOUNDING LAB Day: Open Research & Education

Join us for an enlightening exploration into the transformative role of Artificial Intelligence in Higher Education. This conference brings together leading researchers, academics and practitioners to discuss transdisciplinary AI education and research. Collaboration between the IT:U Interdisciplinary Transformation University Austria and Ars Electronica began in 2023 with the FOUNDING LAB, formed to rethink the future of universities. The work continues in this year's conference which will highlight current practices and stimulate international discussions that can shape the future of AI in education. Following a

keynote by Joanna Bryson, Professor of Ethics and Technology at the Hertie School, experts from universities and diverse disciplines will provide valuable insights into their current approaches and share their strategies on transdisciplinary and practice-based learning. The conference will also offer the opportunity to network with peers, exchange learning experiences and discuss ideas.

Do not miss this chance to engage with leaders of the field, explore innovative educational practices and contribute to shaping the future of AI in Higher Education.

Perspectives on Political Education Symposium

Upper Austrian Chamber of Labor (AT), University of Education Upper Austria (AT),
Ars Electronica (AT)

Encounters: Art, Technology and Society in Dialog

How do I act when I meet a stranger? What fears and insecurities are triggered and why? What happens when I encounter new technologies for the first time? What is the attraction of the unknown? Encounters generate spontaneous reactions that are constantly re-evaluated. They form the basis of democratic coexistence in our society. This year's *Perspectives on Political Education* symposium aims to show that art can act as a medium to positively influence such encounters. It confronts us with the

unexpected and demands new perspectives. Engaging with art can help us think, experience the new and broaden our perspectives. Various formats at the intersection of politics, art, technology and society are intended to initiate encounters of different kinds. In addition to keynote speeches and discussions, the festival events will also be in the spotlight. Participants are invited to take a tour of the festival and then reflect on the artworks and their potential for the educational landscape and a democratic society.



Ars Electronica Theme Symposium

This year's Ars Electronica theme symposium is placing the spotlight on people who are taking the lead with creativity, empathy and courage, inspiring us and giving everyone reason for hope. Other than in previous years, the symposium not only features artist presentations and theoretical reflections: it also puts a specific focus on the presentation of companies, projects and initiatives from big industries to small startups, educational projects and policymakers who work on and already started to implement new and disruptive as well as existing technologies and approaches to counter the major social challenges of our time. From the climate crisis and the energy transition to essential questions of democracy and its development; from the

seeming inevitability of technological progress to the rapid and ubiquitous rise of AI applications, challenging jobs in the creative industries in particular. Over the course of four days, each centered on practical approaches and innovative endeavours, inspiring presentations and discussions will explore the manifold activities and challenges of global initiatives that offer cause for hope. Leading innovators and practitioners present exciting new ideas and initiatives and show how art and technology together can offer innovative solutions to pressing problems. From September 5th to 7th, come experience our program packed with initiatives and examples that give us cause for optimism for a more sustainable and just future.

Because it can break the existing monopoly on our imagination, hope becomes a necessary condition for radical change. If (perhaps only if) there is hope, there will be ways, most importantly, different ways of doing things. STARTS Day explores practices driven by hope to show what it can do, but also "exploits" them to create a sense of possibility.

—Ana Maria Carabelea, STARTS Day Co-Curator

Reclaim, Relearn, Resist: Strategies and Practices for the Future of Digital

S+T+ARTS Day Conference

This year's STARTS Day Conference sets out to re-write the story of inevitable technological progress as *contingent and contextual*, the result of decisions dictated by particular desires, interests or preferences. To back up this narrative, we spotlight brave initiatives and projects that open up other paths and bifurcations on the road of technological progress that can restructure the digital and, with it, social, economic or political realities. Throughout the day, diverse practices—brought together in unlikely and perhaps curious constellations—will create a many-voiced narrative. Actors from business and industry, civic society, government and policymaking, as well as grassroots initiatives and artistic visions

come together to show the many forms of action both stemming from and generating a sense of hope. We unpack the ways in which digital innovation *can* be re-framed to serve democracies and the role of policymakers in this process and the ways in which it *is already* being used in different practices and tactics—from more intentional design processes to strong advocacy for literacy and transparency—to reimagine societal, educational and economic models.

Presented in the context of the *STARTS in the City* project. *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.

Going green! Stories of Reinvention, Disruption and Systemic Change to Reclaim our Future

Studiosotopia Day Conference

The Studiosotopia Day Conference takes this year's theme "HOPE—who will turn the tide" as a starting point to look at inspiring and hope-giving efforts made by companies, startups, initiatives, artists and policymakers to mitigate and fight dystopian prospects of our future on this febrile planet. The second day of the theme symposium brings together a series of experts, practitioners and creative minds who draw on practical examples to tackle the challenge of actively transforming the systems we live in and the technologies we use into more durable, greener versions. "To reinvent the wheel" long served as a saying for a useless activity. Yet it comes close to what many creative minds are now confronted with and already successfully doing when transforming their industrial, economic or social projects into greener—and ultimately net zero—emission

endeavours. Presentations and debates will be staged that cover global efforts and goals to implement initiatives and plans such as "Net Zero by 2050", the "Green Deal", the transition to renewable energy and mitigation of the costs of decarbonization, the turn towards "Eco-Cities", the creation of green mobility systems and legal actions to protect nature and our societies' future. All of these events will feature inspiring, disruptive ideas, offering insight into the reinvention of age-old systems our lives and economies rely on, as well as into efforts to make human life and cohabitation with non-human species and nature on our planet more sustainable.

Presented in the context of the *Studiosotopia* project. *Studiosotopia* is co-funded by the Creative Europe Programme of the European Union.

Rather than just having hope, we make it. The Studiosotopia Day will show exactly this: manifold inspiring, creative and hope-giving examples of people who started acting in order to tackle one of today's biggest challenges—making human life and cohabitation with non-human species and nature on our planet more sustainable.

—Daniela Silvestrin, Studiosotopia Day Co-Curator

AI and Artistic Creation

Prix Ars Electronica Forum 2024 co-hosted by EU Digital Deal

A day of thought-provoking sessions, interactive workshops and inspiring case studies on AI and creativity. As AI enters a wide range of spheres in the creative industries, the Prix Ars Electronica Forum program brings together artists, academics, researchers, technologists and activists to share their perspectives on how AI and artistic creation can intertwine. What is needed to fully utilize this potential? From reflections on consciousness in the age of AI to showcasing practical applications and explorations of the tools, the event delves into opportunities, challenges and fears that accompany AI-facilitated creation. Artists, including Golden Nica winners, will share success and failure stories of AI use in fields

of audiovisual media, language, games, music and more. What other collaborative structures are needed to create an ecosystem for AI creativity? In an interactive session, experts and participants will collectively envision a future-proof, sustainable, inclusive infrastructure for AI-driven artistic creation. Last but not least, the AI revolution also brings shifts in art valuation, IPs and business models. How can we navigate this new ecosystem?

This program has been developed and is presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union.

Lecture Stage Program

The multidisciplinary and international program on the Ars Electronica Lecture Stage provides a platform for thought leaders, innovators and artists to share insights into the intersection of art, technology and society.

Our goals are to foster dialog around and understanding of the rapidly evolving digital landscape, inspire critical thinking and spark innovative ideas among attendees. Participants will be able to engage in in-depth discussions, gain expert knowledge and interact with pioneering figures from various fields.

In the **SHARESPACE** panel discussion, we take a close look at artistic processes, their ideas and challenges, and a general critical discussion on what we think the SHARESPACE technology and concepts can bring to the world of media arts. How can humans use avatars in the near future? How can we engage in social situations that include both humans and avatars? And what technology do we need to explore these “hybrid” spaces together? This is what the Horizon Europe research project SHARESPACE is all about.

State of the ART(ist), a collaboration between Ars Electronica and the Austrian Ministry of Foreign Affairs, focuses on artists who face threats to their existence, whether in the form of political persecution, social circumstances or environmental disasters. The panel discussion **Creative Resilience in Challenging Times** will explore how artists articulate the scope and conditions of our existence through their work.

Pecha Kucha is an event celebrating the 20th anniversary of Interface Cultures (IC) at the

University of Arts Linz. Selected alumni will give short “Pecha Kucha”, discussing their artistic and professional evolution since earning their degrees and presenting current works in progress. The artists will share how IC is still a part of their lives and recall funny anecdotes from their time at the department.

With How to increase the economic resilience of digital art organizations?, Berlin-based agency “The Catalysts” provides an exclusive overview of Digital Inter/Section (DI/S) outcomes, a pan-European project exploring new business models for digital art organizations. Over the past few years, DI/S stakeholders have gathered extensive industry insights, published comprehensive reports, developed sustainability guidelines and experimented with prototyping business models. The session will preview some innovative tools and case studies and share strategic as well as practical insights.

Within this context, Ars Electronica will also share insights into one of the company's own noteworthy recent digital transformation processes: the fundamental re-design and -development of the Ars Electronica Archive. We will show the learnings and outcomes of this enormous undertaking, which was co-funded by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport and the State of Upper Austria. In 2024, Ars Electronica also collaborates with the Taiwan Creative Content Agency (TAICCA) to organize jointly the **TAICCA x Ars Electronica Art Thinking program**. Being a data peasant in an era of Technofeudalism, how can we challenge the

status quo by innovating while maintaining the diversity of culture? In Taiwan, how do technology companies use their hardware advantages and integrate the “soft power” of cultural content to create a human-centered, sustainable and prosperous future? A discussion among creators, enterprises and the public sector.

GET.Inspired

GET.Inspired spotlights promising projects in the field of Artificial Intelligence. Startups, established companies and artists give inspiring short presentations on creative forms of AI innovation as part of *AI5Production*, the largest of four Austrian European Digital Innovation Hubs. It offers the highest level of technical expertise in the fields of digital design, digital production, cyber security and Artificial Intelligence.

The power of individual technology groups and their exclusive role in shaping the future is increasingly subject to criticism. We are called upon to critically question and actively participate, instead of remaining passive victims of digital change.

This panel discussion focuses on the application of Artificial Intelligence in industry and manufacturing. We will critically examine the systems powering AI, its role in enhancing industrial processes and its broader implications for manufacturing. Key topics include the efficiency and innovation brought by AI and its transformative impact on production workflows.

We will also explore how AI integrates into various industrial applications and its influence on the future of manufacturing.

This discussion aims to deepen understanding and foster meaningful dialog about AI's role in shaping the industrial landscape.

Presented in the context of *AI5production*. *AI5production* has received funding from the European Commission and the Austrian Ministry of Labour and Economy.

Additional programs

Expanded Animation 2024, the 12th conference on animation and interactive art, will showcase academic papers and presentations at the intersection of art and technology. Highlights will include talks by Prix Ars Electronica 2024 winners, filmmaker Irina Rubina and indie game studio Slow Bros. Additionally, Jan Pinkava will discuss the future of interactive storytelling and Bonnie Mitchel will host a talk on 50 years of SIGGRAPH history.

The **Critical Change Conference** will be organized and moderated by winners of the Prix Ars Electronica's u19—create your world category. Together with the audience experts, artists, intellectuals, politicians and young people will examine the status quo and discuss the possibility of changing the world.

Workshops

This year's multicultural and interdisciplinary workshop series provides an environment for exploring innovative ideas that inspire missions and actions. The workshop program aims to engage the audience in an intriguing dialog on how to create meaningful change. The festival's topic, *HOPE—who will turn the tide*, signifies proactive agency rather than passive expectations for external solutions. Therefore, this year's workshop program emphasizes rethinking how we approach existing consequences of problems we still hope to solve.

The diverse program of our workshops pushes participants to explore possibilities critically outside of the box, encouraging discussion and sharing of ideas between fellow creatives, creators and decisionmakers for a mutual exchange of knowledge and inspiration. The workshop program at POSTCITY functions as a lively think-tank, giving attendees lots of chances to practice and have conversations with directly related professionals. Below, you will find some highlights. One section of our workshop program is dedicated to workshops by participants of the STARTS exhibitions and related projects under its umbrella. These workshops highlight innovative approaches and solutions that integrate creative thinking and science, aiming to inspire collaborative efforts in mastering the complexities of contemporary societal issues.

The workshop **Critical Cartography of the New Extractivism** by Vladan Joler, one of the collaborators (together with Kate Crawford) of this year's STARTS Prize winning project, will focus on the relationship between technology and power. He will share his knowledge about working with

big data, using mapping as a means of understanding complex assemblages. The workshop based on the project **Low Carbon Chinatown** will concentrate on using Asian Chinese diasporic food culture as a starting point to reduce the carbon footprints of food production, sourcing and consumption. Workshops taking place in the exhibition area are a great chance to meet STARTS participants, as well as artists and projects that contribute to addressing social, ecological and economic challenges. The regular workshop **The Solar Share** will shed light on a form of planetary economics based on photosynthesis.

Aside from that, this year's workshop program emphasizes topics pertaining to the development of Artificial Intelligence (AI) and its ethics. Attendees of the **AI BIAS & BLOOD FOOD** workshop will learn about the fundamentals and constraints of text-to-image generation. However, in order to reveal discrepancies and highlight the need for more inclusive AI research, participants will be also asked to experiment with real food and compare AI-generated photos to it. In the workshop **Against AI Narratives** by Rasa Bočytė, we invite the audience to participate in creatively rethinking pressing issues and concerns of AI related to social justice, (mis)representation and user agency, focusing on what users can do to effect change.

Another part of our workshop program focuses on more professional expertise, yet remains open to the wider public.

A very practical **XR workshop** by Dragos Silion and Ionut Olteanu will introduce the possibilities that Augmented and Virtual Realities (AR/VR) have brought to the art sector in recent years.

During the workshop, participants will have the opportunity to create their own digital avatars and see how they can place them in the real world. Similarly, the workshop by Jan Zuiderveld will focus on demonstrating **how to “break free” large language models (LLMs)** from the digital realm by enabling them to control physical objects.

However, our program also supports alternative ways of engagement in addressing everyday challenges. Therefore, we aim to not only focus on practical thinking but also on speculative and deeper understandings of challenges as they are. This approach is especially evident in the workshop **Toguna World and The Sanctuary of Dreams** by Pierre-Christophe Gam, which represents a future-dreaming ritual and serves as a powerful catalyst for breaking free from the constraints of our present reality, encouraging participants to imagine a world shaped around their innermost desires. Additionally, workshops such as **Energizing Neighborhoods: From Dialog to Co-Creation** and **Data for the People** will concentrate on urban development and new infrastructure narratives, exploring how data should support urban life and promote the well-being and opportunities of diverse communities.

In a special new format, the **Town Hall Meetings** intended for professional audiences, participants will also have the chance to meet Ars Electronica's collaboration partners and expand their networks. Academic institutions, public bodies, cultural organizations and creative industries as well as the private sector, from sustainable industries to innovative technologies, come together at the festival to meet each other to build connections

around topics like XR, digital theatre, Earth observation, arts and innovation and many more. In addition, a **Creative Europe Meetup** is taking place. Creative Europe is a European Commission program that provides support to the European cultural and audiovisual sectors. At the event, Creative Europe Desks representatives introduce their program with a special focus on the strands of Culture and Media.

Overall, visitors to the festival will immerse themselves in a dynamic environment where they can engage directly with highly skilled experts and talented artists through a series of interactive working sessions within the workshop program. This unique opportunity allows participants to not only learn from but also collaborate with leaders in their fields. Amidst the vibrant atmosphere of the festival, the workshop program unfolds as a multifaceted experience, offering diverse learning sessions that cater to different interests, backgrounds and learning styles. It is a chance for attendees to deepen their knowledge, explore new perspectives and actively participate in shaping the cultural and intellectual discourse of the active agency of HOPE.

This year's workshops are presented in the context of *European Digital Deal, Realities in Transition* and *STARTS in the City*. *European Digital Deal* and *Realities in Transition* are co-funded by the Creative Europe Programme of the European Union. *STARTS in the City* has received funding from the European Commission's DG CNCT under grant agreement No. LC-01984766.

One workshop is presented in the context of the *TAICCA x Ars Electronica Art Thinking* program.

EXHIBITIONS

Hope is a great intangible, and yet we choose to hope. At times when scientific arguments alone apparently cannot compel us to act, artists take us to the crossroads of ways of thinking, working and being together. They offer us more complex ways of thinking, beyond the logical cause and effect or technological remedies, challenge our ways of sensing and making sense. Treading their pathways, we can hope to feel and understand the world better and learn to inhabit it better.

— Olga Tykhonova, Co-Curator Theme Exhibition

Prix Ars Electronica Exhibition

Emiko Ogawa (JP/AT) / Co-Curator & Head of Prix Ars Electronica

Artistic Dynamic Blue Marble

The Prix Ars Electronica, the most time-honored media arts competition, has always functioned as a sensitive instrument to capture the spirit of the times since its inception in 1987. In 2024, there were 2,950 entries from 95 countries in the following categories: New Animation Art, Interactive Art + and u19—create your world. In addition, a special AI in ART Award was established this year, focusing on human creativity made possible by the use of AI, from among the entries in all categories. In the New Animation Art category, Beatie Wolfe's *Smoke and Mirrors*, which vividly contrasts marketing campaigns of the oil industry with the alarming rise in atmospheric methane levels, based on the iconic "Blue Marble" photo of the Apollo 17 crew taken in 1972, won the Golden Nica. While many works only make use of game engines and generative AI, the jury gave special recognition to an animation work that uniquely combined these new technologies to create an artistic message that encourages social discussion.

In the Interactive Art + category, Diane Cescutti won the Golden Nica for her multilayered interactive installation work *Nosukaay*, which combines the Manjak loom of West Africa with the computer. Through the narrative of *Nosukaay*, the machine deity, we garner hints for passing on wisdom, tradition and spirituality to the future. Embodying techno-diversity and promoting pluralistic and diverse dialog was highly praised as an important element of interactivity for future. While AI is being used in many works in all categories, Paul Trillo won the AI in ART Award—Golden Nica for *Washed Out "The Hardest Part"*, the first official music video created using Sora, OpenAI's text-to-video model. It demonstrated a turning point with generative AI becoming more common in the creative process, and highlighted the important role that artists will play in future creative work.

This year's Prix Ars Electronica award-winning works visualize the simultaneous creative actions of artists and inspire us to imagine a dynamic, living Earth. Our Blue Marble is not standing still.

I believe that AI should be seen as a complementary tool to the traditional filmmaking process, to enhance human-led creativity rather than replacing it.

— Paul Trillo, AI in ART Award winner, Prix Ars Electronica 2024

Featured Artworks in Prix Ars Electronica Exhibition 2024



Smoke and Mirrors © Beatie Wolfe
GOLDEN NICA New Animation Art

New Animation Art

GOLDEN NICA

Smoke and Mirrors, Beatie Wolfe (GB)

AWARDS OF DISTINCTION

I'm feeling lucky, Timothy Thomasson (CA)

Stained, Jeremy Kamal (US)

HONORARY MENTIONS

Mid Tide #3, Ryu Furusawa (JP)

Unknown Label, Nicolas Gourault (FR)

Interactive Art +

GOLDEN NICA

Nosukaay, Diane Cescutti (FR)

AWARDS OF DISTINCTION

If You Have Starry Skies in Your Eyes, Rib (JP)

Third World: The Bottom Dimension,
Gabriel Massan (BR)

HONORARY MENTIONS

Conversations Beyond the Ordinary,
Jan Zuiderveld (NL)

G80, Fragmentin (CH)

Kazokutchi, So Kanno (JP), Akihiro Kato (JP),
Takemi Watanuki (JP)

REPEAT AFTER ME, 2022, Open Group (UA)

AI in ART Award

GOLDEN NICA

Washed Out "The Hardest Part",
Paul Trillo (US)

AWARD OF DISTINCTION

Intelligent Instruments in Citizen Science,
Thor Magnusson (IS), Intelligent Instruments Lab (IS)

REPETAE, Sasha Stiles (US)



Nosukaay / Diane Cescutti @ Blanchelafarge
GOLDEN NICA Interactive Art +



Washed Out "The Hardest Part" @ Paul Trillo
GOLDEN NICA AI in ART Award

More information about Prize winners is available in the Prix Ars Electronica 2024 catalog.

JKU MED Campus: Art+Science

Artistic Visions, Scientific Revelations: Art+Science Exhibition

The 2024 Ars Electronica Festival at the JKU MED Campus unveils the transformative power of blending artistic creativity with scientific inquiry. This year's program celebrates the dynamic synergy between art and science, showcasing projects that highlight the innovative possibilities born from interdisciplinary collaboration.

Johannes Kepler University Linz (JKU) continues its strong tradition of festival involvement with the debut of the MED Campus as a festival venue. At the forefront of JKU's presentation is the groundbreaking Virtual Anatomy stereographic space. The award-winning technology of the JKU medSPACE allows medical students to deep-dive into the virtual human anatomy with unprecedented 8K quality and real-time navigation, setting a new standard for anatomical education and surgical precision. The Linz Institute of Technology (LIT) at JKU is presenting eight funded projects, each demonstrating the synergy between artistic exploration and scientific research. These projects illustrate how creativity can drive scientific discovery and how scientific challenges can inspire artistic innovation in turn.

Complementing JKU's contributions, the Art and Science Exhibition features an array of compelling projects from diverse collaborators. PiNA's *Spaceship from Hope* invites visitors into a dynamic inflatable installation that envisions a future of interspecies cooperation aimed at planetary conservation. In a different realm, the arc/sec Lab's *Whispering Gardens* uses AI-generated spatial audio to immerse visitors in a fantastical soundscape, blending historical garden aesthetics with futuristic themes.

Yuri Tanaka's *Transient—Cloud Chamber* offers a mesmerizing interaction with cosmic particles, turning cosmic muons into real-time trails of light and sound, revealing the ephemeral beauty of the cosmos. Fiona Smith's *The BOX*, presented by Fraunhofer MEVIS, provides an interactive exploration of the practical and ethical dimensions of integrating AI into healthcare.

A highlight of the festival is the *Applied Virtualities: Extended Reality in Practice* exhibition, co-funded by the European Union through the *Realities in Transition* project.

This initiative delves into alternative Extended Reality (XR) creation, showcasing cutting-edge prototypes and research that push the boundaries of traditional XR/VR experiences and promote new narratives and creative processes. The Art and Science exhibition at the JKU MED Campus is designed to make complex scientific concepts both accessible and engaging. Through interactive displays, workshops and performances,

the festival fosters a vibrant dialog between disciplines, encouraging attendees to explore how art and science can together challenge existing paradigms, drive innovation and expand our understanding of the world, allowing visitors to witness the rich convergence of artistic imagination and scientific discovery and experience firsthand how these fields collaborate to push the frontiers of knowledge.

Stefan Koch (AT) / Rector Johannes Kepler University Linz

Hope, Who Will Turn the Tide?

What comes to mind when you think of a university? Do you imagine an elitist institution, accessible to just a few and excluding the many? Or perhaps countless lecture halls and classrooms where professors hold complicated and incomprehensible lectures? Does a university tend to come across as a kind of academic "ivory tower", offering little support to ordinary people as they live their everyday lives? While I cannot say whether or not universities have traditionally conformed to—or convey—this image, modern universities do not. And I know the Johannes Kepler University Linz certainly does not! Our university has opened its doors to the world, understanding its role as a leading, fully committed international university that promotes social responsibility and represents a "home away from home" for our students who enjoy an outstanding education, but also learn critically to question outdated mindsets, to set their academic discipline in the overall context of its social impact. Thanks to the JKU's modern infrastructure, our researchers can rise to present-day challenges and create modern

solutions to current problems. Our administrative staff ensures smooth day-to-day operations, facilitating a high quality of education along with the opportunity to conduct cutting-edge research. The Johannes Kepler University Linz also encourages residents of Linz to come and enjoy our attractive, green campus. Deeply rooted in the region, this is an ideal space to host and embrace a contemporary and progressive event such as the Ars Electronica Festival.

Does this mean it is all good? Unfortunately, no. On both a national and global scale, we are on the verge of upheaval and radical transformation in all areas of society. We are facing multiple challenges at a time when familiar certainties and assurances are beginning to unravel. We are talking about climate change, global conflicts resulting in human suffering in the Middle East and Ukraine, the migration flow, the rapidly growing significance of Artificial Intelligence and—last but not least—the increasing skepticism towards science. But is it all just doom and gloom?

The resounding answer here is: absolutely not!

There are, after all, qualities we inherently possess, namely the drive and capability to try to understand the world we live in and define our place within it; in other words, actively to determine its direction.

In short, we ourselves bear responsibility as to whether or not—and how—we can overcome the countless challenges we face. I have had the honor of serving as Rector at this university since October 2023 and I find the sense of spirit and resolve at the JKU to be inspirational and encouraging. We share the same ideals here: the aspiration and enterprising ambition to use the tools of science and change lives for the better. As a researcher myself, my personal interest and passion for scientific advancement is inherent, but I am also fully aware that science is only one way of exploring the way we are and the world around us. There is also an additional approach: Art. Artists, researchers and scholars alike pursue an inner drive and motivation to comprehend, categorize and question our place in our world. Oddly enough, these two approaches are not contradictory. On the contrary, these approaches feed off on one another; they complement, stimulate and inspire one another. We identified these attributes early on at the JKU, supporting the unique connection between both worlds by means of countless cross-disciplinary projects, programs and partnerships with artists and artistic institutions. The JKU has even created a joint academic degree program in partnership with the University of Applied Arts Vienna. Our unique Circus of Knowledge and the Kepler Salon build bridges to support school and community outreach, bring knowledge, art and society together, communicate research to the public in laymen's terms and provide artists with a stage to share their perspectives with everyone. Furthermore, we intend to partner with the University of

Applied Arts Linz in the area of design as a means to address and resolve issues and continue pursuing academic and scientific advancement. Bringing science, art and culture together is not only rewarding, it is essential. Naturally, we welcome alternative perspectives, ideas and proposed solutions; these are vital if we—as a global family—are to react and respond effectively when tackling the daunting challenges of our time. All of this is part of the Ars Electronica Festival.

I am particularly proud that the JKU has a history of being actively involved in this festival. I am also especially delighted that the JKU's MED Campus will debut as a festival location. The festival is not only an opportunity to showcase the JKU's tremendous expertise in the field of medicine to a global audience; visitors can also experience the award-winning Virtual Anatomy stereographic space. This new technology enables medical students to plan surgeries in unprecedented photographic 8K quality, navigable in real time, and in addition serves to educate students in anatomy by using new methods.

Here, too, is an opportunity to thank everyone involved in making the JKU Faculty of Medicine a reality. The Faculty of Medicine is celebrating its tenth anniversary this year and the fact that it is now part of the Ars Electronica Festival is both a testament to—and a reward for—the outstanding efforts undertaken here. The JKU's degree programs in engineering and natural sciences are firmly established at the university and widely acclaimed beyond Austria's borders.

Time and again, the JKU has anticipated pioneering achievements that have since acquired immense significance.

For example, the world's first all-mechatronics degree program, and Austria's first academic

degree program in computer sciences. Or, recently, one of Europe's first academic degree programs in Artificial Intelligence.

The university's history of transcending cross-disciplinary boundaries and fostering interdisciplinary partnerships has been a vital factor in JKU successfully pursuing this approach. Along with the Linz Institute of Technology (debuting eight funded and compelling projects in different disciplines at this year's festival), the JKU recently established the Linz Institute for Transformative Change (LIFT_C) in an effort to conduct pivotal research focusing on the multitude of transformation processes.

A particularly striking example of the way art and science interact is the world's first-ever quantum concert: JKU physicists and others will use quantum technology to perform a composition by Anton Bruckner in the St. Mary's Cathedral. A special Turing test will demonstrate a playful, experimental approach. In this case, instead of an individual trying to simply guess whether or not s/he is talking to a machine or another person, two people will interact with AI. Will the individuals in this configuration be able to figure out which one is the AI? We can only wait and see!

All of this will be incorporated into this year's festival as it is part of the answer that we as humanity can—and must—convey to the theme of this year's festival. Who will turn the tide? Are we being overwhelmed by a series of crises, are our hard-earned and painstakingly fought-for accomplishments—such as democracy, social equality, equal rights and freedom of expression—being undermined by fear, anxiety, hopelessness and seemingly simplistic answers? Are we powerless in the face of such difficulties? And who is going to save us?

To counter scientific skepticism and mistrust, we have to get the message across that science

plays a particularly important role in solving these problems. After all, science is the very means by which we are able to understand problems and crises, identify root causes and devise potential solutions. Science has always been about discovery; that is its purpose, merit and unique power. The Ars Electronica Festival tackles these questions head-on. We can only save ourselves—each in our own way and above all, collectively and globally—as humankind; not as nation states. Each of us—with our own unique gifts and individual talents—can shape our world view, in much the same way that artists and researchers do and without being at odds with one another. We can do so with the tools and resources at our disposal. In this way, the festival is not only a source of encouragement, optimism and inspiration reflecting just what it is that unites us; it is also a shared celebration in which we invite the whole world to join us and celebrate the kind of creativity we need in this world, be it in science or art. Hope is just as important as creativity. That is why we are also celebrating hope; without which there can be no progress, prosperity or a future worth living. We celebrate the hope that we can collectively identify and embrace our strengths, applying them to our mutual benefit. In doing so, we seek to ensure that future generations not only have a prosperous, inclusive and safe planet worth inhabiting, but a space in which to continue the rich heritage and legacy created by masterpieces in both science and art.

Am I hopeful? Absolutely—and I believe that ultimately we will successfully navigate these times of change and turmoil. I firmly agree that we will turn the tide together, and this year's Ars Electronica Festival is meant to demonstrate just that. I wish you all an enjoyable, stimulating and engaging experience!

LINZ INSTITUTE OF TECHNOLOGY EXHIBITION

Clemens Wenger (AT), Enar de Dios Rodríguez (ES), Martin Ringbauer (AT), Johannes Kofler (AT), Richard Küng (AT), Alexander Ploier (AT), Benjamin Orthner (AT/GH), Philipp Haslinger (AT)

BruQner—The Sound of Entanglement

Anton Bruckner's work is an integral part of music history and is recognized far beyond the country's borders. Austria is also internationally renowned for its contributions to quantum physics—not least thanks to the 2022 Nobel Prize in Physics. In *BruQner*, these two worlds meet. Using a musical interpretation of a so-called “Bell Test”, striking passages from Bruckner's work are made audible in a new way. A sensual symbiosis of music, visuals and modern research is created.

BruQner is one of the first attempts in the world to work musically with quantum mechanics.

Entangled photon pairs from lasers will take on the role of a conductor and show the incredible findings of the second quantum revolution in a performance. *BruQner* is completely committed to the festival motto of “Tradition, Innovation and Avant-Garde”. Marvel with us and hear the future potential in Bruckner's music!

A project by OÖ KulturEXPO Anton Bruckner 2024 in cooperation with Ars Electronica with the kind support of LIT-JKU, VCQ, the University of Innsbruck, TU Vienna, SFB—beyondC and the Cultural Affairs Department of the City of Vienna.

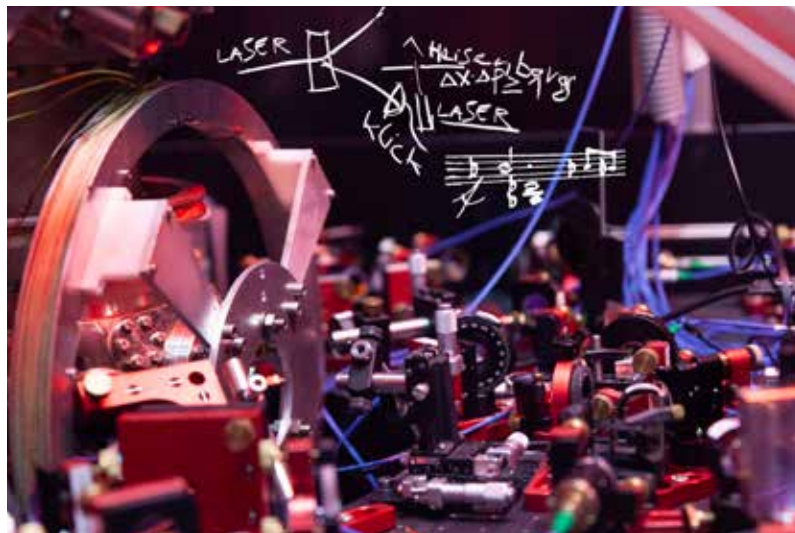


Illustration © Martin Ringbauer, Philipp Haslinger



© Oleg Lesota

Parisa Ayati (IR), Markus Schedl (AT), Shahed Masoudian (IR), Deepak Kumar (IN), Gustavo Escobedo (PE), Anna Hausberger (AT), Gerald Gruber (AT), Ghazal Hosseini (IR), Dominik Baumann (AT), Stefan Brandl (AT), Oleg Lesota (RU), Michael Preisach (AT)

Hack the Hat

Mastering the Recruitment AI Gatekeeper

In today's digital age, AI is being used increasingly in recruitment, often leaving job applicants in the dark about why they were rejected. This artistic project, *Hack the Hat*, aims to shed light on the black box of these AI-driven decisions.

In *Hack the Hat*, the recruitment process is controlled by a magical AI screening hat. Players guide Merlin Kepler, who faces repeated rejections, by modifying his CV to see how changes in gender, age, experience and skills affect the AI's decisions. The goal is to help Merlin pass the screening process and uncover

the AI's hidden biases and criteria. You are joined by two other contenders competing for the highest score. However, the real challenge is to see if collaboration, rather than competition, leads to better outcomes for everyone. The overall aim is to invite visitors to explore the biases in AI-driven recruitment and reflect on the broader implications of automated decision-making.

Hack the Hat received financial support from the Linz Institute of Technology, the State of Upper Austria and the Federal Ministry of Education, Science and Research.

Sabina Köfler (AT), Jan Maximilian Janssen (AT)

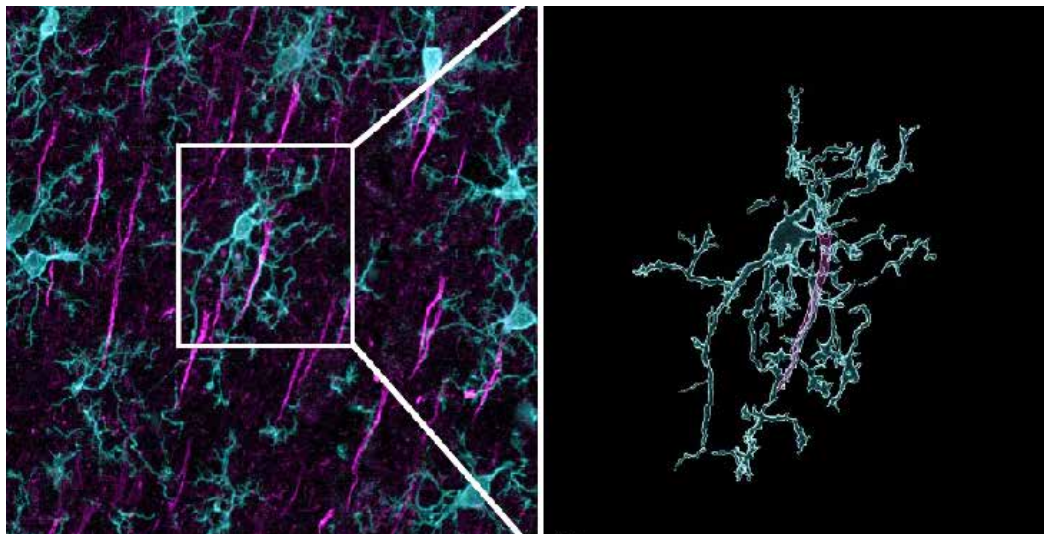
touching thoughts / kicking cancer

touching thoughts / kicking cancer is a collaboration between the Department of Pathology and Molecular Pathology and the Institute of Anatomy and Cell Biology of the medical faculty of the Johannes Kepler University and the Linz-based network initiative servus.at.

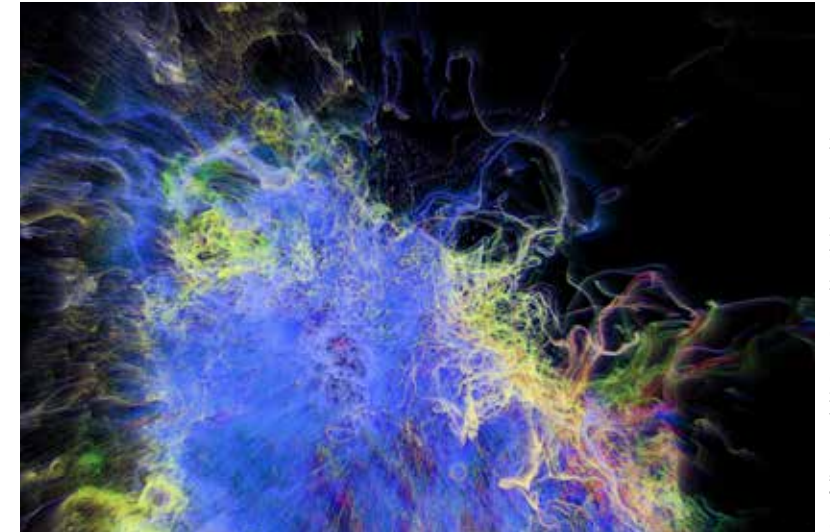
Situated at the intersection of art, science and digital culture, the project engages with advanced imaging techniques such as light sheet microscopy, confocal microscopy and expansion microscopy. It examines how these techniques are used in the creation of large 3D datasets of neuronal networks and cancer tissues. Digital artists Błażej Kotowski, jjawen, kamo and Simone C Niquille have been invited to investigate the digital nature

of such image-making processes. The encounter with the artistic research widens scientific protocols by casting light on the conditions and methods through which such images are produced. How does the digital world allow and inform all of this?

Sabina Köfler, Department of Pathology and Molecular Pathology, JKU Linz / Jan Maximilian Janssen, Institute of Anatomy and Cell Biology, JKU Linz / Davide Bevilacqua, servus.at—Kunst und Kultur im Netz / Andreas Roschger, FB Chemistry and Physics of Materials, MorphoPhysics Group, University of Salzburg / Serge Weis, Department of Pathology and Molecular Pathology, Neuropathology / Joachim Smetschka, Department of Time-based and Interactive Media, University of Arts Linz
This project is supported by the State of Upper Austria.



© touching thoughts / kicking cancer



© Nefeli Manoudaki, Iason Paterakis, Christina Watschinger

Yoojin Oh (KR/AT), Sabina Hyoju Ahn (KR/US), Christina Watschinger (AT), Ryan Millett (US), Nefeli Manoudaki (GR), Iason Paterakis (GR/US), Tobias Ruff (DE/AT), Rong Zhu (CN), Peter Hinterdorfer (AT), Joonsoo Kim (KR)

Microbial Mindscapes

Microbial Mindscapes is an interactive audiovisual installation and performance exploring the impact of the human gut microbiota on emotions. Inspired by the artist's struggles with panic disorder and depression, this project merges biophysics, gastroenterology, microbiome research, microbiology, pharmacology and AI. Using scientific discoveries on molecular interactions and microscopic techniques, it links gut microbiota with mental health and cognitive functions, highlighting the influence of lifestyle on well-being. The project explores philosophical and scientific correlations between humans and microbes, prompting a reevaluation of consciousness and self-identity. Through

an immersive visual and auditory experience, the project encourages reflection on the interplay between art, science and human emotion. It broadens understanding of mental and physical health, emphasizing gut microbiota's role in shaping our emotional and cognitive states and advocating for a holistic approach to health.

Project Leader: Yoojin Oh / Artist: Sabina Hyoju Ahn / Sound: Ryan Millett / Visual & Space Architects: Nefeli Manoudaki, Iason Paterakis / Scientists: Christina Watschinger, Tobias Ruff, Rong Zhu, Peter Hinterdorfer
We acknowledge support from LIT-ARS-2024-003, the FWF projects I5791, P35166 and the FWF Cluster of excellence "Microbiomes Drive Planetary Health".

Thomas Gegenhuber (AT), Lennart Grau (DE), Sara Maric (AT), Carla Streckwall (DE),
Laura Thäter (AT)

On the (side)line

Digital platforms and AI applications have become integral to our social and economic life. Digital corporations, however, often shield consumers from the reality of their operations, which require lots of manual work. Workers need to watch and remove problematic content on social media platforms or make sure that AI tools refrain from making racist or malicious statements. Given the pivotal role these workers play in our use of these tools and our understanding of reality, one might expect them to hold high status and be well-paid. Yet, the reality is starkly different. These corporations engage in labor arbitrage by outsourcing this work to countries, particularly in the Global South, where a low-cost workforce is willing to perform these tasks—often at the cost

of their mental and physical health. *On the (side)line* reminds us that these workers are putting themselves on the line every day to make tools safer for us. The workers' concerns, wishes and interests deserve our attention.

The Linz Institute for Transformative Change generates momentum to understand and tackle societal challenges. To achieve this, our mission is bringing together stakeholders from various disciplinary backgrounds or societal sectors to collectively address these challenges. We conduct this project in collaboration with the Institute of Organization Science at Johannes Kepler University, Linz and the Berlin-based artists Lennart Grau and Carla Streckwall.

This project is supported by the State of Upper Austria.

Jan Schlüter (DE), Silvan David Peter (CH)

Raise Your Voice

Raise Your Voice is an interactive art installation exploring the authority gap between age groups. While the youngest generation has important ideas, minors are generally taken less seriously than adults and they struggle to be heard and considered. Changing societal biases is too slow a process, so *Raise Your Voice* provides a tongue-in-cheek shortcut. It levels the playing field for children and juveniles by converting their voices into adult voices. Speakers of any age record statements and dialogs at the installation and choose to listen to the converted recordings in private or broadcast them to radios distributed on site. Decoupling speakers from utterances allows listeners to reflect on how they perceive what was said and uncover associated biases.



© Raise Your Voice

Raise Your Voice teaches us to listen more carefully to those who are not currently in charge but will make the biggest difference in the future.



© Katharina Leitner

Bernhard Nessler (AT), Gregor Aichinger (AT), Katharina Leitner (AT)

The Turing Game

Can machines think? Can you distinguish humans from AI?
Let's play the Turing Game!

Are ChatGPT and other current Large Language Models already able to pass the Turing Test? In *The Turing Game*, two humans and a machine meet in a text chat without knowing the identities of their counterparts. The humans must work together to recognize the respective other human and distinguish them from the AI that masquerades as a human. If the machine succeeds in convincing at least one of the two humans that itself is human and the other human is a machine, the machine wins the Turing Test and the humans lose. The artistic installation provides current research findings on the Turing Test and related technical and philosophical considerations about intelligence and consciousness, as well as ethics and morality. The impact of the game on the certification and safety of AI is highlighted.

The visitors can demonstrate their Turing Test skills and directly play the game. The online platform at www.turinggame.ai is accessible worldwide and invites players to sample additional games and beat the AI.

Lead and Scientific Supervision: Bernhard Nessler (SCCH/JKU) / Co-Lead and Legal Advisory: Gregor Aichinger (JKU/SCCH) / Installation and Design: Katharina Leitner (Linz)

This project is supported by the State of Upper Austria. The project and the interdisciplinary research of the SCCH, the LIT Law Lab and the JKU ML Institute was founded by the Linz Institute of Technology (LIT) of the JKU, by the business and research strategy #upperVISION2030 of the country Upper Austria in the project *AI Engineering and Certification Center* and by the collaboration with TÜV AUSTRIA and the joint venture TRUSTIFAI in the CERT project.

LIT Robopsychology Lab (AT)

Songs about AI

Enhancing Public AI Literacy through Music

It is a paradox: although AI is hyped in the media, many people claim to know little about it. Yet AI concerns us all! Promoting public AI literacy is thus crucial for broader participation in shaping our AI-driven future. For several years, the LIT Robopsychology Lab has been exploring new creative ways to share knowledge of AI. In 2023, this led to *A Liadl, ans üwa KI*, a humorous song explaining AI in Austrian dialect.

The Lab's empirical research has supported the effectiveness of using music to enhance AI literacy. The repertoire is therefore expanded for this year's Ars Electronica Festival to include two new pieces: a hiphop track about environmental impacts of AI and a "Gstanzl" series about gender stereotypes and the lack of diversity in AI. All three pieces are performed live at Ars Electronica Festival, including in the event *G'sungen, g'rappt & g'stanzlt: Was Sie schon immer über KI wissen*

sollten, where the topics of the songs are scientifically contextualized through short talks by experts.

LIT Robopsychology Lab: Martina Mara, Kathrin Meyer, Sebastian Lang, Lara Bauer
Artists participating: Blonder Engel, Yasmo, Flip, Dominika Meindl, Lukas Wögerer, and others
This project is supported by the State of Upper Austria.



© LIT Robopsychology Lab / Nina Danninger

Martin Reiter (AT), Florian Nimmervoll (AT), Mario Zeppetzauer (AT)

Neural Neighborhood

Illuminating Complexity Through Simplicity

An inspiring digital interaction takes place within a spatial arrangement of small, transparent casts shaped like human brains. Each of these brain replicas is equipped with RGB LEDs and is influenced by its neighboring brains, generating interdependent illumination patterns. Inspired by "Cellular Automaton" like Conway's *Game of Life*, viewer interaction activates new "cells," resulting in complex, vibrant patterns. The installation comes to life through tactile interaction with life-sized silicone brains based on R&D models for brain surgery training and hidden contactless interaction via ultrasonic sensors.

This installation highlights that complexity arises from simplicity. Intricate illumination patterns emerge from basic interactions between cells,

mirroring how our world is built on simple elements and interactions.

This reflects the interconnectedness of human societies, ecosystems and the brain, highlighting how small actions can have significant, far-reaching impacts.



© Martin Reiter

ART+SCIENCE EXHIBITION

Chris Bruckmayr (AT), Klaus Dieterstorfer (AT), Stefan Mittlböck-Jungwirth-Fohringer (AT), Rupert Huber (AT)

Climate Organ

In *Climate Organ*, nine "Kärcher" vacuum cleaners with a blowing function, each connected to an old church organ pipe, become a complete instrument with intuitive interfaces tied together: an instrument for sucking in and cleaning the "bad" air of a society consisting of despondent worries about the future and unsolved social issues hampering daily life in our society; an instrument for joyfully transforming this "bad" air into a dynamic sound image, a multi-toned acoustic counter-voice of bravery and happy rebellion against conformity and despondent silence.



© Klaus Dieterstorfer

Mauricio Valdés San Emeterio (MX)

Share-ploring Spatial Audio

The project is dedicated to breaking down the barriers between complex spatial audio technologies and the creators who can benefit most from them. By offering a transparent, brand-agnostic platform for discussion, education and exploration, we seek to ensure that spatial audio does not become a footnote in the history of sound innovation but marks the beginning of a creative era in audio experience, using our sensory capabilities for artistic expression.

Jonathan Reus (US/NL), Antoine Bertin (FR), Natan Sinigaglia (IT), Rojin Sharafi (IR/AT), Manu Mitterhuber (AT), Enrique Mendoza (AT/MX), Robertina Šebjanič (SI), Brane Zorman (SI), Amelié Nilles (FR),

Felix Deufel (DE), Miller Puckette (US), Daniel Teruggi (FR/AR), Ake Parmarud (SE), Katarina Gryvul (UA), Katharina Klement (AT), Francisco J. Rivas "Tito Rivas" (MX), Gašper Torkar (SI)



© Aljaž Rosa

PiNA—Association for Culture and Education

Spaceship from hope

objects from outer space can turn the tide

How can interspecies coexistence contribute to the future of both human and non-human life on Earth? This multidisciplinary exhibition illustrates how interspecies cooperation and innovative thinking can pave the way for a hopeful, sustainable future, aligning perfectly with the festival's theme by presenting innovative projects that instill hope through practical, empathetic and sustainable solutions.

Visitors will encounter diverse projects by various artists. *The Radiotrophic Sanctuary* explores the cooperation between fungi and humans, using radiotrophic fungi to protect against radiation. *The Marine Research Vessel* showcases self-sufficient marine stations promoting coral growth and biodiversity through renewable energy. *Symbiocene* delves into interspecific cooperation, while *Toasted Furniture* transforms recycled plastic

into durable furniture. Additionally, *Share-ploring Spatial Audio* offers a forum for exploring spatial audio technologies.

The exhibition challenges growth-centric narratives, advocating for degrowth and empathetic living. It addresses urgent ecological issues, emphasizing sustainable practices and non-exploitative economies and highlights innovative technologies and sustainable practices that propose alternative futures by merging art and science. The exhibition is housed in a futuristic, inflatable space designed by architect Luka Murovec. This spaceship-like structure, adaptable and dynamic, offers a unique environment for displaying the project.

Marko Vivoda, Saša Spačal, Luka Murovec, Nina Mršnik, Andrej Koruza, Gaja Meznaric Osole, Danica Sretenovic

Krater Collective (Danica Sretenović, Andrej Koruza, Gaja Mežnarić Osole, Amadeja Smrekar) (SI/YU/INT)

Krater Feral Future Fortune Forecast

As Krater Collective operates on unstable urban grounds, they ask visitors to engage in fortune telling to envision survival tactics for its endangered multispecies community. Joined in the Japanese knotweed tea rituals, the visitors are invited to forecast Krater (fortunate) future, while reading the history, presence and future of vivid urban grounds presented in its very archives: artifacts, soundfacts, photofacts from Krater's work on Forbidden Vernaculars and Feral Cartographies.



Krater Collective © Amadeja Smrekar

Nina Mršnik (SI)

Toasted Furniture

In search of the perfect production process

Toasted Furniture is a research project about a self-made production operation. We built DIY machines that “toast” plastic waste into panels from which we make objects. Each step of the process is a constant work in progress that we question all the time, starting from the plastic waste to the complexity of the homemade machines and our small-scale garage operation. Our desire to make new objects is also questionable and because we cannot do anything to curb it, we want to at least create the perfect production process for it.

Nina Mršnik, Nuša Jelenec

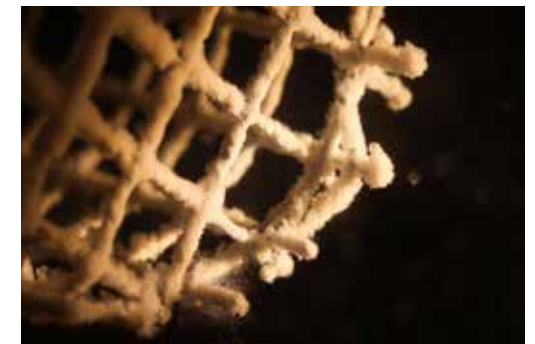


© Natasa Kosmerl

Marko Vivoda (SI)

Marine Vessel

The audience sees a prototype featuring four aquariums with electrolysis, samples of varied materials and a system for potentially collecting oxygen and hydrogen. The prototype showcases self-growing building material, raising awareness of interspecies co-existence, renewable energy and self-sustainability. Utilizing seawater and a system for electrolysis housed within aquariums, this concept addresses the need for sustainable solutions and marine conservation.



© Marine Vessel

Saša Spačal (SI)

Radiotrophic Sanctuary

The *Radiotrophic Sanctuary* is an embodied infrastructure for interspecific cooperation in which a unique ecosystem is being established with the purpose of connecting and supporting at least two biological species, i.e. fungi and humans. We have opted for radiotrophic fungi, which have the ability to protect the visitors from radiation, as well as species of fungi protecting the materials on which they grow.

Production: Pina, Innorenew, Faculty of Biotechnology Ljubljana, HEKA, Ministry of Culture Slovenia, Zavod projekt ATOL



© Luka Murovec

Yuri Tanaka (JP), Akitaka Ariga (JP), Chris Bruckmayr (AT), Pavle Dinulović (RS), Umut Kose (TR), Rohan Sachdeva (IN)

Transient—Cloud Chamber Vol. 1

A cloud chamber is a particle detector that allows us to directly observe radiation with the naked eye, including cosmic muons, enabling the design of an art installation meant to transform each detected muon into a visual trail and a corresponding sound, in real-time.

One by one, they appear and disappear. By the time you witness them, each of these particles is nearing its fleeting and certain end, with the next one waiting just around the corner. And each particle, within its brief existence, embodies the opposing principles of simultaneously being and fading away—the story of a desire to remain unchanged and an urge to move on.

Thus, in this everlasting cosmic ambivalence, there is beauty to be found not only in the attempt to keep life still, but also in the hope that every passing ushers in another un-still and transient

being, perhaps more meaningful and profound than the last. A sincere appreciation of a transient existence, however brief it may be.

This work is funded by a grant from Toshiaki Ogasawara Memorial Foundation and JSPS KAKENHI Grant Number 24K15639.



© Yuri Tanaka

Uwe Rieger (DE), Yinan Liu (NZ), Hua Yang (CN)

Whispering Gardens

Whispering Gardens invites the audience to traverse through imaginary landscapes guided by spatial audio narratives and soundscapes. Created by an AI system, the storylines merge classic principles of garden architecture with contemporary environmental degradation and extrapolated fairy tales. At the heart of the installation sits a robotic arm which is equipped with an ultrasonic speaker able to target individual visitors with a narrow beam of sound. While multiple people may occupy the site simultaneously, the scenes reveal themselves only to a few at a time. Those within the beam of sound find themselves immersed in imaginary gardens and illusory landscapes, guided by the whispering voice of an invisible narrator. The *Whispering Gardens* project is part of ongoing research by the arc/sec lab and the DIV Lab, which aim to discover new principles for the design, construction and interaction with cyber-physical environments.



Generated using Photoshop Firefly

arc/sec Lab: Uwe Rieger (DE/NZ) & Yinan Liu (NZ), University of Auckland
DIV Lab: Hua Yang (CN), ShanghaiTech University
Support: Hongsheng Gao (CN), Ziqiang Huang (CN), ShanghaiTech University

The project is supported by the University of Auckland and ShanghaiTech University.



© Fiona Smith

Fiona Smith (GB)

The BOX 2.0

“The BOX Will See You Now”: An Interactive Artwork Exploring the Use of AI in Medical Diagnostics

The Box 2.0 is a two-meter black, glossy cube whose surface is pierced by the impressions of the hands that were used to train its AI model. Putting a spotlight on the data that is used to build AI models, this installation takes visitors on an interactive journey through an alternative hand-surgery clinic. Acting as patients, the hands of visitors will be scanned, and then through a dynamic display, *The Box 2.0* will communicate with them about their treatment plan. Without any opportunity to question or debate, the visitors will then be shepherd to their assigned treatment. Only at the end will they be offered any human interaction with a medical professional. Finally, visitors will be given the opportunity to enter the engine room and come face-to-face with *The Box 2.0* themselves. They are encouraged

to touch its walls, examine the diversity of hand types it contains and see if their hand “fits”. A window into *The Box 2.0* also allows them to see how it developed its algorithm.

The project was made possible thanks to generous help from Bianka Hofmann, Miriam Walsh, Mark Kobine, Peter Bentley, Malcolm Cruickshank, Paul Charlton, Hans Meine, Matthias Günther, Rieke Alpers, Anna Rörich, Valentin Kraft, Susanne Diekmann, Roxanne Wong and Nicola Osborne.

The BOX 2.0 is based on *The BOX*, the outcome of the Creator Residency “STEAM Imaging V—Holding the ‘Digital’ in Medicine to Account”, hosted by Fraunhofer MEVIS, in collaboration with the Institute for Design Informatics, the International Fraunhofer Talent School Bremen and the School Center Walle, supported by Ars Electronica.

ART THINKING LOUNGE

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

Platform for Transformation through Art

The Art Thinking Lounge is a “platform for transformation through Art.” It creates a space for companies, government, artists, scientists, activists and citizens to experience, criticize, express their opinions and discuss visions of the future through artworks and to inspire better futures. What is the role of art in the 21st century? And how can we apply art for a better society in the future? Art is a catalyst for shaping a better society in the future, a way to open up new perspectives. Art encourages the curiosity to look at what is behind the scenes and to stimulate creative solutions. The Art Thinking Japan Initiative aims to open up artistic thinking to Japanese companies and stimulate critical dialog around the challenges the future holds. It began in 2014 as a collaboration between Hakuodo, a Japanese integrated marketing and innovation company, and Ars Electronica. This year's Art Thinking Lounge is a new initiative as part of that

program. The Art Thinking Lounge has three areas: *Art Thinking ABC* consists of a playful exhibition on “what is Art Thinking, why is it necessary and how can it be done” and a kit that allows visitors to try out Art Thinking at the Ars Electronica Festival. *Art Thinking Inspiration* presents artists' projects that put Art Thinking into social practice; and *Art Thinking Prototype* showcases companies' future visions. These will be subject to criticism and feedback from visitors.



Transformation Lounge © vog.photo



© Yuima Nakazato

Yuima Nakazato (JP)

Dust to Dust

Documentary, Environment, Politics, Fashion, Journalism

The future of fashion is here and it is being ushered in by Yuima Nakazato, currently the only active haute couture designer in Japan. Embracing innovative scientific technologies and meshing them with older material techniques, Yuima is determined to move clothing away from mass production and toward respect for the individual and our environment. While designing sculptural haute couture for the runway, Yuima dreams up his visionary and socially aware practice through

research and experience of environmental and production issues happening all across the world—this time in Kenya, where the scale of textile waste is a harbinger of the urgent need for conservation and social change.

Documentary Film: 87 minutes
 Director: Kosai Sekine / Producer: Yusuke Kamata /
 Cinematographer: Andrzej Rudz / Editor: Mariko Ide /
 Cast: Yuima Nakazato

FASHION FRONTIER PROGRAM (JP)

FASHION FRONTIER PROGRAM 2024

The exhibition showcases the work of the winners of the 2023 *FASHION FRONTIER PROGRAM*. What they all have in common is that their work is based on fieldwork. Through this fieldwork, they have developed a new sense of value and creativity in their work, which is born from their deep contact with people and objects that are a natural part of the garment-making process, such as their connection with materials, craftsmen and nature. In the *FASHION FRONTIER PROGRAM*, we do not only focus on the beauty of the work, but also on the charm, production background, concept and reason behind it. In this age of mass production and mass disposal, why do we make clothes?

These winners have come up with their own answers to this question. We hope that the designers who will be responsible for making clothes in the future will be designers with aspirations like theirs.

The program discovers and supports fashion designers who can realise garment designs that combine social responsibility and creativity. It was established in 2021 with designer Yuima Nakazato. The programme consists of five elements: 'Award', 'Incubation', 'Scouting', 'Matching' and 'Lab'. We are looking for people of any age who want to take a new step forward as a fashion designer. This project was sponsored by Daimaru Matsuzakaya Department Stores Co.Ltd., Goldwin Inc., Seiko Epson Corporation and TOYOSHIMA & CO.,LTD.



Yu Kawajiri (JP)

weaving sentimentality

In the torrent of the times, the fabrics that had lost their owners and had nowhere to go were untied, torn, twisted and knitted by the artist's own hands. Countless gorgeous garments left behind by the mother of an acquaintance at her house. Or the colorful patchwork of *hanten* with colorful linings left behind by the former residents of an old private home. In this way, it was expressed as a time to pass on the feelings of sadness and loneliness that dwelled there to the next generation.



weaving sentimentality © Yasunari Kikuma

Julia Moser (AT)

Pantha Rhei. Growing colours for flowing waters

In reminiscence of energized waterfalls and places of power in nature, this garment aims to poetically evoke moments in which the qualities and energy of water can be felt and experienced. The pigments used for dyeing the clothes derive from bacterial strains collected from the Danube river which require almost no water and no harmful chemicals for dyeing. Instead of wearing shoes, the model stands barefoot on stones and experiences the connection to nature through this direct contact.



Pantha Rhei. Growing colours for flowing waters © Yasunari Kikuma

Hiroto Ikebe (JP)

MAYUGOMORI

MAYUGOMORI focuses on the declining sericulture traditions that have long supported Japanese livelihoods and deciphers the relationship between materials and producers arising from communication between humans and silkworms. The aim is to transform the production process from silk waste to new materials by merging modern technology with land-based and life-inspired techniques within the local community, aiming to reduce environmental impact and create a positive impact on the surrounding environment.



MAYUGOMORI © Yasunari Kikuma

Theme Exhibition

Olga Tykhonova (UA) / Co-Curator Theme Exhibition

HOPE: the touch of many

During the five days of the festival, the exhibition inhabits the architecture of the POSTCITY's bunker and unfolds as a shared space and a contact zone. It is a tapestry of conceptual, sensual and emotional journeys through and within artistic inquiries and research domains. It is also an interface that reveals the collaborative and empowering endeavours of Ars Electronica, its multiple partnerships and commitments. The extensive journey through the concrete underground maze is divided into five parts. A prologue in the festival's opening area is followed by an underground descent unfolding across three chapters that follow the twists and turns of the bunker's architecture. The journey concludes with an epilogue before resurfacing from the depths of POSTCITY.

Hope is a great intangible.

Neither a belief that everything was, is, or will be fine, nor a substitute for action, hope is rather a basis for action. We choose to hope. Amidst defeatism and cynicism, amnesia and ignorance, we choose to recognize, commit to and develop radical possibilities built on alternative views of a more compassionate, communal

and cooperative human nature. To be hopeful without being delusional we need an account of the complexities and uncertainties that provide openings for collective power and action towards collective transformation. Scientific arguments alone apparently cannot compel us to act, as the urgency of climate change clearly demonstrates. But if scientific evidence is not enough, what is? It can be—the power and impact of affecting our sensory and emotional capacity can be. As Rebecca Solnit warned us, we need to recognize the shades of grey between black and white to maybe see the world in full color, to be hopeful in a meaningful and impactful way. How can we cultivate and enhance this sensitivity if we aim for actionable hope, hope that bridges the gap between envisioning a better future and taking action in the turbulent present? Affects, emotions and our entire sensory capacity—rather than rational arguments alone—play a decisive role in and impact on changing behaviour and culture. As a society, we depend on an ongoing boost of imagination activism to set up better (if not new) and more mindful ways to communicate and organize in exhilarating alliances across distance

and difference. Evolutionary biologist Stephen Jay Gould argued that mutual aid is an important evolutionary factor among all non-humans. Despite difference, time pressure and resources scarcity, not because of altruism, calculation, advantage or survival mechanism—but from a deep understanding of kin, interconnectedness and structurally embedded mutuality and interconnected wellbeing. Our lifestyle choices are not driven solely by rational factors. To counter the destruction of the earth and foster coexistence, we need to develop more complex ways of thinking that go beyond the logical cause and effect and ensure that poetry too survives in the world. That powerhouse of imagination and worldbuilding, the writer Ursula Le Guin has heeded great societies that did not use the wheel, but there have been no societies that did not tell stories. “What other people, real or imaginary, do and think and feel—or have done and thought and felt; or might do and think and feel—is an essential guide to our understanding of what we ourselves are and may become... For the story is one of the basic tools invented by the mind of man, for the purpose of gaining understanding.” Within the overarching theme of this year's festival, “HOPE”, the exhibition spotlights and underlines the “superpower” of artists and their role in society as significant critical others and storytellers. Artists have the superpower to eliminate indifference, to ignite hope that moves us, ultimately and at its best, hope that moves us to act. Hope is neither a gift nor a remedy, but something that artists can spark and cultivate within us all. They inspire confidence to endeavor and a commitment to pursuing possibilities, protecting the ineffable, the unmarketable, the poetic and the eccentric. Artists challenge us to see beyond the confines of what is, highlighting and activating what is or should be within our view, and scattering seeds of awareness and courage.

The exhibition showcases various strategies and methodologies, including scanning the horizon, intertwining social design with eccentric engineering, creating interfaces for dialogs and polylogues and triggering, translating and expanding the senses.

And as we move along the concrete maze, artists stress and stretch both our sensory and our emotional capacities as far as possible. The power and impact of this influence must go beyond mere aesthetics of watching and listening. It should enhance compassion, collaboration and mindful coexistence rooted in solidarity and kinship. As artists translate future uncertainties into present-day choices and we encounter both their tangible and imaginative worlds, we might discover personal and collective power and a sense of connection that is both emotional and political. To follow Octavia Butler's notion of “new suns,” artists help us collectively to envision these new horizons, allowing other landscapes to emerge. Embarking on a journey in a bunker, we embrace two forms and promises of hope: hope created by us and for us to create. We are challenged to feel and urged to act, invited to touch and be touched.

Presented in the context of the *European Digital Deal* project, part of the theme exhibition is co-funded by the Creative Europe Programme of the European Union. The exhibition features works from the *EMAP (European Media Art Platform)* residency created through the European Media Artist in Residence Exchange (EMARE), the CIFO x Ars Electronica Award supported by the Cisneros Fontanals Art Foundation (CIFO) and a work supported by the Institut Ramon Llull. 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 and a project awarded the *Ars Electronica Award for Digital Humanity*, supported by the Austrian Federal Ministry for European and International Affairs. Another work was co-produced by Ars Electronica and the National Taiwan Museum of Fine Arts and one project has been developed during the *TAICCA x Ars Electronica Art Thinking* program.

One driving question has been “What world do we want to live in?” with “we” understood as a very inclusive. Not just we in Linz, or family, or nations, but as a larger collection of people. For this, we have focussed on creating and developing curiosity. So “how can we create and underscore curiosity?” has been an important question. For this, we have returned repeatedly to questions of surprises, wonder and awe as ways to inspire curiosity.

— **Time's Up, Theme Exhibition Artist Spotlight**

Olga Tykhonova (UA) / Co-Curator Theme Exhibition

ARTIST SPOTLIGHTS

Often, we misconceive our opinions and views as facts—overlooking that the ways we look at the world are already shaped by an underlying storyline. But these stories can be told in different ways: it is a question of perspective, a question of where we stand when we look at the world. From where artists stand, they oftentimes see things that we do not. Looking through the artist's lens can affect and even change our ways of sensing the world. They help us narrate it differently and access other perspectives.

Within this year's theme exhibition, we invite visitors to try on the artists' lenses in four designated spaces with artists Tega Brain, Anab Jain of Superflux, LaJuné McMillian, and the Time's Up collective. Opening with a specific question, *Artist Spotlights* take us to the cross-roads of ways of thinking, of ways of working

and being together. Intended as cultural quests of imaginative propositions, they move us beyond rational analytics and technological remedies and boost our affective understanding of culture, society and nature as necessarily interdependent. We tread these tentative and explorative pathways, and the hope is that we can not only understand, but feel and treat the world around us better.

We are also invited to rethink artistic research. The great power of exploring the facts and realities not only through standardized and refined scientific methods, but through the medium of artistic expression allows us to explore the world differently. Artists allow us to re-conceptualize knowledge in ways that allow us to understand the planetary and societal issues we are facing through affective regimes.

We have seen enough climate art about grief and loss and mourning. I make art to point to the agency we have in the climate crisis. We need art that experiments with system redesign, degrowth aesthetics and cultivates imaginaries for climate mitigation and adaptation. I also want to see climate art about reaching those most responsible for the crisis. Where is the art about revenge?

— **Tega Brain, Theme Exhibition Artist Spotlight**

ARTIST SPOTLIGHT: Time's Up (AT)

Just asking for a friend

How dare you maintain hopeful visions in times like these?

Simple questions are often the best ones. We have been thinking about this one for over two years already and it is still productive.

We know this question has no answer. But it has many responses. One of ours is:

I hear futures and I forget.

I see futures and I remember.

I do futures and I understand.

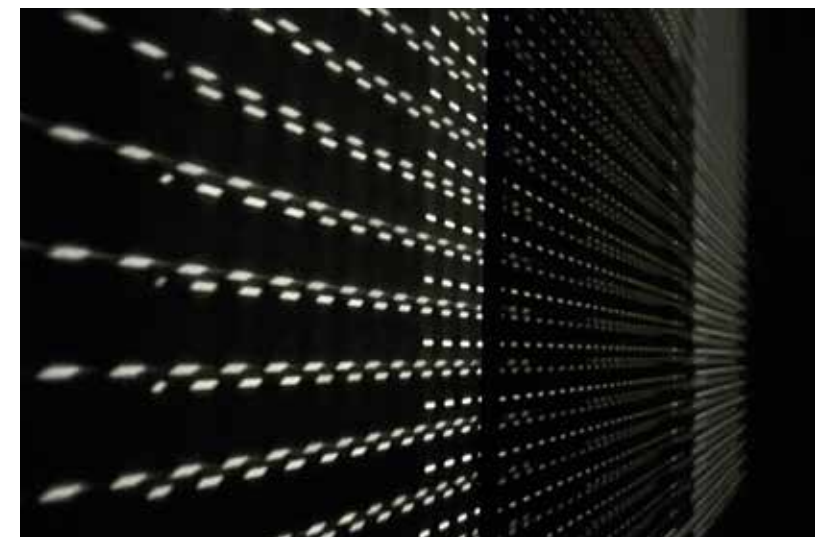
Some other responses might be found nearby. Some of these you will have yourself. Some of them will come about because people thought and acted “as if” the world was already changed. Some of the responses emerge to contradict what we thought we all knew.

The questioner aimed the question at us and our work. We felt defensive for a moment, provoked, criticized. Despondency and dejection do not show a lack of intelligence. Nor do action and

hope. Grief, anxiety, creativity, doubt, resilience and activity are all valid reactions to the many-sided crisis. There is much to do. We need volition, understanding, choice and agency to deal with this volatile, uncertain, chaotic and ambiguous world.

This project emerged from audience interactions with the exhibition “Dr Ruhsam: or how we learnt to love sleep” in Romania and reflections within the FWF funded arts-based research project “Curiouser and Curiouser Cried Alice.”

Time's Up is supported by the Austrian Federal Ministry for Arts, Culture, Civil Service and Sport BMKOES, Linz Kultur, Kulturland OÖ and LinzAG. Presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.



ARTIST SPOTLIGHT: LaJuné McMillian (US)

Black Movement Library

The *Black Movement Library* is a library for activists, performers and artists to create diverse XR projects, a space to research how and why we move and an archive of Black existence. The library seeks to build a community through performances, XR experiences, workshops, conversations and toolmaking.

The *Black Movement Library's* project *Movement Portraits* VR experience is an abstract documentary, diving into the movement histories and stories of five Black Performance artists living and working in New York City.

Spirit and Child follows the journey of the artist's inner child, diving into an alternative reality through meditation and prayer. Particles radiate from the young avatar—an abstract representation of the energy we access and emit when we are able to move through the world freely. The piece is part of a larger body of work including performances and XR installations exploring themes

of embodiment, inner child healing, spirituality and liberation.

Production Credits: Movement Portraits / Creator: LaJuné McMillian / Performers: Roobi Gaskins, Lamb, Renaldo Maurice, Roukijah Rooks, RaFia Santana

Presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.



© LaJuné McMillian

ARTIST SPOTLIGHT: Anab Jain (GB) of Superflux

Presentation of projects by the students from the Design Investigations course of the University for Applied Arts Vienna



Digital Ruins
© Stefan Schönauer

Human Powered Toaster
© Florian Sapp

Pawsitive Charge
© John Küçükçay

Stefan Schönauer (AT)

Digital Ruins

Modern ways of data storage provide us with seemingly infinite space. While these technologies are incessantly trying to appear elusive and magical, they are reliant on and made up of physical matter. This means they are tied to tangible limitations. *Digital Ruins* envisions a future in which we are forced to leave behind vivid and experiential personal archives. In a dystopian, digital reality that leaves us powerless, we turn back to traditional and folkloric ways of self-defense to save ourselves and our memories.

Stefan Schönauer in close collaboration with the Design Investigations Studio at the University of Applied Arts in Vienna, lead by Anab Jain.

Florian Sapp (AT)

Human Powered Toaster

The project began with a simple question: How much electricity do we use for our everyday tasks? While this can be quantified in watts, joules or kilowatt hours, these figures can be abstract. What does 100 watts actually mean?

The *Human Powered Toaster* project aims to make this concept more relatable by translating electric power into familiar physical work. Can human strength alone power a toaster? Given that a conventional toaster requires about 1000 watts, a custom toaster using only 10% of that energy was created. This improved toaster is powered by a stepper motor functioning as a dynamo. To generate the necessary energy, a heavy weight was connected to the dynamo with a rope and spindle, converting the falling weight's potential energy

into electrical energy. In this installation, human energy is directly converted to electricity using a hand crank connected to the dynamo.

Human Powered Toaster is a project by Florian Sapp, created as part of his studies at Design Investigations, at the University of Applied Arts Vienna. Special thanks to Julian Maisriml and Alan Schiegl for their assistance with filming.

Julia Hahl (AT/JP)

Pawsitive Charge

Fossil fuel reserves have been depleted and renewable energy sources are failing to meet the demand. Desperate for a solution, a bizarre, alternate opportunity occurred: harnessing energy that is produced by dogs.

In this speculative project, a startup named *Pawsitive Charge* capitalizes on this untapped resource with three innovative products that tap into the energy produced by our loyal companions: A dog wearable that charges phones using energy from walking with piezoelectric elements, combined with solar panels. A device that generates power via a dynamo in a flexi leash as it winds and unwinds. A gadget that converts tail wags into energy using a Faraday generator with copper wire and magnets.

The bond between humans and dogs becomes entwined with the act of harvesting energy, creating a strange mix of appreciation and misuse. Desperate, the world has embraced this dark and unusual solution. All devices produce real energy to light up an LED, symbolizing energy generation.

John Küçükçay—Photos and Video

Caro Laa—Motion Graphics

Dog Modeling provided by Elizabeth Sharp and Cora.

Project created as part of her studies at Design

Investigations at the University of Applied Arts Vienna.

The selection of the projects from the Design Investigations Studio course of the University for Applied Arts Vienna led by Anab Jain is presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.

ARTIST SPOTLIGHT: Tega Brain (AU)

Tega Brain (AU), Alex Nathanson (US), Benedetta Piantella (US), Solar Protocol Collective (INT)

Solar Protocol

A naturally intelligent network managed by the sun.

Solar Protocol is a planetary-scale network of solar-powered servers, installed and maintained by volunteers around the world. The servers collectively host the *Solar Protocol* web platform at <http://solarprotocol.net/>, serving it from whichever server is in the most sunshine (and producing the most energy) at the time. Decisions about how network traffic is routed and where the computational work is done, are automated according to a solar logic derived from season, time of day and weather conditions across the planet. As an algorithmic system that uses sunlight instead of machine learning to automate decisions, the project provokes new ways of thinking about intelligence and automation.



Solar Protocol, Exhibition view at ZKM | Center for Art and Media Karlsruhe © Tobias Wootton

Solar Protocol also explores what a low carbon internet infrastructure and web design could look like. It provides solar-powered web hosting for the project's community and functions as a kind of planetary-scale, virtual artist-run space.

The Solar Protocol Collective is led by Tega Brain, Alex Nathanson and Benedetta Piantella and includes project contributors and stewards: Anne Pasek, Caddie Brain, Brendan Phelan, John Samoza, Camilo Rodriguez Beltran, Daniel Nuñez, Alejandro Rebolledo, Graham Wilfred Jnr, Tim Chatwin, Bridgit Chappell, Baoyang Chen, Denzel J. Wamburu, Cyrus K, Chris Stone, Jesse Li, Zoë Horsten, Jarl Schulp, Crystal Chen and Jonathan Dahan. With support from: Eyebeam Rapid Response for a Better Digital Future program, Code for Science & Society's Digital Infrastructure Incubator and a Mozilla Creative Media Award.



Cold Call: Time Theft as Avoided Emissions © Walter Wlodarczyk, Courtesy of Pioneer Works

Sam Lavigne (US), Tega Brain (AU)

Cold Call: Time Theft as Avoided Emissions

Stealing time from high emitters

Cold Call: Time Theft as Avoided Emissions is an unconventional carbon offsetting scheme that draws on strategies of worker sabotage and applies them in the context of high emission companies in the fossil fuel industry. Time theft is a strategy to deliberately slow productivity, where workers waste time and are therefore paid for periods of idleness. For example, fake sick days, sleeping on the job, extended lunch breaks or engaging in non-work related activities

like social media or unrelated phone calls. *Cold Call* is an installation that takes the form of a call center. Audiences are invited to connect by telephone to executives in the fossil fuel industry and instructed to keep them on the phone as long as possible. The cumulative time stolen from these executives is then quantified as carbon credits using an innovative new offsetting methodology.

Commissioned by the STRP Festival, Eindhoven with support from Creative Capital.

Artist Spotlight Tega Brain is presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.

Claudia Larcher (AT)

AI and the Art of Historical Reinterpretation

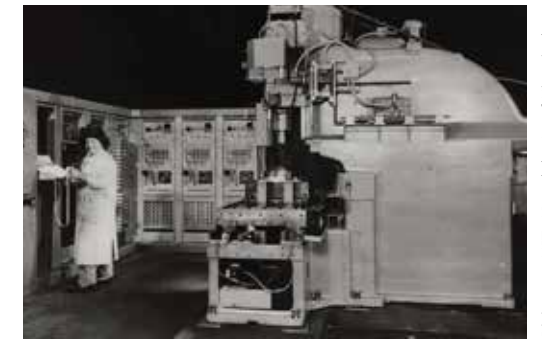
Filling Gender Bias Gaps

AI technologies, especially image generation models, can rewrite history and enhance our understanding of the past while addressing potential gaps. The project critiques distortions in historiography driven by political interests, personal preferences, one-sided narratives and the marginalization of people and events. This particularly applies to FLINTA* individuals, whose contributions have been overlooked. By creating a growing fictional image archive within a cultural, socio-political and scientific context, the project reinterprets the past with inclusivity and diversity. In this way, AI models are trained and informed to ensure a balanced perspective. This collection, which can be data scraped, is spread across digital platforms, fostering a deeper understanding of history and its impact on future AI decisions. The exhibition installation presents a selection of images related to technology using

a slide projector and a vintage projection screen, evoking the feel of a historical, analog-image archive.

Supported by Ulrike Hanstein and Dagmar Schink, VALIE EXPORT Center Linz.

The Ars Electronica Award for Digital Humanity was initiated and is supported by the Austrian Federal Ministry for European and International Affairs.



Digitron at MIT: AI and the Art of Historical Reinterpretation © Claudia Larcher

Luiza Prado (BR)

All Directions At Once

All Directions at Once is a web-based artwork that charts histories of reproductive control. The work follows the path of ayoowiri, or the peacock flower—a plant that grows in the tropical areas of Latin America. During the European occupation of the land, an infusion of this plant was often used as a contraceptive and abortifacient amongst Indigenous and African communities—a strategy of reproductive resistance within the context of colonial domination. What kinds of modernities come into being through these acts of refusal? Through the stories of ayoowiri and other contraceptive and abortifacient plants, this animated graphic essay explores conceptions of radical communal care and unravels the poetic dimensions of excess as a fragmented, fast-paced pluri-verse, meshing together timelines; a disjointed collective, moving in all directions at once. *All Directions At Once* was acquired by the Art

Institute of Chicago in 2022 as the first internet-based work in their permanent collection.

Supported by Schloss Solitude Web Residencies. Presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.



© The Art Institute of Chicago

Martyna Marciniak (PL)

Anatomy of Non-Fact

Chapter 1—AI Hyperrealism

In an age of visual communication marked by fakes and hoaxes, it is crucial to recognize when aesthetics take precedence over facts.

The first chapter of the ongoing project: *Anatomy of Non-Fact* questions whether visual truth is material or “in the eye of the beholder”?

The work engages with the hyperrealism of the so-called “Baleciaga Pope” image, which captured the attention and imagination of many during the “AI-boom” of 2023.

The audience will be confronted with a reconstruction of this AI-event, in the form of a physical display with textile elements and a short film.

By creating a heightened sensation of the uncanny, a state of perpetual semi-recognition, in intensifying conflict between sensing and sense-making, the work aims to empower the viewer. It also sets out to catalog and demystify

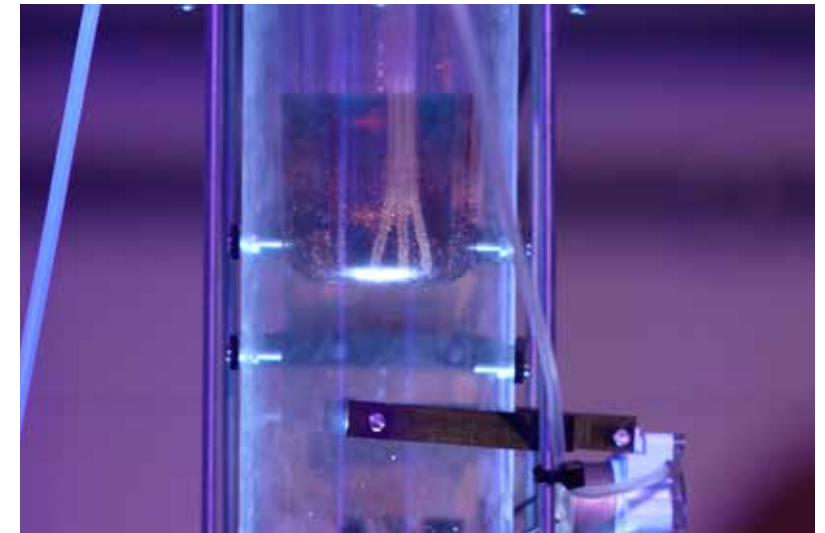
some of the elements of the established visual languages of fact, with their inherent biases, lapses and misleading tropes.

Concept, Idea, Design, Production, Script: Martyna Marciniak
 Production Support: Kotryna Slapsinskaite
 Actor: Derrick Jenkins
 Videographer: Hagen Betzwieser
 Score and Sound design: Marco Pascarelli
 Technical support: Jan Schlüter
 Project advisors: Ayodele Arigbabu, Kasia Chmielinski, Andres Colmenares, Lachlan Kermode, Julia Kloiber, Manuela Naveau, Gerfried Stocker
 With production support from Akademie Schloss Solitude

This project has been developed and is presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.



Atlas of Non-Fact teaser © Martyna Marciniak



© Klaus Spiess, David Bosch

Klaus Spiess (AT), Emanuel Gollob (AT)

Anthropophagic Myth, Biopiracy and Opera in the Amazon

Psychogeographies of Hope

How can we apply an Amazonian myth, as described by several anthropologists, to contemporary relations of nature and culture? How can we change romanticized colonial perspectives, such as Werner Herzog's and others' export of “Caruso Operas” to the Amazon? How can we use the growth necessities of microbes for a postcolonial narrative? How can we understand sound as a medium linking the environment to humans? The audience sees a two-meter, hollow, double-walled, transparent cylinder filled with microbes between the walls, in which a tenor sings a Caruso aria. Vocal vibrations are transmitted to the microbial cylinder, and the microbes' vibrational needs alter the sound. This changed sound

is played on a phonograph in front of the cylinder, which reflects the microbial growth needs. The audience hears the altered sounds and perceives the vibrations through small haptic transmitters.

Electroacoustics, Sound: Paul Gründorfer, Michael Strohmann / Mechatronics: Jürgen Ropp, Interface Culture, University of The Arts, Linz / Voice, Tenor Singer: George Kounoupas, Univ. of Music and Performing Arts, Vienna / Dramaturgy, Choreography: Lucie Strecker, Performance Lab, University of Applied Arts, Vienna
 Auditive Anthropology: Hans-Jürgen Hauptmann
 Phonography: Christoph Freidhöfer / Microbiology: Mehrta Shirzadian, Mark Rinnerthaler, Heribert Insam, Amrito Geiser
 Supported by the Austrian Science Fund AR 687 PEEK, Medical University and University of Applied Arts, Vienna.

Dorotea Dolinšek (SI)

Biosymbiotic Exoskeleton

Biosymbiotic Exoskeleton is an inflatable spacesuit that makes it possible to coexist symbiotically in the radical extraterrestrial environment with an individual's microbiome. The spacesuit becomes an ecology of organisms, breaking down the human body into parts for which specific care and maintenance procedures can be established in order to prevent dysbiosis. The body, dismantled per partes, thus becomes an organized system for which it is possible to create altered living conditions. By reverse-engineering an imaginary situation in outer space, projections can be made concerning the possibilities of survival on an ecologically altered planet, where the human body is disassembled into functionalities, rhizomatically linked between different species. The microbiome plays a crucial role in survival, not only in an ontological sense but also in a very

intimate way. To be alive is to be in symbiosis with non-human living systems that extend far beyond the physical boundaries of the human body.

Produced by: Ars Electronica within the framework of the EMAP (European Media Art Platform) | Coproduced by: Kersnikova Institute / Kapelica Gallery | Curators: Christl Baur, Martin Honzik, Jurij Krpan | Production support: Jessica Galirow, Sandra Sajovic | Expert collaborators: Anastasia Bragina, Manuel Selg, Kristijan Tkalec | Technical solutions: ::vtol:: (Dmitry Morozov) | Technical support: Simon Gmajner, Jure Sajovic | Inflatable structure: Ursula Klein (Schulteswien) | Acknowledgements: Gabriele Berg, Johannes Buchwieser, Gernot Grömer, Randolf Helmstetter, Leo Schatzl, Barbara Sušnik, Miha Turšič, Florian Voggeneder

This project has been developed and is presented in the context of the *EMAP* project. *EMAP* is co-funded by the Creative Programme of the European Union.



© Matjaž Rušt



© Myriam Lambert

Marc Vilanova (ES)

Cascade

Waterfalls emit infrasonic frequencies vital for the navigation of certain birds, which use them as a compass during their migrations. Recently, noise pollution from industrialization has threatened this journey. *Cascade* attempts to reproduce the infrasonic recordings of various waterfalls using small speakers incapable of emitting such low frequencies. However, their vibrations activate an optical fiber through which the sound "falls," creating a curtain of light that visualizes the sound waves, offering an alternative form of listening. This challenges human auditory and perceptual capabilities, decentering our position as "the measure of all things." Such vibration can be seen, felt and touched with the skin, providing a multisensory experience that emphasizes interspecies connections through "feeling with" others and the body. The fibers of *Cascade* illuminate the viewer's position, reminding us of the critical importance of preserving the often unseen elements of nature.

Idea, Production, Construction: Marc Vilanova
3D Design: Javi Albo, Rodrigo Waihiwe
Technical Design & Fabrication: Javi Albo
Software: Alfredo Ardia
Custom Hardware and Firmware: Wesley Lee
3D Printing: Nuno Oliveira
Installation Support: Johanna Palmeyro, Clarisa Esevich, Márcio Ferreira, Tiago Rosendo, Guillaume Côté, Myriam Lambert, Triska Sicuranzo, Matias Tolchinsky, Elsa Guerra, Alba Medinyà, Neus Masdeu, Júlia Faura, Mercè Lledós, Lisandro Marquez
Support: EMAP, Creative Europe, Avatar Center, Institut Ramon Llull, OSIC, Konvent Puntzero

This work was realized in part within the framework of the European Media Art Platform (EMAP) residency program at Gnrnation with support of the Creative Europe Culture Programme of the European Union, Avatar Center and the Institut Ramon Llull.

This project has been developed and is presented in the context of the *EMAP* project. *EMAP* is co-funded by the Creative Programme of the European Union. Presented with the support of Institut Ramon Llull.

masharu studio (NL)

Compost as Superfood

Compost as Superfood explores the production of human-made, earth-like substances meant especially for voluntary ingestion by humans. The act of making compost plays into the engagement with recreating healthy soil that is sufficient in nutrients and minerals. This project delves into the ingestion of compost as a means to understand its properties and potential benefits for human health and environmental balance.

By bridging art with scientific research, masharu studio invites dialog on how the human relationship with food production and edibility can be re-imagined. During the exhibition, the audience will encounter a multisensory experience featuring displays through images, scientific data and tactile interaction with the compost.

Compost as Superfood aims to discuss the safety around consumption of organic materials and the complexity of cultural understanding, spatial awareness, environmental awareness and personal desires surrounding this.

Compost as Superfood is a project by masharu studio (Dr. masharu, Sil Zeigarnik, Sophia Komarov-Reinisch and others). The project is developed with the support of Ars Electronica, European Media Art Platform, Creative Industries Fund NL, Soil Life (Platform DIS and Bodemzicht Foundation) and Waag Futurelab.

This project has been developed and is presented in the context of the *EMAP* project. EMAP is co-funded by the Creative Programme of the European Union.



© Tom Ossendorp

Ryo Kishi (JP)

Distorted Flower

Distorted Flower explores the dilemma of the distortion of stereotypes arising from technological evolution. String loops, controlled by algorithms, defy gravity and float freely, warping as they move. When technological advances such as the expansion of expression through generative AI and the evolution of life via genetic engineering challenge the stereotypes, controversy almost invariably arises. Opinions divide between those who celebrate it as a new possibility and those who criticize it as ethical distortion. This represents the dilemma created by the warping of stereotypes accompanying technology's evolution. *Distorted Flower* expresses this dilemma using a flower, an emblem of artificial evolution

through selective breeding, as its motif. The continuously transforming petals at first glance symbolize distortion, but from another angle, they appear to be pulsating with the effort to create new forms.



© Ryo Kishi



© Taiwan Content Plan

Simple Noodle Art (TW): Zi Yin Chen (TW), Hsiang Feng Chuang (TW)

Exploration and Exploitation— AI Interactive Video

Does AI exacerbate social divisions when faced with the dilemma of exploring and exploiting humans? The rise of social media has changed the means and direction of information flow. As information is delivered by AI recommendation algorithms in a pandering way, it seemingly increases the opportunity to access more information. However, does it also make it difficult for individuals with different standpoints to receive each other's perspectives, thus leading to filter bubbles? Do content creators pursue their reach, thereby affecting the content they created? This work depicts an office worker coming home from work, clicking on a YouTube-recommended video which introduces the "AI virtual companion." We have created an AI interactive video system that can switch the YouTuber's opinions on different standpoints based on the audience's emotional response when watching. We also installed a message board at the exhibition venue, allowing viewers to post their perspectives after watching.

Lead artists: Zi Yin Chen, Hsiang Feng Chuang, Producer: Simple Noodle Art, Co-Producer: Ars Electronica, NTMoFA Executive Producer: Chih Yung Chiu, Chun Chieh Lai, Laura Welzenbach, Emiko Ogawa, Lisa Shchegolkova, Associate Producer: PanSci Director: Simple Noodle Art Executive Director: Chi Wen Ting
Screenwriter: Chi Wen Ting,
Assistant Screenwriter: Fucheng Hsieh, Simple Noodle Art, Script Supervisor: Zi Yin Chen, Talent: Gao Hong, Kuowei Cheng, Cinematographer: Chingwen Liao
Gaffer: Itami Liang, Production Sound Mixer: Coca Yan, Sound Designer: Kueia Chen, Visual Effects Supervisor: Vincent Huang, Jhong Wei Chen, AI Interactive System Engineer: Shanboy Chen, Hsiang Feng Chuang, Editor: Zi Yin Chen, Hsiang Feng Chuang, Colorist: Hsiang Feng Chuang, Subtitle Translation: Bart Dashorst
Special Thanks: Bo Cheng Shen
This work was co-produced by National Taiwan Museum of Fine Arts & Ars Electronica in 2024, with support from the Ministry of Culture (Taiwan), R.O.C., under the Technology Art Venues Innovation Project and the Taiwan Content Plan.

bit.studio (TH)

FLOCK OF

Discover the supernatural nature of floating fish

FLOCK OF seeks to inspire by fusing art and technology, challenging perceptions and sparking curiosity by transforming a school of fish into a flock. This installation symbolizes life's interconnectedness and adaptability, reflecting the ever-changing nature of existence. Helium-filled balloons, each with an electronic brain, create an aerial spectacle, continuously receiving signals from sensors and sending data to a central server. A central server guides their movements in real-time using advanced modules for navigation, detection and communication. This blend of physics, mechanics, electronics, programming and network systems results in

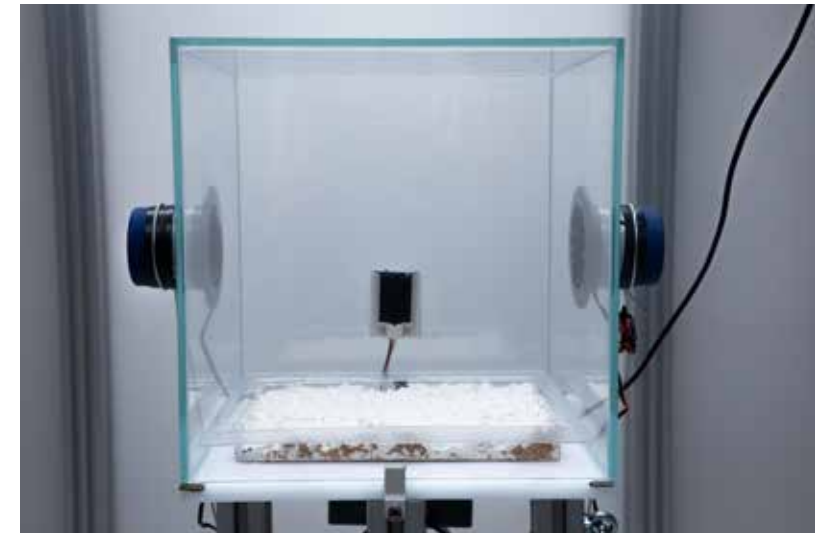
a mesmerizing display, highlighting the potential of interdisciplinary innovation. Within its cultural and scientific layers, *FLOCK OF* explores themes of interconnectedness and collective behavior, encouraging viewers to reflect on the ever-evolving nature of our world.

bit.studio was responsible for the development, design and implementation of all aspects of the project.

Presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.



© bit.studio



© Tiziano Derme & Nadine Schütz

Tiziano Derme (IT), Nadine Schütz (CH)

Fu(n)ga

Polyphonic feedback and spatialization between fungal growth and sound

Fu(n)ga explores the relationship between fungal growth, CO₂ and acoustic vibration through spatialization and experimental sonification. The experience includes three main components: developing an enzymatic fungal process under controlled conditions, monitoring CO₂ from fungal respiration and using sound to enhance and transpose fungal growth patterns with and into audible cues. A network of sensors and transducers creates a polyphonic feedback process. It combines acoustic stimulation of fungi (talking to fungi) and sonification of fungal respiration (listening to fungi) monitored in real-time and during experiments. A spatial audio system immerses visitors in the organic composition and incorporates their breathing. Like a musical fugue, this metabolic polyphony expands into an auditory landscape in which multiple voices

and temporalities reflect each other. *Fu(n)ga* creates a new bio-sensory media domain that invites reflection on the role of CO₂ as an intrinsic condition of life.

Institutional partners:

ETH-Zürich Digital Building Technologies (dbt),
Future Cities Laboratory (FCL) Global

Collaborators:

MAEID—Büro für Architektur & multimediale Kunst
ECHORA—Landscape Acoustics & Sound Architecture
Audio software development: Mathieu Preux, Advice:
Manuel Poletti

Controlled environments hardware and software
development: Che Wei Lin, Tobias Hartmann

The project has been produced in the frame of the ArTS
Production Grant for Swiss Artists supported by the Swiss
Arts Council Pro Helvetia.

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



© Adriano Ferreira Borges

Bethan Hughes (DE/GB)

Hevea Act 6: An Elastic Continuum

An Elastic Continuum is an artistic research project developed by artist Bethan Hughes that forms the sixth act in her ongoing project, *Hevea*. It traces the story of *Taraxacum kok saghyz*, a rubber-containing plant better known as the Kazach or Russian dandelion, from the perspective of the women whose labor was and is related to its cultivation. Following the journey of this humble "weed" from the Tien Shan mountains in Kazakhstan to collective farms across the former Soviet Union, greenhouses at Auschwitz to the laboratories of multinational tire corporations in Europe, Hughes questions the entanglements between people, plants, politics and power. The installation revolves around a single-channel video constructed from fragments of archival film and contemporary footage from Kazakhstan, Holland and Germany. A series of glass, rubber and steel sculptures extends beyond the screen, acting as instruments through which a multi-channel audio piece composed by artist Diego Flórez is played.

Glass, steel, rubber, quadrophonic audio + 8-channel generative audio, HD video, 27 mins.
Sound: Diego Flórez Translation: Gary Vanisian, Maja Zagórska

Voice artists: Nicola Sangs, Raushan Tolganbayeva, Anna Kin, Daria Shyshko, Halina Rasiakówna, Marlene Dietrich
Archival material: German Federal Archives; Central State Archive of the Republic of Kazakhstan; Central State Archive of Ukraine; Lore Shelley Archive.

Many thanks to: Professor Dr. Dirk Prüfer at the Institute of Plant Biology and Biotechnology, University of Münster; Fred Erkner and staff at ESKUSA GmbH; Peter van Dijk, Anker Sørensen and staff at Lion-Flex / KeyGene; the Tselinny Centre of Contemporary Culture; Pablo de Soto and the team at LABoral; Dominika Kluszczyk.

This project was realized within the framework of a European Media Art Platform residency program at LABoral Centro de Arte y Creación Industrial with support from the Creative Europe Culture Programme of the European Union. It was produced with support from the Senate Department for Culture and Social Cohesion Berlin, Institut für Auslandsbeziehungen and the Alexander Tutsek-Stiftung.

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

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

iBody & Auditory culture bring body and environment to life

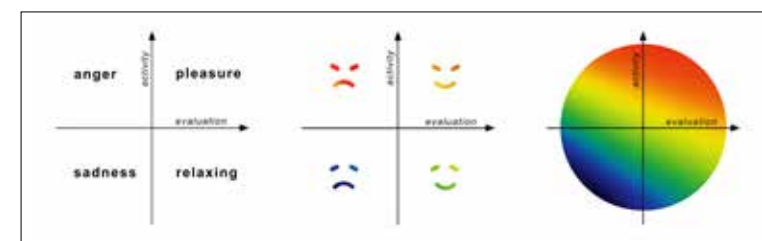
Body interactions with re/presentations of the environment, symbol, icon, index, create different "realities". The project aims to make this understandable and to be experienced.

Symbols are willful assignments to what is seen. This feasibility leads visual cultures to the Anthropocene. Body representatives rule over it. Icons are reproductions of sensations. Index is body's immediate sensation of stimuli. This precognitive experience of hearing as a tele-sense and abstract experience of "tension-solution" is adequate to media cultures.

As mediated realities beyond time and space,

they create an "all-at-onceness", their immateriality can't be understood symbolically, it is experienced in an abstract stimulative way. All of this describes hearing.

Biosemiotics ascribes meanings to precognitive stimuli that live a survival of bodies with nature; not determined by representatives of bodies, but by bodies themselves. Media worlds are auditory cultures in which the body turns the tide!



© Werner Jauk, Doris Jauk Hinz

Carlos Sfeir Vottero (CL/ES)

Iron 56

Our planet is propelled by the four fundamental forces of the Universe, those that cannot be reduced to more basic interactions. The Strong Force, the Weak Force, Electromagnetism and Gravity represent the essence of the Earth's formation, present and future. *Iron 56* proposes a tangible model of the relationship between energy and balance allowing visitors to play with these otherwise imperceptible forces.

The installation takes its place at the intersection of art and science as a strategy to connect with the more-than-human world. The project intends for the flow of energy to be a means of communication that can be decoded for the public through a poetic approach to physics and chemistry. Studies on statics and magnetism are behind the work's harmony and chaos. Experiments on the counter-extraction of iron through electrolysis result in crystalline formations that embody the forces at play in the installation.



© Carlos Sfeir Vottero

Fabrication: Iron and Electricity / Interaction: Gravity and Electromagnetism / Text: Matteo Rapini / Install: Rebekka Jochem

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*.

Aoi Serizawa (JP)

Is there

With the development of science, technology and media, the boundary between what is real and what is virtually generated information that we can obtain through our eyes is becoming increasingly blurred. *Is there* is a reconsideration of the image we have of the material in front of us. This is done by creating a moving image of water that is different from the water we see in our daily lives. The "materiality" of water itself and the "visuality" and "virtuality" associated with its shape and movement create a gap in perception between the water we know and the water we see in front of us. The experience of confronting the moving figure of water before one's eyes not only reveals unknown aspects of water; it also provides an opportunity for the viewer to understand how he or she receives information and what kind of image he or she has of the environment and the experience.

The project was developed and presented with the kind support of Musashino Art University. Presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.



© 2024 Aoi Serizawa

Federico Gloriani (AR)

Mutualidad de Fantasmática Electrónica

Mutualidad de Fantasmática Electrónica (*Mutuality of Electronic Phantasmatics*) is a performative and relational project developed in Rosario, Argentina, by a group of artists who search through waste containers seeking discarded electronic devices, so as to recover and dismantle them. Between April and July 2024, more than 100 devices were gathered. So far, 41 were disassembled and 1630 components were recovered. Microwaves, toasters and irons are some of the devices used to build the overhead projectors, which show images of the recovered components, along with a video and texts that register and expand on the process. Other components were reinserted into the art-tech community, giving them a new life. The modern idea of technological progress has led us to an unprecedented crisis. It is prudent to create, from the Media Archaeology approach, a discipline that proposes an alternative to modern linear temporality by interweaving different pasts with the challenge of fragmenting the future.

Curatorship: Clarisa Appendino / Gathering and Disassembly: Buan Binario, Juan Ignacio Cabruja, Belén Céspedes, Lara Ferré / Inventory: Abril Contreras, Iñaki Solá
Design and Construction of overhead projectors: Guido Bertos / Photography: Sofía Desuque / Video: Federico García / Acknowledgements: Biblioteca y Archivo América Elda Nancy, Julia Levstein, Damián Monti Falicoff, Johana Celman + Belén Antola (Ula Lab)
The project has been produced as part of the CIFO x Ars Electronica Awards, a cooperation between Ars Electronica Festival and Cisneros Fontanals Art Foundation (CIFO).



© Sofía Desuque

My name is Fuzzy—Bastien Bron (CH)

La Machine à Tubes

The Hit Machine

Pursuing his innovative approach to pop music, Bastien Bron, aka My name is Fuzzy, explores Artificial Intelligence, embracing its fantasies and limitations. Instead of questioning whether AI will save or destroy humanity, he prefers to test its ability to entertain us. Although it is called *LA MACHINE À TUBES* (*The Hit Machine*), there is no guarantee it will produce a single hit. Like an artist dreaming of creating "the" hit, the machine tries infinite combinations of notes and lyrics, not knowing if it will succeed. It has been fed melodies and themes imagined by the artist, which the AI uses to create new content. The audience is invited to interact with the machine and make choices to generate new songs, played live by the artist's digital alter-ego.

Danceable, playful or unsettling, the work offers an ironic look at the algorithms shaping our tastes and desires. The machine plays with

its own obsolescence, blending contemporary technology with retro-futuristic craftsmanship.

Concept and Art Direction: Bastien Bron / Programming and AI: Tammara Leites / Digital Programming: Clément Borel / Development and Technical Direction: Harold Weber / Set Design: Julian Thompson
Visual Identity: Yann Do / Theory and Musical Programming: Cédric Liardet / Artistic Collaboration & Distribution: Laetitia Gauchat / Video: Das Playground
Thanks to La Case à Chocs, Charlotte Tonini, Baptiste Milesi, Le Pommier, Yann Zitouni
Support: La Case à Chocs (CH), Loterie Romande, Pro Helvetia—Swiss Arts Council, Migros Culture Percentage, Canton of Neuchâtel, City of Neuchâtel, Fondation culturelle BCN / Production: L'Association des Amis Flous (Neuchâtel—CH)
Presented with the kind support of the *Swiss Arts Council Pro Helvetia*.



© Fabien Nissels

Navid Navab (IR/CA), Garnet Willis (CA)

Organism + Excitable Chaos

A robotically prepared pipe organ driven by a robotically-steered chaotic pendulum

This work probes the form-giving tendencies of nature by drawing kinetic chaos into conversation with sonic turbulence. The chaotic motion of *Excitable Chaos*, a robotically-steered triple pendulum, drives the aerodynamic thresholds of *Organism*, a robotically-prepared century-old pipe organ. *Organism* dismantles the socio-historical tonality of the organ to sound its turbulent materiality, liberating long-repressed timbres to be heard anew. *Excitable Chaos* produces chaotic patterns by modulating the mass/orbital relations between its 3 moving arms. As a physical system with nonlinear behaviour it highlights how, in nature, even events at the smallest scales of magnitude compel emergent behaviours whose next states are unknown.

The generative movement of *Excitable Chaos* conducts *Organism's* sonic behaviour. The resulting turbulent sonifications of chaos serve as meditations on the cascading sense of more-than-oneness that develops spontaneously in nature, at the brink of unfolding futures.

Concept, composition, sculpture, programming, design, electronics, sonification: Navid Navab // Engineering, design, sculpture, electronics: Garnet Willis // Research partners: SAT Montréal with Québec Ministry of Innovation, Topological Media Lab with Fonds de Recherche du Québec, X-IO Technologies UK // Assistance: Charles Bicari, Camille Desjardins, Jean-Michaël Celerier, Eric L'Ecuyer // Residency: Recto-Verso, Hexagram, Milieux Support: Canada Council for the Arts, Conseil des arts et des lettres du Québec, Conseil des arts de Montréal, Le Salon Richmond 1861



© Navid Navab



© Dimension Plus

Dimension Plus (TW)

Project Patching—Ti hoeh koe

AI and Geocultural Bias Experiment Project

AI has significantly impacted social behavior and cultural cognition. Regional cultural training to counter AI bias involves combating prejudice through archiving. The project aims to train AI systems to understand and adapt to a broader range of human experiences. The goal is to create and maintain rich, region-specific databases and establish a novel, open-source community to address gaps and biases in mainstream AI datasets. Taking the common Taiwanese food, “pig’s blood cake,” as an example, the project collects various data related to pig’s blood cake, including its appearance, production process, ingredient sources, regional variations and cultural significance in different communities. This data can enable AI to more accurately

identify and understand the uniqueness of pig’s blood cake as a specific cultural food. Ultimately, this project aims to enhance AI’s sensitivity and accuracy regarding Taiwan’s distinctive cultural elements.

Creator: Dimension Plus
 Project Host: Escher Tsai / Producer: Szu Ya Wang /
 Technical Coordinator: Tzu Chen Lee / Technical Support:
 Seth Hon, Reviles Huang / Production Team: Monique
 Chiang, Jessie Huang, Pingyi Chen, Zun Yu Tan / Visual
 Design: Milkshake / Installation Production: Hozen Studio
 This project has been developed in the context of the
 TAICCA x Ars Electronica Art Thinking program.
 Organizer: Taiwan Creative Content Agency,
 Ars Electronica
 Co-organizer: Quanta Research Institute
 Special Thanks: Keith Lam, Tyng Ruey Chuang, Tim Wei

Maria Smigielska (PL/CH), CompMonks (FR/CH)

Proteus 4.1

Interacting on the networked planet

Proteus 4.1 is the recent version of the interactive and generative series called *Proteus*, which uses the complex material behaviour of ferrofluid as a vector to seek meaning in uncertainty. This version evolved its mode of interaction by distributing it via a web-based application using gaze-tracking from cameras embedded in personal mobile devices. Its physical counterpart is a modular and non-site-specific installation that aims at embodying interactions happening fluently across the digital infrastructure in a single space. As a direct reference to post-war architectural megastructures and the concept of “proteinic architecture” from Yona Friedman, the installation mirrors the internet’s distributed nature by spatial articulations of scattered digital screens and mirrors within a modular structure. Observing a slow-paced evolution of ferropatterns encourages AI-powered mindfulness to counter

the digital age’s attention economy characterized by distraction and information overload.

Artists: Maria Smigielska, CompMonks
 Software development: Mihael Giba, Juraj Komericki
 Physical installation production 2023: William Linn
 Physical installation production 2024: esc medien kunst labor and Ars Electronica
 Interactive web-based reaction-diffusion based on the development by Linus Mossberg

This work was realised within the framework of a European Media Art Platform residency program at KONTEJNER | bureau of Contemporary Art Praxis with support from the Creative Europe Culture Programme of the European Union. The physical installation has been further developed in 2024 with the support from esc medien kunst labor and Ars Electronica.

Presented in the context of the *EMAP* project. *EMAP* is co-funded by the Creative Europe Programme of the European Union.



© LABoral Centro de Arte



© Courtesy of 350.org

Kathy Jetñil-Kijiner (MH), Aka Niviâna (GL)

Rise: From One Island to Another

Watch this poetic expedition undertaken by two islanders, one from the Marshall Islands and the other from Kalaallit Nunaat (Greenland), connecting their realities of melting glaciers and rising sea levels. Kathy Jetñil-Kijiner and Aka Niviâna use their poetry to showcase the linkages between their homelands in the face of climate change. Through this video we are given a glimpse of how large, yet so small and interdependent, our world really is.

The science behind climate change and its causes has been clear for decades. And yet it has not

been enough to drive the change we need to see in order to rescue our planet. We hope this poem can spark the emotion and drive needed for more people to rise and take action.

Courtesy of 350.org

Team: Dan Lin, Nick Stone, Rob Lau, Oz Go

Presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.

Pierre-Christophe Gam (FR)

Toguna World and the Sanctuary of Dreams

The accelerator of the Imagination

Informed by IFA, an ancient divination system from West Africa, *The Sanctuary of Dreams* takes the form of a digital temple. According to IFA, achieving a truly satisfying and fulfilling life requires consideration of five fundamental pillars: Ce-Meji (the Body), Ka-Ogbe (the Mind), Gbe-Meji (the Spirit), Sa-Meji (the Heart) and Yeku-Meji (the Soul).

The pillars are introduced through five, three-minute mixed-media animations, combining photo, 3D and digital collage techniques, each exploring both the visible and invisible dimensions of its corresponding principle. The centerpiece is *The Dream Manifesto*, an eight-minute film that introduces the philosophy behind the Future-dreaming ritual. It invites viewers to question their

perception of reality and expand their dreams for the future beyond socially conditioned, limiting beliefs.

Winner of the 2022 Unity for Humanity grant award and of the 2023 Unity special Kick-off award in partnership with the Tribeca Film Festival.

Development made possible under the Future Africa: Telling Stories, Building Worlds Program led by Africa No Filter, together with Meta, Electric South, Imisi3D; and under the CChange fellowship program led by Goethe-Institut San Francisco, Gray Area and the Foreign Office of the Federal Republic of Germany.

Presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.



© Pierre-Christophe Gam



© Victor Mazón Gardoqui

Sonandes (BO): Guely Morató Loredo (BO), Víctor Mazón Gardoqui (ES)

Triangle of Sacrifice

The installation critically addresses the profound environmental impact of large-scale lithium extraction in the lithium triangle, a territory comprised of Argentina, Chile and Bolivia, a region that contains 65% of the world's lithium reserves. This immersive artwork monitors in real time the extraction of lithium through a soundscape and three sculptural pieces, meticulously carved in metals from local mines. Each sculpture is subjected to a saline water drip mechanism, symbolizing two million liters of water per ton of lithium carbonate extracted. Transnational companies exploit fossil water from glaciers and wetlands in one of the driest regions on the planet. As the world moves towards energy transition and sustainability, there are regions of the world that will be impacted by these new market

demands led by green capitalism. This artistic endeavor forms part of a long-term research project by the Sonandes team, exploring themes of neo-extractivism, sacrality and deep listening.

Guely Morató Loredo—Concept, composition and field recordings
 Víctor Mazón Gardoqui—Technical advice, hardware and software development
 Noelia Morató Loredo—Production
 Henry Poma—Embosser
 Oscar Abud—Video sculptures
 Council of Atacameño Peoples
 Inhabitants of the Thunupa Salt Flat
 Inhabitants of the Olaroz Salt Flat
 Sonandes.org Research team

The project has been produced as part of the CIFO x Ars Electronica Awards, a cooperation between Ars Electronica Festival and Cisneros Fontanals Art Foundation (CIFO).

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. In 2023, the initiative significantly expanded its focus. Initially driven by Russia's war on Ukraine and its complex global impacts, the project now addresses broader risks and existential insecurities faced by artists worldwide.

The 2024 *State of the ART(ist)* Initiative concentrates on global issues that create precarious conditions for artists, including:

- Conflict zones, political interference and war like aggression.
- Lack of freedom of expression or social repression.
- Natural disasters or the climate crisis, leading to drastically altered living conditions.

The award targets artists directly affected by these threats, whose lives are marked by "uncertainty" and "risk." While exploring "What is Risk?" is a submission requirement, the jury evaluates entries based solely on their artistic quality.

Kamya Ramachandran (IN), Oyindamola (Fakeye) Faithful (GB), Marita Muukkonen (FI) and Ivor Stodolsky (DE/FI), Simon Mraz (AT), Christl Baur (DE)

Jury Statement

Autocratic leaders are increasingly gaining power—and weakening human rights—around the globe. Humanity is losing its way. Conflicts are raging, civic space is shrinking and the media is under attack from all sides. The climate crisis is a human rights crisis that is hitting the most vulnerable and frontline ecological defenders the hardest.

While authoritarian governments and many world leaders are backtracking on human rights obligations, we feel art, its actors and its institutions

can actively engage in countering inegalitarian, anti-democratic and eco-destructive forces. Art can stand for resistance and change.

The *State of the ART(ist)* initiative promotes and highlights this artistic agency. This year, it garnered a remarkable number of 311 submissions across 46 countries. The candidates are both diverse artistically and thematically: from collective action software applications, through grassroots movements, to more traditional visual arts and contemporary dance.

They carry messages addressing topics ranging from the violence of terrorism and war to structural violence in domestic and everyday practices of alternatives.

The jury conducted a rigorous evaluation process, in which the question of risk constituted a fundamental aspect of reflections on each submission. Political and social contexts provided a critical backdrop to the work. Nevertheless, while addressing this question was a prerequisite for valid submissions, the jury's selection criteria were based on artistic quality.

We should emphasize that in its work, the prize adheres to international human rights conventions, affirming that discrimination on grounds of origin, ethnicity, race, color, religion, gender,

sexual orientation or any other identity category is unacceptable. Regardless of any government or leadership's violations of basic freedoms and human rights, collective discrimination against individuals based on the actions of their country or its leaders is not legitimate. Individuals stand for their own thoughts and actions. We extend our sincere appreciation to all participating artists for their courage and creativity in sharing their vision, stories and perspectives.

While provoking meaningful discourse on human rights, societal challenges and the enduring power of artistic expression, we wish to emphasize that we evaluate artists for their art and the selected works are examples of this combination of engaged artistic excellence.

Said Ahmed Mohamed Alhassan (SD)

Haawriya / حاورية+حرية (حاورية)

Haawriya is an installation composed of a shipping container painted with various colors and symbols. Hidden loudspeakers reveal different sounds of protests reproduced to form a kind of cultural resistance. The term 'Haawriya' derives from two Arabic words meaning "container" and "freedom". They are combined here into one word to reveal the tense relationship between the two extremes—container as a means of oppression and freedom as a demand of the Sudanese Revolution.

The container was used as a mortuary where hundreds of unidentified dead bodies were stuffed. It was used to block bridges to prevent non-violent protesters from gathering at different places, restraining their freedom of movement and expression. This installation depicts how Sudanese people view the metal shipping container in this new context: from being a useful container carrying goods around the world, it has

turned into a block employed to kill their dreams of freedom, peace and justice.

Project supported by Goethe-Institut, Khartoum and funded by the German Federal Foreign Office. Installed and displayed at Al Malaz Exhibition NEXT LEVEL within the ART MEETS CULTURAL POLICIES project at Omdurman Cultural Center 2022.

The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.



© Said Ahmed

Nina Bulgakova (UA), Anastasiia Mostova (UA), Kateryna Zhuravlova (UA)

Fertility Performance

Dance Performance

Fertility Performance is based on the exploration of the interplay between the essence of femininity and the eternal Earth, delving into the very core of the concept of fertility and the ritualistic nature of this profound interaction.

Each of the dancers drags along her own stone, conveying unique and dynamically-evolving relationships. The long rope symbolizes her past, accumulated experience and invaluable knowledge. The stone itself, steeped in the history of a person's life, also reflects the complex dynamics with men, as well as the feminine role in the sacred process of creating new life and skillfully tending to fertile soil. The performance is a prayer in which symbolism is embedded in every detail. Grains of wheat poured onto the stage and sieves on the dancers' heads represent steadfastness and peace before sowing. Created by Ukrainians, whose history is rooted in cultivated soil, the performance reflects their deep reverence for fertility, especially in times of scarcity.

Fertility Performance was staged by choreographers Nina Bulgakova and Vadym Yesaulenko (Ethno Contemporary Ballet) in Kharkiv (UA) in 2022. Duration: 65 min, without intermission / Stage Directors and Choreographers: Vadim Yesaulenko and Nina Bulgakova / Artists: Anastasiia Mostova, Nina Bulgakova, Kateryna Zhuravlova / Musical Accompaniment: Dakha Brakha (UA), Laboratorium Pieśni (PL) The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.



© Leo Ollikainen

State of the Art(ist) is an important pillar of the Austrian Foreign Ministry's commitment to freedom of opinion, thought and artistic creation. With this project, we give visibility—directly at the Festival and in a virtual art gallery—to artists who cannot realize and present their work, or can do so only at significant risk. In this framework, they get something back that is of high value in cultural diplomacy and for me personally, i.e. a part of their dignity. That it is precisely a Ukrainian collective that has been selected for the main prize appears to me, beyond the high artistic quality, particularly relevant. This extraordinary distinction demonstrates that support for Ukraine remains of central importance, also und especially in the field of art and culture.

— **Ambassador Christoph Thun-Hohenstein, Director General of the Directorate General V—International Cultural Relations of the Austrian Foreign Ministry**

Leila Samari (IR), Maryam Sehhat (IR)

A Woman's Odyssey

In this story fish is a woman because she can grow a human in her womb. In fact, *A Woman's Odyssey* is a symbolic narrative of a woman's struggles and her journey to freedom. In this way, she dies many times and is reborn in a new form. The influence of Iran's ancient culture in the creation of this story cannot be denied, for example, the combination of human and animal in the creation of the main character. The author of *A Woman's Odyssey* has written the initial form of the story as a poem years ago in Iran, but her experiences of immigration and especially the recent "Women-Life-Freedom" movement in Iran had a final effect on the story.

We see how living in the terror of war, discrimination, restriction and oppression under the heavy shadow of a dictatorial regime melts a person and finally changes for survival.

Vasya Dmytryk (UA)

Heating Season

The nails collected from the ashes in the stove in the author's workshop become a material witness to the winter of 2022-2023. The "tracegraph" created for the project, consisting of a system of moving magnets that sets in motion a mass of nails on the surface of the tablet, leaves mechanical traces of friction and incomplete combustion products on interchangeable sheets of paper.

The kinetic installation recreates Madeleine Akrich's ideal laboratory observation, which proposes to describe sociality in terms of scripts or situations of creating connections between human or non-human actors. The concept of a script is synonymous with the language of programming, where words in the code are simultaneously actions.

As in the case of sociological and anthropological methods of studying this process, the observer of the installation can only see the factors of change and their stage results. As Bruno Latour asked: Do things act on the same level as people?



© Maryam Sehhat

Leila Samari: Story, Storyboard, Characters, Backgrounds
Maryam Sehhat: Animation, Sound, Edit
The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.

Project Curator: Cyrill Lipatov / Technical Curator: Roman Klymenko, Coszhey Lab
The project was created under the program of the European Union EU4Culture and Goethe-Institut Ukraine. Program's applicators: NGO Museum For Change, Odesa; NGO Asortymentna Kimnata; Ivano-Frankivsk. The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.



© Ivan Strahov

Paribartana Mohanty (IN)

Immersive Sky Experience

Immersive Sky Experience explores the common sky as an observatory for forecasting using Artificial Intelligence, machine learning technology, data mining and archiving for climate storytelling and weather predictions. It forecasts on a minute-to-minute basis weather changes to specific micro geographies, providing reports from windows, streets, villages, municipalities and small towns. This provides a unique perspective on and experience of the Odia language and culture, Odia people and their characteristics. This is a web-based interactive project. The audience will see a continuously changing sky juxtaposed with a climate story or forecast. The project brings visual data/photos of the sky from six coastal districts of Odisha, voluntarily uploaded by the public.

Conception and Creation: Paribartana Mohanty / Text and Translation: Paribartana Mohanty and Gita Nandan Ballabha Das / Research Assistance: Jyoti Ranjan Sahoo,



© Paribartana Mohanty

Gita Nandan Ballabha Das, Satyabadi Biswal / Technical Assistance: Jyoti Ranjan Nayak (Sigma Analytics and Computing Pvt Ltd, Odisha) / Finance and mentorship supported by Sharjah Art Foundation Production Program 2023 and Prince Claus Mentorship Award for Cultural & Artistic Responses to Environmental Change 2022-23. The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.

Indu Antony (IN)

Nanna Langa

Nanna Langa captures the essence of 547 unique journeys, sewn together in a 23-foot-long tapestry of strength, vulnerability and collective empowerment. Each stitch of the skirt represents a narrative thread contributed by the resilient women of Namma Katte—an inclusive space that fosters solidarity, celebrates diversity and resonates with personal narratives. These stories are embroidered onto the fabric, creating a vivid mosaic of human experiences. Aiming to lend voice and visibility to these narratives, often untold or unheard, the project highlights the power of storytelling as a means of connection and healing. As visitors engage with the skirt, they encounter a kaleidoscope of emotions and insights, revealing the rich tapestry that is womanhood and community.

Indu Antony in collaboration with the women of Namma Katte. This project is supported by Wellcome Trust, London and Museum of Art and Photography, Bengaluru. The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.



© Philippe Kalita

li li k.s.a (MM)

The Red Macadam

Visitors are invited to walk barefoot along a pathway composed of some 3,000 broken stones of uneven size, bound together by the color red. Each stone symbolizes an individual who tragically lost their life during the 2021-23 protests in Myanmar. As visitors move along the path, a motion sensor captures their footsteps, triggering a dataset containing the names of those killed during the protests. These are projected from transducers placed underneath the pathway. At times, visitors may feel the vibrations emanating from these devices. Sometimes the names are whispered, sometimes read aloud, the experience enhanced with various sound colors.



© Anna Soz

aa-e (l'atelier des artistes en exil), PAUSE (PROGRAMME D'AIDE À L'ACCUEIL EN URGENCE DES SCIENTIFIQUES EN EXIL), HEAR (Haute école des arts du Rhin Mulhouse—Strasbourg) / The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.

Lai Lai Natalie Lo (HK)

寂靜春天來臨前—The Days Before The Silent Spring

The idea of an impending “silent spring” comes from late marine biologist Rachel Carson’s warning penned in the 1960s of a forthcoming crisis of species diversity. In her eponymous book, Carson anticipated a gradual erasure of life-forms and sounds caused by pollution from pesticides. Today, decades of environmental deterioration and global conflicts have indeed brought us to an appalling present. In this unprecedented chaos we still hear talk of vanishing diversities, lost autonomy and the danger of silencing. Farmland may seem old and feeble, and the bacteria, species and communities it nourishes may also feel trivial, but in precarious times their symphony could sound the beginning of a new era. Lo's work has expanded beyond documenting crops, flora and fauna to focus on her fellow farmers. Their divergent demands, hopes, experiences and struggles reflect the arduous nature of negotiations, while also nourishing the collective as a whole.

Project Team > Cinematographer: Lo Lai Lai Natalie, Wong Yik Fung / Editing: Lo Lai Lai Natalie / Calligraphy: Tsang

Wai Yee / Music: Wong Hing Yan / Sound Design: Fiona Lee Wing Shan / Subtitles Editor: Nin Chan, Yentl Tong / Subtitles: Rene Ng / Research Assistant: Mark Li Man Chung, Rita Wong Yin Ping, Wong Yik Fung / Writer, Editor: Quchang / Project Manager: Zoie Yung / Lead Technician: Lonely Lau / Sound Technician: Fiona Lee Wing Shan / Designer: Jian Yang / Translation: Alvin Li, Jason Chen Acknowledgements: WYNG Foundation, Para Site Artspace, A Rapture Workshop, Choi Yuen Village / Sang-woodgoon / WMA Hong Kong, WYNG Foundation Hong Kong The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.



© Kwan Sheung Chi

Vardit Goldner (IL)

Swimming Lesson

Swimming Lesson is a video installation and mockumentary film in which Bedouin girls are taught to swim in a waterless “pool”. The aim is to raise awareness of the lack of swimming pools accessible to Bedouins in Israel. This denies them swimming lessons and leads to frequent cases of drowning in the sea. Over 200,000 Arab-Bedouins live in the Negev region of Israel today, with access to one single swimming pool that was opened in the Bedouin town of Rahat in 2017. Bedouins are not permitted to enter swimming pools in Jewish localities. While the work primarily deals with the lack of access to swimming pools due to discrimination, it also addresses the possible shortage of water in the not-too-distant future on account of global warming and drought.

Artistic Adviser: Einat Weizman / Scriptwriters: Vardit Goldner, Hadar Aviel / Arabic and Hebrew Subtitles: Fatin Abu Ghosh / English Subtitles: Tal Haran / Filming:



© Violetta Datskovsky

Violetta Datskovsky / Filming Assistant: Adi Sav Sound / Recording: Keren Or Menahem / Actresses: Vardit Goldner, Zohar Shitrit, Fatma Abu Madegam, Arakib Abu Madegam, Saeda Abu Madegam, Hadel Abu Madegam, Aseel Abu Madegam, Njood Abu Madegam, Alia Abu Madegam, Hakma Abu Madegam, Marem Abu Madegam, Najwa Abu Madegam, Sabah Abu Madegam, Astabrak Abu Madegam, Sojood Abu Madegam / The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.

Saddam Jumaily (IQ)

Poisonous Meadow

Poisonous Meadow portrays the dark side of the extreme authority exercised by religious leaders, highlighting the politicization and abuse of religion found in Middle Eastern societies such as Iraq, Afghanistan and Iran. In an ironic way, the exhibition seems to push us to sense the concrete and internal moral decay at the core of religious thinking. The artist's paintings represent the many ways in which religion destroys lives and distorts societies by curbing freedom. This is so especially for women whose civil liberties and human rights are seen as a litmus test for a free society. Jumaily has long witnessed the deterioration of Middle Eastern societies weighed down by political religion and marked by the repression of women, resulting in their absence from public life. At this moment in his career, Jumaily's paintings represent in part critical reflection and in part fearless audacity.

All artworks by Saddam Jumaily / Grant from The Finnish Cultural Foundation, Finland.

The presentation of the work is funded by *State of the ART(ist)*, a collaboration between the Austrian Ministry of Foreign Affairs and Ars Electronica.



© Saddam Jumaily



© Future Heritage Lab

Azra Aksamija (AT/US), MIT Future Heritage Lab (US)

Design to Live

Everyday Inventions from a Refugee Camp

This project explores how Syrian refugees in Jordan's Azraq Camp use art and design to transform their living environments, thereby reclaiming agency and humanity. It showcases over 20 innovative creations that highlight the gap between standardized humanitarian design and refugees' sociocultural needs. The bilingual (English/Arabic) documentation includes photographs and texts by the camp's residents, as well as drawings and an animation by MIT Future Heritage Lab researchers. This cross-border collaboration demonstrates how displaced people use art and design for self-determination and hope, challenging the defined parameters of essential human needs that underpin humanitarian aid. The project highlights design as a subversive world-making practice, offering insights into the resilience and ingenuity of displaced communities responding to new realities shaped by conflict, climate change and inequality.

This project was developed as a three-year-long collaboration between MIT Future Heritage Lab, Syrian refugees, CARE-Jordan and the German Jordanian University. The resulting book was edited by Azra Aksamija, Raafat Majzoub and Melina Philippou and published by MIT Press in 2021.

The project was funded by grants from various entities at MIT: Office of the SA+P Dean, Council for the Arts at MIT, Alumni Class Fund, Transmedia Storytelling Initiative, MITx, Lawrence B. Anderson Award, the Humanities Arts & Social Sciences Award, J-WELL Education Innovation Grant, CAMIT-Council for the Arts at MIT, CAST Mellon Faculty Grant, CAST International Exhibitions and Performance Fund and the MISTI Arab World Program. The production of the book was also partially funded with the generous support of the Graham Foundation Grant for Organizations, Kunsthau Graz, The Aga Khan Museum Toronto and the Austrian Federal Chancellery, Division for the Arts and Culture.

PLATFORM EUROPE

The European Union is the one single best idea we have ever had on this continent, and we had it together. The core of this Union is not geography, but a unique concept of collaboration that will sustain the future of this space and all that lives in it.

— Vanessa Hanneschläger,
Head of European Collaboration, Ars Electronica

Ars Electronica Platform Europe

Ana Maria Carabelea (INT), Vanessa Hanneschläger (EU)

Change through Collaboration

For many years, Digital Humanism was the driving concept behind our efforts. Recent global developments at the ecological, technological and socio-political levels have led us to believe that the only genuinely effective way to achieve change is through collaboration. Working together with diverse and unique people and institutions that negotiate their common hopes, concerns and visions is the very DNA of Europe as a philosophical construct, a geographic space and a political union. For this reason—in the year in which the Ars Electronica Festival puts the spotlight on protagonists of positive change after a European election that leaves at least some space for negotiating hopeful futures—we have decided to relaunch the European Platform for Digital Humanism as **Ars Electronica Platform Europe**. While the platform's identity, initiatives and scope have evolved, its core mission remains the same: to re-imagine tech-driven change through art. Platform Europe is a forum of exchange and collaboration for a network of cultural institutions, artists, scientists, technologists and policymakers who come together in different

constellations around projects (co-)funded by the European Union.

Though the issues we address here might be global, we acknowledge that our perspective is, perforce, deeply embedded in the European context. In creating this space of dialog, we make room for a critical restlessness that challenges the universality of our European perspective, seeking to connect it to different viewpoints. Platform Europe remains constantly a “work in progress” and invites all those interested in developing European futures to join the dialog. In the following pages, we introduce Platform Europe's main approaches and the current projects that work towards its goals. These initiatives are the backstage for new narratives; here, new practices are established with and for artists and critical thinkers. We script the change we want to see in our socio-political, technological and planetary narratives, and we translate it into alternative ways of educating and engaging citizens, test it in incubation and digital transformation programs and develop it into transdisciplinary practices.

PRACTICES: TRANSDISCIPLINARITY

Transdisciplinary models that bring together knowledge from different fields of expertise to create a more fundamental understanding of the world represent the key to driving the societal evolution required to tackle the challenges of our time. By fostering a culture of transdisciplinarity across the continent, Platform Europe is invested in projects based on collaborative cultures, especially in the context of Art and Science.

S+T+ARTS (Science+Technology+Arts)

The STARTS initiative can be understood as the core crystal of Ars Electronica Platform Europe. Ars Electronica's long-standing involvement in STARTS is part of our wider commitment to designing and testing transdisciplinary practices and sustainably integrating art-thinking and artistic practice as innovation catalysts for research processes and technology development. **STARTS residencies** and **STARTS Prize** winners investigate both innovative perspectives on the technosphere and, in many cases, planetary issues. **STARTS regional centers** dedicate themselves to the implementation of innovation on a practical level. Currently, Ars Electronica actively participates in three STARTS projects.

Art and Science is a transversal approach that has been gaining traction globally over the last decades. Integrating Technology into this transdisciplinary mix, both as mediator and accelerator, is not only a visionary strategy developed by the European Union, but also genuinely represents Ars Electronica's perspective on the world and our future.

— Veronika Liebl, Managing Director
Festival Prix Exhibitions, Ars Electronica

S+T+ARTS EC(H)O

Fostering ECOlogically conscious and Human-compatible digital technology

In an age of societal and environmental emergency states when individual disciplines seem to have hit the innovation ceiling, Science, Technology and the Arts depict, as it were, a sequence where new approaches, alternative perspectives and creative solutions promise to inspire progress and accelerate development. *STARTS Ec(h)o* supports practices at this intersection, recognizing the most successful artist-led, creative experiments through the STARTS Prize, STARTS residencies and the annual AI&Music program at Sónar. Besides coordinating the project, Ars Electronica also organizes the annual STARTS Prize on behalf of the European Commission—a prestigious award that singles out economically or socially impactful projects at the intersection of science, technology and the arts.



Echinoidea Future—Adriatic sensing by Robertina Sebianic © Miha Godec

Two Grand Prizes—for Innovative Collaboration and for Artistic Exploration, each endowed with a €20,000 grant—as well as 10 Honorary Mentions and 18 Nominations are selected every year. Winners may then be included in the STARTS Exhibition and the STARTS Day at Ars Electronica Festival, where they will be showcased this year, too.

Partners: Ars Electronica (AT), INOVA+ (PT), La French Tech Grande Provence (FR), Media Solution Center Baden-Württemberg (DE), High Performance Computing Centre Stuttgart (DE), Salzburger Festspiele (AT), Sónar (ES), T6 Ecosystems (IT), Dresden University of Technology (DE)

Duration: 1.1.2024–31.12.2026

Website: starts-prize.aec.at

STARTS Ec(h)o is funded by the European Union under Grant Agreement No. 101135691.

A look at this year's submissions for the STARTS Prize showed many voices and actions that stand out and strive to create counter-images and counter-reactions, engaging with ideas in order to bring about change.

— **Francesca Bria, Fumi Hirota, Manuela Naveau, Katja Schechtner, Miha Turšič—STARTS Prize'24 Jury**

S+T+ARTS4Africa

STARTS4Africa is the first STARTS residency program fully dedicated to promoting African innovation at the fulcrum of Science, Technology and the Arts. African change-makers in partnership with European players (with experience in STARTS) run 8 artistic residencies in Nigeria, Senegal, Ghana and Tanzania. The residencies bring local and international artists together with regional stakeholders to highlight the rich, intricate and locally shaped relationships between technology, arts and culture. *STARTS4Africa* establishes dialog with a too-often neglected continent in the discussions on technological development and innovation, making possible a digital transformation that considers and incorporates local or regional specificities. This allows for new understandings of transdisciplinary practice, as well as alternative socio-political, technological and planetary narratives. In the context of this project, Ars Electronica organizes the first edition of STARTS Prize Africa, the

African edition of the well-known STARTS Prize. A €15,000 Grand Prize and five €3,000 Awards of Distinction honor regional initiatives that promise a positive social, humanitarian, economic, environmental or political impact, foster digital transformation within the creative sector or exemplify visionary pathways toward a diverse and sustainable society. Ars Electronica also coordinates the project's dissemination events, including the annual STARTS Exhibition that showcases the winners and artists-in-residence at the Ars Electronica Festival 2024.



The Return of Balot—film still @ CATPC, 2024 © Jurgen Lisse

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: 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.

A striking aspect of these artworks is their speculative exploration of the future. They offer visionary glimpses into the potential trajectories of African societies. Artists envision vibrant futures marked by innovation, sustainability and social justice through media ranging from sculpture to Virtual Reality. These speculative narratives inspire hope and aspiration.

— **Andrea Barschdorf-Hager, Mónica Bello, Oscar Ekponimo, Judith Okonkwo, Kathleen Siminyu—STARTS Prize Africa jury**

S+T+ARTS in the City

The *STARTS in the City* residencies support locally/regionally inspired art-driven innovation and human-centered technologies. These tackle current challenges and have a positive ecological, societal or ethical impact. By strengthening regional ecosystems of stakeholders and academia, *STARTS in the City* can assess the feasibility and scaling potential of the residency outcomes and make a first step towards market-ready products and services. *STARTS in the City* speaks to our belief in solutions grounded in local/regional perspectives and lived experiences as the only way to develop technologies that are truly sensitive to the distinct challenges of a specific locality.

In the *STARTS in the City* project, Ars Electronica coordinates the website and newsletter and is responsible for coordinating the exhibitions of the residencies' outcomes in the each of the represented regions, as well as at the Ars Electronica Festival 2024.



Still from Drone Aviary © Superflux

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: 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.

Most cities have innovation agendas that outline how people will live, move, work, consume, retire, heal, educate and entertain themselves. *STARTS in the City* invited artists to influence these policies and to develop projects that show alternative ways for citying the future. With and for the communities the artists worked for schools, hospitals, ports, streets, farms and many other entities. The outcomes are diverse and inspiring. Let's hope that projects as these can inspire and influence the *New European Bauhaus* movement which should most definitely include artists in its search for a more sustainable and inclusive world.

— **Christophe de Jaeger**, *STARTS in the City* coordinator

Studiosotopia

Enter the Symbiocene with Arts and Science

In the face of complex issues and ramifying ecological implications of the Symbiocene, the second iteration of the *Studiosotopia* project engages collaborative frameworks and interdisciplinary expertise. The residency model is two-directional, with scientists from diverse disciplines working alongside and learning from established leading artists, while emerging artists collaborate with leading scientists and research institutions. This all contributes to a better understanding of how artist-led transdisciplinary collaborations can contribute to tackling the questions of our time on a scientific and philosophical level. *Studiosotopia* is our boldest attempt at a transdisciplinary framework. The project is driven by the hope that an experimental space of exchange, collaboration and shared learning may be created to set off speculative solutions for sustainable development. Through the *Studiosotopia* initiative, artists and scientists from diverse backgrounds collaborate on projects that illuminate the complexities of the Symbiocene. From exploring biodiversity hotspots to investigating sustainable

technologies, each endeavor offers a unique perspective on our relationship with the natural world. Ars Electronica is hosting one residency as part of the project, in which an emerging scientist collaborates with established artists to develop jointly their methodological approaches. Several exhibitions and debates on the topics addressed by the artists and scientists (-in-residence) will be showcased at the festival. This year, we are staging a debate on the topics outlined above and officially launching the *Studiosotopia* Open Call. This is directed at emerging scientists and artists who are interested in exploring transdisciplinary incubation models for the accumulation of knowledge.



librate force by Maja Smrekar and Jonas Jorgensen © Hana Jošić

Partners: MEET | Digital Culture Center (IT), Ars Electronica (AT), Kersnikova Institute / Kapelica Gallery (SI), Bozar (BE), GLUON (BE), LABoral (ES), Hexagone (FR), Łaźnia Centre for Contemporary Art (PL), Cluj Cultural Centre (RO), Digital Hub/Beta Festival (IE), Cyens Centre of Excellence (CY)

Duration: 1.1.2024–31.12.2026

Website: studiosotopia.art

Studiosotopia is co-funded by the Creative Europe Programme of the European Union.

The Great Acceleration graphs update is an interdisciplinary challenge, and looks at new methodologies and practices to link the understanding of the intensification of human activity—the world-systems—and the Earth System.

— **John Palmesino & Ann-Sofi Rönnskog** (Territorial Agency), *Studiosotopia* residency artists

PRACTICES: INCUBATION & TRANSFORMATION

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 are not only transforming their strategies and approaches to collaborate beyond regional and national borders, but also across the sectors—exchange and cooperation with creative industries are becoming the cornerstone of innovation in the field. Platform Europe actively participates in the innovation processes

underway in the cultural sector through initiatives that shape the digital future of theatres, museums and cultural and creative industries. Beyond our engagement in the facilitation of transformation models, we also advocate for and support incubation as a practice in numerous Art and Science residency programs. Projects connecting industry and other sectors to the artistic sphere can also benefit from incubation.

It was a very special and valuable experience for all of us because in our daily theatre life, we very rarely have the opportunity to deeply evaluate a project after it has been done. We rarely take time to think about which path to follow in following seasons, which aesthetic to take on. This residency enabled us (...) to reflect our hunger and curiosity in new technologies for the future.

— Karla Mäder, *ACuTe* project partner at Deutsches Theater Berlin

ACuTe

Culture Testbeds for Interactivity, Performance and Technology

ACuTe is a trendsetting, large-scale innovation project that aims to revolutionize the way theatre and the performing arts are produced and performed with the help of emerging technology, and, in the process, set up new forms of cultural collaboration and competence development.

In line with Platform Europe’s commitment to the digital transformation of the cultural and creative sectors, the project creates “culture testbeds” in the performance arts—incubation programs testing tangible prototypes that reimagine how we tell stories (new dramaturgies), how we produce stories (stage design) and how audiences interact with and respond to them (audience engagement).

Ars Electronica is involved in developing the incubation program, along with 12 leading theatres, universities and arts organizations. Our extensive network is activated to create capacity-building and knowledge transfer opportunities for professionals and showcase cutting-edge productions and performances in the context of the Ars Electronica Festival, as well as at other theatre events and festivals around Europe.

At this year’s festival, we will demonstrate an impressive approach to the integration of technology into performative practices in the context of the Big Concert Night.



Audience of SH4DOW by Michael Fock © Florian Voggeneder

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), Deutsches Theater Berlin (DE), Teatrul Național “Marin Sorescu” (RO), Academy for Theatre and Digitality (DE)

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.

European Media Art Platform (EMAP)

Initiated by werkleitz in 1995 as *EMARE* and co-funded by the Creative Europe Programme since 2018 under the new name *European Media Art Platform*, *EMAP* is the longest-standing European initiative that Ars Electronica Platform Europe participates in. Currently made up of 16 leading European organizations with a wide range of expertise in digital and media arts, bio art and robotic art, the consortium is joined every year by a different international partner in hosting artist residencies that are focused on intercultural and interdisciplinary knowledge exchange. Besides artists and host organizations, the *EMAP* residency program involves various experts from science, arts and technology whose mandate is to consult, support or train the artists.



Biosymbiotic Exoskeleton by Dorotea Dolinšek © Matjaž Rušt

This aligns with Ars Electronica’s long-term interest in exploring new narratives about the ubiquitous Technosphere through incubation and transdisciplinary practices. As a member institution of *EMAP*, Ars Electronica hosts one residency production per year (in 2024: masharu) as well as an annual group show in the context of the Ars Electronica Festival.

Partners: Werkleitz Centre for Media Art (DE), Ars Electronica (AT), Antre Peaux (FR), Teatro Circo de Braga (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), Creative Industry Košice (CIKE) (SK), Silent Green (DE), WRO Art Center (PL)

Duration: 1.2.2022–31.1.2025

Website: emare.eu

EMAP is co-funded by the Creative Europe Programme of the European Union.

In view of the successive or parallel floods of social injustice, the dismantling of democracy, wars, nuclear threats, climate catastrophes, species extinction and other adversities, it is difficult not to lose hope for a better future. What is encouraging, however, is the tireless creative spirit of emerging artists and how they experimentally explore new paths: Be it with fungi and bacteria, with open source programming and new technologies or in new structures of mobility and community. The European Media Art Platform offers these artistic research temporary shelter and long-term support throughout Europe and beyond.

– Peter Zorn, *EMAP* coordinator at werkleitz

Tilling Roots&Seeds



KILOWATT Summer School 2024 © Lorenzo Burlando

Tilling Roots&Seeds aims to enhance European cultural cooperation and artistic research and practice on topics like the plant biodiversity crisis and sustainable food systems in Europe. The overall objective of *Tilling Roots&Seeds* is to find collaborative ways to discover, regenerate and narrate different aspects of the work of farmers in

a way that implies interconnectedness, harmony with the natural world and respect for future generations. Ars Electronica Platform Europe is dedicated to this investigation, which develops new narratives for the planet, allowing us to showcase artworks emerging from this discourse at next year’s Ars Electronica Festival.

Partners: Quo Artis (ES), Ars Electronica (AT), KILOWATT (IT), University of Barcelona (ES)

Duration: 1.4.2023–30.11.2024

Website: tillingrootsandseeds.eu

Tilling Roots&Seeds is co-funded by the Creative Europe Programme of the European Union.

Speculative practice and its artifacts carry important social, economic and political values declaring to be powerful influential tools contributing to define the fate of our planet and society.

– Fara Peluso, *Tilling Roots&Seeds* artist

LABEL4FUTURE

Driving the Green Transition through Circular Economy Innovation

Label4Future is dedicated to advancing circular economy practices and innovation in the EU's less developed regions: Slovakia, Slovenia, Bulgaria, Romania and Poland. Focused on the plastics industry and related sectors, the project supports Small and Medium-sized Enterprises in creating innovative, sustainable solutions. *Label4Future* uses the power of creativity to build better futures for our people, planet, clients and communities. Ars Electronica Platform Europe's dedication to sustainability and the evolvement of planetary

narratives makes *Label4Future* an ideal context to develop incubation strategies for innovative approaches to plastic. In a changemakers meetup at the Ars Electronica Festival 2024, we bring together artists, designers and material researchers with the circular economy industry. We then accompany them in their joint development process in the *Label4Future* incubation program. Innovative approaches will also be displayed in an exhibition at the festival.



Food Waste Biomaterial Makers—Project “Kofit”
by Remix el Barrio © Tom Mesic

Partners: Creative Industry Košice (CIKE) (SK), Ars Electronica (AT), European Federation for Creative Economy (Creative FED) (NL), Chamber of Commerce and Industry Slovenia (CCIS) (SI), Austria Wirtschaftsservice (AWS) (AT), Creative Prague (CZ), Technical University of Košice (TUKE) (SK)

Duration: 1.1.2024—31.12.2025

Website: label4future.eu

Label4Future is funded by the European Union (European Innovation Council and SMEs Executive Agency EISMEA) under Grant Agreement No. 101133162.

PRACTICES: EDUCATION & ENGAGEMENT

A joint understanding of how the world works is the fundament of democratic discourse. This kind of shared perspective can only be achieved if people share a knowledge base informed by fact. Traditional educational systems and models are increasingly struggling to create these joint knowledge bases successfully, which is why Platform Europe is invested in developing new and complementary educational approaches that understand knowledge creation as a bottom-up process. Equitable engagement of all people involved in the act of knowing facts is therefore not only the method, but also the ideology that guides us.

If technology
has become ubiquitous
in the western world, then
crafts(wo)manship is an emergency.

— Anastasia Pistofidou, keynote speaker
at the *Label4Future* Future Forum

Critical ChangeLab

Critical ChangeLab adopts a bottom-up approach that empowers young people to “own” everyday democracy and engage in direct action towards justice-oriented transformations. Its aim is to strengthen democracy in Europe by creating and implementing a flexible model of democratic pedagogy. The project supports Platform Europe’s mission of trying and testing alterna-



Festival University © Florian Voggeneeder

tive ways of educating young people, empowering them to share their views and become engaged citizens. Together with create your world, Ars Electronica’s youth initiative, the project creates spaces for young people to express their opinions. It offers opportunities for them to work towards change and develop democratic agency, too. Ars Electronica is designing and implementing Critical ChangeLabs in various learning environments alongside nine project partners in different European countries. The goal is to enable young people to make a difference

in their immediate surroundings, co-build democracy, with the end goal of fostering a sense of agency among a new generation. Ars Electronica heads up the implementation of this process in Austria. Ars Electronica also leads the communication of the project focused on sharing and promoting the outcomes and learnings of these activities. At this year’s festival, we are implementing Critical ChangeLabs for our young audiences and hosting the youth-led *Critical ChangeLab* conference.

Partners: University of Oulu (FI), Ars Electronica (AT), Trinity College Dublin (IE), University of Barcelona (ES), Waag Futurelab (NL), Kersnikova Institute / Kapelica Gallery (SI), Tactical Tech (DE), European Alternatives (FR), LATRA Innovation Lab (GR), IDIZ—Institute for Social Research in Zagreb (HR)

Duration: 01.04.2023–31.03.2026

Website: criticalchangelab.eu

Critical ChangeLab is funded by the European Union under Grant Agreement No. 101094217.

When young people today come of age, they will be in the mid 21st century. Critical literacy is necessary not just to understand the content that they are consuming, but to understand where the content comes from and how that content is created. And also many of these people are going to be content creators themselves. Critical thinking is necessary for them to understand and to constantly reflect as well on what they are creating and how what they are creating is shaping the world they live in.

— Caitlin White, *Critical ChangeLab* project member at Trinity College, Dublin

IMPETUS

Innovative Methods for Providing European citizens with Trusted and Useful Science

IMPETUS is a project that showcases ways in which Citizen Science contributes significantly to crucial societal issues such as digital literacy, data justice and participatory governance. Citizen Science heightens trust in scientific expertise, increases critical thinking skills and creates a robust defense against misinforma-



CITIZENS FOR SDG 15.1 by Ivana Radović © Aleksandar Stefanović

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. The project offers innovative funding pathways for Citizen Science initiatives through the *IMPETUS Accelerator Programme*. 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 developing the future. Platform Europe is committed to Citizen Science not simply

as a method of participatory engagement, but as a cornerstone of the future of democratic discourse. Citizen Science as an approach is perhaps the most prominent illustration of the intrinsic connection between the evolution of (engagement) practices and socio-political narratives. Ars Electronica participates in the development of the *IMPETUS* methodologies and in the promotion of Citizen Science, most importantly by awarding the *European Union Prize for Citizen Science* on behalf of the European Commission and showcasing its winners in the context of the Ars Electronica Festival. This year, we award the *European Union Prize for Citizen Science* for the second time.

Partners: Zabala Innovation (ES), King’s College London (GB), Ars Electronica (AT), NESTA (GB), Science for Change (ES), T6 Ecosystems (IT), European Science Engagement Association (AT)

Duration: 1.7.2022–30.6.2026

Website: impetus4citizenscience.eu

IMPETUS is funded by the European Union under Grant Agreement No. 101058677.

I think the direction in which we need to take Citizen Science is towards more citizens being involved in figuring out how to live with the technologies that are becoming a bigger part of our daily lives. Many projects this year were creative about using digital technologies to empower citizen science in new ways, but very few projects deal with technology as its topic of investigation. This leaves many burning questions about the democratic, environmental, societal and political impacts of rapidly advancing technologies like Generative AI and others. In 2024, we saw a few projects addressing this, but I hope to see more involvement of citizens in such research in the coming years.

— Sofie Burgos-Thorsen, *EU Prize for Citizen Science* jury member

FUNKEN Academy

re:sourcing

FUNKEN Academy—re:sourcing was a summer school on “Shaping fungi, DNA and metal powder through Art and Science” attended by 30 students. Through the summer school, the consortium partners aimed to promote European knowledge transfer and cross-sector innovation. Also, partners collaborated with high-tech institutes to integrate new technologies with artistic trends in the context of an applied artistic course program.



ZOE by Noor Stierfert Kroese & Amir Bastian © Bart Grietens

Platform Europe supports this education program invested in the development of new planetary

narratives through material research by showcasing selected outcomes of the works developed in the context of the summer school at this year’s Ars Electronica Festival.

Partners: Klub Solitaer (DE), Ars Electronica (AT), WRO Art Center (PL), Fraunhofer ENAS (DE), Fraunhofer IWU (DE)

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.

Our project is intended to enable artists to carry out long-needed mediation work, to make complex processes and technologies easily accessible. Change is not brought about through information, technology and science alone, but through experiments generating ideas that precede and accompany the change.

— Robert Verch, *FUNKEN Academy* coordinator in the Open Call

fAIr media

Debunking AI-generated mis/disinformation in media

fAIr media sets out to debunk mis/disinformation, promote media literacy and enhance citizens' capacity and critical approach to media (including social media) through an active and participatory methodology involving AI, professionals, artists and young citizens. The project’s main challenge is to work with experts to anticipate the impact of generative AI on the media landscape. Platform Europe takes particular interest in exploring the evolution of our Technosphere and its socio-political implications. The project’s approach of actively involving citizens in co-development processes speaks to our dedication to alternative models of



Fake News at Deep Space 8K LIVE © Robert Bauernhansl, background photo © Lucas Jackson, Reuters

(self-)education and engagement. The project starts at this year's festival. In the coming years, we will stage an Open Lab on Misinformation as well as an international Misinformation Forum in the context of the Ars Electronica Festival.

Partners: Zaragoza City of Knowledge Foundation (FZC) (ES), Ars Electronica (AT), Sinelglossa (IT), Baltan Laboratories (NL)

Duration: 2.9.2024—1.9.2026

fAIr media is funded by the European Union.

We cannot predict the future, but all of us who meet at Ars Electronica have a role in shaping it with desirable stories. Many young future scientists will stumble upon them and, once they grow up, build the technologies to realise them. We may not see the results next year, but we must remember that great challenges are played out over the long haul.

— Federico Bomba, *fAIr media* consortium member at Sinelglossa

NARRATIVES: SOCIO-POLITICS

Technology is not born and does not operate in a vacuum. Rather, technology is produced by and continuously (re)produces socio-political dynamics. The ways in which we make sense of the societal and political patterns around us are inevitably tied to the ways in which we develop our technologies, and reimagining technologies is dependent on our ability to create alternative social and political narratives. Platform Europe's work here focuses on agency and the alternatives often obscured by the narrative of technological determinism. Our current agenda-setting project in this context is *European Digital Deal*.

There is no automatic progress for technology to benefit everyone. [We need] organization on every level, taxation, regulation and the dismantling of this ludicrous narrative of automatic progress through technology that is just not working anymore. It is also grown so stale. We have been hearing it for the past 30 years now, or even more (...).

— Hito Steyerl, guest of the *The Digital Deal Podcast*

European Digital Deal

European Digital Deal is a three-year 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. *European Digital Deal* is located at the intersection of technological and socio-political narratives as a reminder of their deepening entanglement. Zooming into the risks and possibilities new technologies bring to existing forms of governance, the project calls on multiple voices to construct narratives and visions for a more deliberate and aware technological future. Reinventing the concept of artistic

residency to suit complex issues, we center it on the collaboration and exchange between artists, technologists, futurists, policymakers, curators and more.

As the coordinator of the project, Ars Electronica is responsible for the communication and content production within the project. This includes *The Digital Deal Podcast*—a series in which artists, cultural critics and theorists discuss how new technologies reshape our democracies and help us make sense of these changes. At this year's festival, both the Theme exhibition and a full day of the Theme symposium are curated in the context of *European Digital Deal*.

Partners: Ars Electronica (AT), GLUON (BE), iMAL Art Center for Digital Cultures & Technology (BE), Kersnikova Institute / Kapelica Gallery (SI), LABoral (ES), Onassis Stegi (EL), Y csoport (HU), Sineglossa (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)

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.

DIGITAL DEAL AWARD

Rafiul Alom Rahman (IN), Rachita Sai Barak (IN), Maniza Khalid (IN)

The Queer Muslim Project

The Queer Muslim Project uses art, culture and digital media to challenge harmful stereotypes and norms and to enable queer and Muslim communities to shape their own narratives. As visitors step into the space, they encounter three splendid curtain installations suspended from above. These curtains sway and undulate, unveiling images of queer Muslim individuals delicately overlaid onto fabric inspired by rich Islamic and South Asian heritage. The exhibit includes a separate room for the audience to engage with digital content produced by The Queer Muslim Project, demonstrating the impact of its work. The three grand curtains embody diverse motifs, patterns and weaving styles that eloquently depict the rich history of Islamic culture. The project represents profoundly the lived experiences of queer Muslims: shaped by their origins, the cultural shift

they aim to create through their narratives, and the collective need to thrive and honor their rich diversity.

Founder and Director: Rafiul Alom Rahman /
Communications Lead: Rachita Sai Barak /
Program Lead: Maniza Khalid

Presented in the context of the *European Digital Deal* project. *European Digital Deal* is co-funded by the Creative Europe Programme of the European Union and by the Austrian Federal Ministry for Arts, Culture, the Civil Service and Sport.



© The Queer Muslim Project

NARRATIVES: TECHNOSPHERE

Life in the Technosphere, where AI and Big Tech are reshaping social and technological landscapes, creates the need for a more human-centric approach to digital transformation. This need is highlighted by such dire consequences as the erosion of privacy, the spread of misinformation and the rise of data monopolies. With regard to Platform Europe, societal and ethical considerations are pushed to the forefront of technological development within projects that align with the European Union's broader policies on digital transformation. In the context of this year's festival, *Realities in Transition* is the most prominent example of a project developing alternative narratives about the Technosphere.

I worked on scanning real persons and telling their stories in a co-creative, inclusive way.

I wanted to try out how it feels in VR; if you feel closer to the person... And it is actually really incredible. It is something you cannot produce with a projection or by just playing it on the screen. With VR you can really get very close to the people's stories and representations.

— **Rebecca Merlić**, *Realities in Transition* artist-in-residence

Realities in Transition

Realities in Transition is an international community that aims to explore and support alternative Extended Reality (XR) productions and new narratives and creative processes. *Realities in Transition* works on building a strong, independent European XR creative and activist community, a think tank to tackle current and future challenges in the digital sector.

With *Realities in Transition*, Ars Electronica Platform Europe can embrace technological innovations of XR in artistic contexts and incubate new artworks; also, it can envision educational approaches to this technological shift. The goal is to open a critical reflection on the evolving realities of the Technosphere and the positioning of the arts in the rapidly evolving market of virtual and Augmented Reality content production. Hence, Ars Electronica's participation in *Realities in Transition* predominantly centers on the development of educational programs around artistic approaches to XR. XR workshops, expert engagement and networking events at the Ars Electronica Festival are being developed as part of this project, as is a workshop methodology booklet. To showcase desirable ways forwards for XR as a field, re-interpretations of and artistic



The Collective Algorithm of Care by Leo Scarin & Mariot Meyer, presented at *Realities in Transition* TestLab @ V2_ Lab for the Unstable Media / Fenna de Jong

approaches towards extended realities are showcased in an XR exhibition at this year's festival.

Partners: Chroniques (FR), Ars Electronica (AT), L.E.V. Festival (ES), KONTEJNER | bureau of contemporary art praxis (HR), Dark Euphoria (FR), iMAL Art Center for Digital Cultures & Technology (BE), V2_ Lab for the Unstable Media (NL)

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.

NARRATIVES: THE PLANET

The climate crisis seems to be the planet's way of rebelling against centuries of human-centered extractive and exploitative practices, putting pressure on us to connect our social, political and technological realities with the way we understand nature. Rewriting narratives about the planet has become imperative for the reconstruction of our modes of inhabiting it, a task that seems more urgent than ever. Platform Europe's most focused approach to tackling this issue is *More-than-Planet*.

More-than-Planet

More-than-Planet addresses a crisis of planetary imagination, exploring how transdisciplinary cultures can contribute to a new understanding and vision for our environment on a planetary level. With *More-than-Planet*, Platform Europe contributes to European cultural-environmental literacy and brings together planetary perspectives with alternative educational approaches. Through a “comparative planetary imagination”, the project empowers European research, innovation and cultural communities with novel insights, skills, tools and concrete use-cases. These imaginations—or visions—are developed in transdisciplinary, collaborative and art-driven innovation programs that utilize critical and creative tools to

address the environmental state of emergency. *More-than-Planet* aims to have long-term impact by developing a pathway toward the framework outlined by the European Cultural Outer-Space Activities (ECOSA). It builds on decades of individual efforts by many artists, scientists and cultural organizations who have enabled artistic production focusing on outer space. The outcomes, among them a commission for a space-themed work for the Deep Space 8K realized by Menche Lab, are disseminated as novel environmental narratives in the context of Ars Electronica. Bill Fontana's contribution to this year's Ars Electronica Festival Opening is realized in the context of *More-than-Planet*.



Connected--How the World is More than the Sum of its Parts by Menche Lab
© Florian Voggeneder

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

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.

Science through Society

European Union Prize for Citizen Science Exhibition

Citizen Science stands for scientific research that transforms the allocation of roles and agency in the research process. Citizens initiate, design and implement investigations in collaboration with scientists, enabling all persons involved in the process to gain new perspectives as well as access to and understanding of data (volumes) and to design the solutions to the challenges of our times. Citizen Science opens up an appreciative, transparent and innovative interaction between science and the general public, which has great potential to contribute to a positive change in our society and living environment. Science and research carried out in this way is not only designed with the common good at the core of its mission, but enables society to become the initiator and protagonist of scientific endeavor. Ars Electronica Festival is a space in which citizens are invited to become active citizen scientists. In this year's Citizen Science exhibition *Science through Society*, we invite our audience to take a glimpse beyond their immediate surroundings. With Citizen Science becoming one of the cornerstones of the European research landscape, we present European lighthouse projects from the field and showcase

the current dimensions of this approach in the European context.

The European Union recognizes the crucial role of citizens in the research process

With the *European Union Prize for Citizen Science*, the European Commission wants to underline the importance of Citizen Science and to honor, present and support outstanding projects whose social and political impact advances the further development of a pluralistic, inclusive and sustainable society in Europe. Ars Electronica was commissioned to organize the competition as part of the IMPETUS project—which is being carried out in cooperation with King's College London (GB), the European Science Engagement Association (AT), Zabala Innovation (ES), T6 Ecosystems (IT), Science for Change (ES) and Nesta (GB). In 2024, this prestigious prize is given for the second time.

This exhibition and the exhibited projects are presented in the context of the IMPETUS project. IMPETUS is funded by the European Union under Grant Agreement No. 101058677—HORIZON-WIDERA-2021-ERA-01.

European Union Prize for Citizen Science: Grand Prize

Kerstin Neumann (DE), Roberto Papa (IT)

INCREASE: Intelligent Collections of Food-Legume Genetic Resources for European Agrofood Systems



© Elisa Bellucci & INCREASE consortium

More information about Prize winners is available in the *Prix Ars Electronica 2024* catalog.

Raquel Colacios (ES), Blanca Calvo Boixet (ES)

ASD Publics: Playable cities for all

ASD Publics is a pioneering initiative aimed at enhancing the design and accessibility of public spaces for neurodiverse children, particularly those with autism spectrum disorder (ASD). ASD Publics employs a holistic approach to create sensory-friendly environments and a collaborative co-creation methodology involving autistic children, families, urban practitioners, policymakers and autism experts. The project has developed design guidelines to promote inclusivity and sustainability, raising awareness and empowering the Autism Community in the process.

We extend our sincerest appreciation to all the families and children who participated in the research activities of the project. Our heartfelt thanks go to our collaborators Aprenem Autisme and Escola Industrial de Sabadell for their invaluable involvement. Lastly, we express gratitude to the New Europe Bauhaus and the European Institute of Technology for their generous support of the project.



© ASD Publics

Thor Magnusson (IS)

Intelligent Instruments in Citizen Science

Understanding Contemporary AI through Creative Practice

In the *Intelligent Instruments* Lab we create systems with AI that can be seen as musical co-creators. Focusing on physical instruments that exhibit agency and adaptation, we study how performers and audiences react to this new behaviour. We are interested in the experience of working with AI, how it feels and how it impacts our musical behaviour. For this reason we have designed a collection of instruments which we use in our work, involving people in workshops, design sessions, user studies and performances. The instruments we brought to the Ars Electronica exhibition are the ii halldorophone and stacco.

The *Intelligent Instruments* project is developed by Thor Magnusson (IS), Jack Armitage (UK), Halla Steinunn Stefansdottir (IS), Victor Shepardson (USA), Nicola Privato (IT), Miguel Angel Rozzoli (AR), Halldor Ulfarsson (IS), Sean O'Brien (USA), Marco Donnarumma (IT), Sophie Skach (AT), Giacomo Lepri (IT). The *Intelligent Instruments* project is supported by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (Grant agreement No. 101001848). The project is hosted at the University of Iceland. Some workshops and public engagements have been funded by the Icelandic Music Fund.

S+T+ARTS Exhibition

Masha Zolotova (RU) / Co-Curator STARTS Exhibition

Where Artists Shape Innovation

The triangle of science, technology and arts has emerged as a catalyst for creative solutions and alternative visions for our present and future. Why? Because it—and art above all—produces the disruptive innovations we need to become more empathetic and determined in our way to confront pressing issues. How can we contribute to fostering a culture where the arts, science and technology thrive as interconnected and mutually enriching modes of exploration, knowledge and discovery?

The STARTS Exhibition sheds light on the impressive and wide-ranging roles of artistic and creative communities, showcasing their potential to act as inspirations and driving forces during these times and beyond. From individual artists to larger institutional efforts, the exhibition highlights projects and initiatives that are actively working to bring about change through their innovative ideas and actions.

The exhibition opens with *Calculating Empires: A Genealogy of Power and Technology, 1500-2025*, a large-scale visual manifesto by Kate Crawford and Vladan Joler. It not only maps our technological present based on a five-century-long history but also encourages us to rethink

how we relate to today's social, political and technological systems. By asking how we got here, the artists call for the reflection on what the next step might be.

A Way Forward

But is it the only way to look into our past, and, thus, to think about our future? There is no singular view of history; instead, there is a multitude of perspectives that highlight the necessity of foregrounding as a catalyst for dialog and collective actions those that have been previously oppressed.

With the help of technologies, the artists gain the opportunity to bring their rich cultural knowledge to the global stage and safeguard it in an open and transparent manner, to foster a deeper understanding and connection to their heritage, to engage with the audience and provoke thought. The artworks presented not only contest the history, but also empower communities to actively react to the unfairness as in *Balot NFT* project that becomes a radical model of restitution of both stolen art and occupied land. The only way to move forward is to acknowledge

the role of situated knowledge in the process of invention and innovation. By examining the power structures of the past, we can learn valuable lessons and understand how technologies contribute to reshaping our narratives, offering hope for a more inclusive future.

Artistic Perspectives

What are the next steps? Artistic and creative communities have great potential in shifting the paradigms by bringing their alternative perspectives to the public attention. They continuously question established norms, seek ways to contribute to a more inclusive, accessible and empathetic world.

The exhibition features striking creative solutions and artistic-driven innovations of different scales: from individual artistic efforts, DIY prototypes and community-led experiments to multidisciplinary collaborations and large-scale long term partnerships. In their unique manner, the artists question the status quo of technologies today and develop alternative solutions, in order to rethink them in an environmentally friendly way, to adapt the most vital of them to harsh environments or reinforce them by merging with historical methods and practices. The artists also provide insights into otherwise mystifying processes, helping to improve citizens' technological literacy, especially in connection with the rapidly developing field of AI. This is particularly crucial in times when technological advancements go hand in hand with social and economic innovation.

Infrastructures of Power and Care

Who can help the artists in this endeavor? Institutional support plays a crucial role in nurturing the field's sustainability and in fostering further experiments. This support ranges from facilitating and mediating dialog between stakeholders in art, science and technology, to building frameworks and providing access to large-scale infrastructures such as CERN, the European Organization for Nuclear Research,

or High Performance Computing Centers. Initiatives as STARTS, and programs as Arts at CERN or FUNKEN Academy,, illustrate the transformative potential of well-supported infrastructural frameworks not only with bringing the participants together and initiating encounters with attention to all actors involved, but also with dissemination the approach and methodology to the wider community and stakeholders. These infrastructures are essential for achieving transnational scale and for providing the visibility to enable further development.

[Collaborative] Solutions

What could be the result of these collaborations? The fruitful interactions established between art, technology, science and industry can lead to groundbreaking outcomes not only from the perspective of the artists, but also participating industry partners, like small and medium enterprises, as well as decision-, policymakers and society in general. This exhibition showcases inspiring examples of such collaborations that with new products help rethink the traditional approaches, bringing creativity into an industry accustomed to conventions; develop new practices with advanced 3D printing technologies and new solutions to move beyond conventional industrial interaction protocols with robots on production sites. It is precisely these forward-looking approaches and the associated paradigm shifts that the European Commission sets out to promote with its STARTS initiative—Science, Technology, Arts. Ars Electronica currently participates in three STARTS projects: *STARTS Ec(h)o*, *STARTS in the City* and *STARTS4Africa* funded by the Horizon Europe Programme of the European Union and DG CNCT. This exhibition features not only their outcomes as the selection of STARTS Prize and STARTS Prize Africa winners and the projects developed in the residency framework in *STARTS4Africa* and *STARTS in the City*, but also *FUNKEN Academy*, co-funded by the Creative Europe Programme of the European Union. Part of the exhibition is presented in the context of *Label4Future*, funded by the European Union.

Featured Artworks in S+T+ARTS Exhibition 2024

S+T+ARTS Prize

GRAND PRIZE

Arts at CERN (CH)

Calculating Empires: A Genealogy of Power and Technology, 1500-2025—
Kate Crawford (AU),
Vladan Joler (RS)

HONORARY MENTIONS

How (not) to get hit by a self-driving car—Tomo Kihara (JP), Daniel Coppen (GB)

Maria CHOIR—
Maria Arnal Dimas (ES)

METABOLICA—
Thomas Feuerstein (AT)

VRJ Palestine—
Nisreen Zahda (PS)

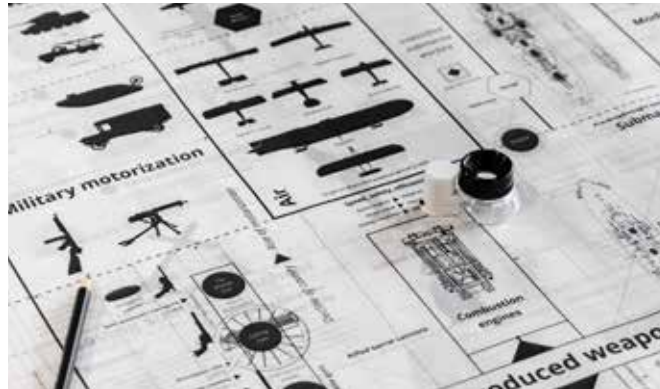
NOMINATIONS

Clay PCB—Patricia J. Reis (PT),
Stefanie Wuschitz (AT)

Low Carbon Chinatown—
Ling Tan (SG/GB)

Revolution Refridge—
Rojava Center for Democratic
Technology (SY) & Dani
Ploeger (NL)

Soft Collision—
Anna Schaeffner (FR)



Exhibition view of *Calculating Empires*, Kate Crawford and Vladan Joler, Osservatorio Fondazione Prada, Milan © Piercarlo Quecchia-DSL Studio / Courtesy: Fondazione Prada



Soft Collision, Membrane placed on UR5 © Michelle Mantel



How (not) to get hit by a self-driving car © Tomo Kihara, Daniel Coppen

S+T+ARTS Prize Africa

GRAND PRIZE

Balot NFT—CATPC-Cercle d'Art des Travailleurs de Plantation Congolaise (CD)

AWARDS OF DISTINCTION

Black Body Radiation: Rescripting Data Bodies—
Ama BE (GH/US),
Ameera Kawash (US/PS)

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

I.AM.ISIGO Digital Mystery System—Bubu Ogisi (NG)

Sand Gardens—
Mohamed Sleiman Labat (EH)

The Metadata Memoir—
Minne Atairu (NG)



Still of *Balot NFT #019* © CATPC-Cercle d'Art des Travailleurs de Plantation Congolaise



Dzata (River production still) 2023 © Knoetze, Hlongwane and Wilson



Sand Gardens © Mohamed Sleiman Labat, Motif Art Studio

More information about Prize winners is available in the *Prix Ars Electronica 2024* catalog.

S+T+ARTS IN THE CITY

The projects developed and featured in the framework of *STARTS in the City* showcase art-driven innovation and human-centered technologies that have a positive ecological, societal and ethical impact.

Mark Farid (GB)

Invisible Voice

Invisible Voice is a digital arts and research project featuring a browser extension, mobile app and installation. Supported by the European Commission and UOC and co-commissioned by HacTe in the framework of *STARTS in the City*, it aims to reshape societal narratives and unite individuals around shared causes like environmental impacts, human rights and corporate accountability. Launching in January 2025, *Invisible Voice's* desktop/mobile extension and app empower you with factual and unbiased information about the businesses behind the companies you use. Using data from 37 Open Access datasets, it offers scores on political bias, lobbying, sustainability and more, helping users align their activities with their values. The mobile app scans products, logos or barcodes to provide information about materials,

ingredients, packaging and company data. Prioritising privacy, *Invisible Voice* repurposes online advertising for social impact, turning data into action and fostering communities.

Artist: Mark Farid / Lead Developer: Orange / UX & UI: Tom Shearing / *Invisible Voice* is created by artist Mark Farid and developed by Orange. It is co-commissioned by HacTe and MediaFutures with support from the University of the Arts London, Universitat Oberta de Catalunya, GuestRoomMaribor and the *STARTS* program of the European Union.

This project has been developed and is presented in the context of the *STARTS in the City* project. *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.



© Mark Farid

DISNOVATION.ORG (FR/PL/CA)

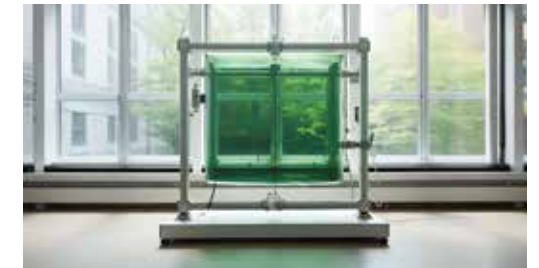
The Solar Share

An Edible Solar Currency

Sustainability is the goal, but what does it really mean? *The Solar Share* project challenges prevailing economic models with insights from sunlight-harvesting organisms that are crucial to the metabolism of life on Earth. Staged as a one-square-meter microalgae bioreactor, the artwork foregrounds human energy dependence on photosynthesis and proposes harvested edible microalgae as a radical economic unit: *The Solar Share*. This unit is the biomass produced on one square meter of the Earth's surface on the day of measure. This edible algae unit is a photosynthetic proof of work that can be consumed, exchanged, or stored as a currency. *The Solar Share* is an invitation to experience firsthand a transformative economic model that reintegrates human metabolism and energy needs with the actual new energy entering the Earth's system as photosynthesis. *The Solar Share* provocatively

recenters Earth's metabolism in economics, redefining sustainability within planetary limits.

Conception and realisation: DISNOVATION.ORG / Co-production: IFT Paris, Xcenter Nova Gorica, ART2M and More-Than-Planet / Co-commissioned by: Hac Te Barcelona / Co-designed with: Katharina Ammann / Project assistants: Romain Theron, Léo Lima This project has been developed and is presented in the context of the *STARTS in the City* project. *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.



© DISNOVATION.ORG

Stanza (GB)

THE ORACLE

⇔ TRANSCENDENCE

The Oracle is an expression of the all-seeing eye monitored by Artificial Intelligence, all at once. It acts as an autonomous brain seeking to render the hidden interactions between humans and non-human agents visible. This artwork speculates how AI will manifest its own "desires" through machine learning patterns and act as a poetic metaphor for invisible agency in our cities. In another sense, the artwork operates between observation, critique and re-imagination, seeking to decipher the landscape to communicate with us. The data used includes thousands of inputs from weather, pollution, bike locations, buses, trains and news feeds. The main artistic and technical prototype is created with a custom API with neural nets and machine learning capabilities built in—heuristic functions; server scripts create neural nets running over the system. This allows the artwork to feed off AI data in real-time

as the AI regenerates new patterns of information seeking constant change.

Supported by Meet Digital Art Centre Milano. This project has been developed and is presented in the context of the *STARTS in the City* project. *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.



© STANZA

S+T+ARTS4AFRICA

The projects developed and featured in the framework of *STARTS4Africa* showcase the artistic endeavours in bringing together technological innovation and meaningful integration of African cultural practices.

Akwasi Bediako Afrane (GH), Anwar Sadat Mohammed (GH), Cyrus Khalatbari (FR/CA)

Into the E-Metropolis

A project that seeks to engage electronic device lifecycle workers such as second-hand dealers, repair people, scrap collectors/dealers and local recyclers through intense discussions, and workshops where there will be hands-on experimentation with the electronic devices, alongside artistic interventions to create works of art that trigger sustainable practices with relation to electronic devices within Cape Coast communities in Ghana. *Into the E-Metropolis* presents a documentary spotlighting the practices of some local electronic workers within the Cape Coast communities, while also capturing moments of intersection between Science, Technology and the Arts towards a more sustainable practice within the communities during its workshop initiatives.

Akwasi Bediako Afrane, Anwar Sadat Mohammed, Cyrus Khalatbari, Dr. Ekow Appiah, Dr. Frederick Bamfo, University of Cape Coast (UCC), GHANA ELECTRONICS SERVICING TECHNICIANS' ASSOCIATION (GESTA), ASM STUDIOS, MGM STUDIOS
Blue Canvas Studio, Kwame Nkrumah University of Science and Technology (KNUST), Swiss Federal Institute of Technology Lausanne (EPFL), HEAD, (HES-SO)/Geneva University of Art and Design (Switzerland), Sudu and Pedu communities of Cape Coast.
This project has been developed and is presented in the context of the *STARTS4Africa* project. *STARTS4Africa* has received funding from the European Commission's Directorate-General for Communications Networks, Content and Technology under grant agreement No. LC-01960720.



© ASM STUDIOS

Jibril Baba (NG)

RECALL: Spirit of the Old

What if it is knowledge from the past that saves the future?

RECALL: Spirit of the Old aims to create a sustainable solution to food and water access in north-eastern Nigeria. The project is presented as a modular unit installation and an experiential display to foster public discussion. The installation is designed to combat yam spoilage by using sensors to monitor the crop's health and then it sends a recommendation to the farmer. It is adapted as a modular storage for swift assembly and disassembly, an invaluable feature due to high food insecurity in the region. The early inclusion of the local community into the project philosophy was very important for the development of cultural and sociopolitical ideas into the project. As a result, the experiential event will pay homage to these ideas that shape the reality of citizens in northeast Nigeria. Through the use of vibrant colors, symbolic architecture and local

materials, the experience invites viewers into a space where they would dare to dream up bold new futures for humanity.

Artist: Jibril Baba / Technical support: Gallery of Code (NG), Jibril Amina Elejo / Documentary photography: Iko-ojo Attabor / This project has been developed and is presented in the context of the *STARTS4Africa* project. *STARTS4Africa* has received funding from the European Commission's Directorate-General for Communications Networks, Content and Technology under grant agreement No. LC-01960720.



Yam market, wukari © Iko-ojo photography

Aurelio Mofuga (TZ)

Daladala Verse

The DALADALA; Hop on a ride to uncover the social and economical contribution of Tanzania's oldest form of public transport.

Nested under the S+T+ART4Africa residency, the *Daladala Verse* project seeks to explore Utanzania (What it means to be a Tanzanian) leveraging immersive storytelling techniques such as AR/VR. Daladala is Tanzania's public transport system, that for decades has remained the backbone of Tanzania's economic, social and political spheres. Starting as an informal out-of-necessity after the collapse of government-led transportation, Daladala has garnered significant motion and its impact has been widespread across the country. Despite its significance, little is known about Daladala's rich history, stories and contribution to Tanzania. Merging Daladala stories with technologies opens an avenue for gamifying and narrating the entire experience, making it surreal and engaging even for those who are not natively Tanzanian and never used Daladala transport before.

This helps to preserve the work so that it can be experienced by many generations and opens a further enquiry into the Daladala topic by others.

Developed under a residency partnership with OnaStories Group and Inova+. This project has been developed and is presented in the context of the *STARTS4Africa* project. *STARTS4Africa* has received funding from the European Commission's Directorate-General for Communications Networks, Content and Technology under grant agreement No. LC-01960720.



© OnaStories Group

LABEL4FUTURE

The projects featured in the framework of *Label4Future* showcase new artistic visions for more sustainable production methodologies.

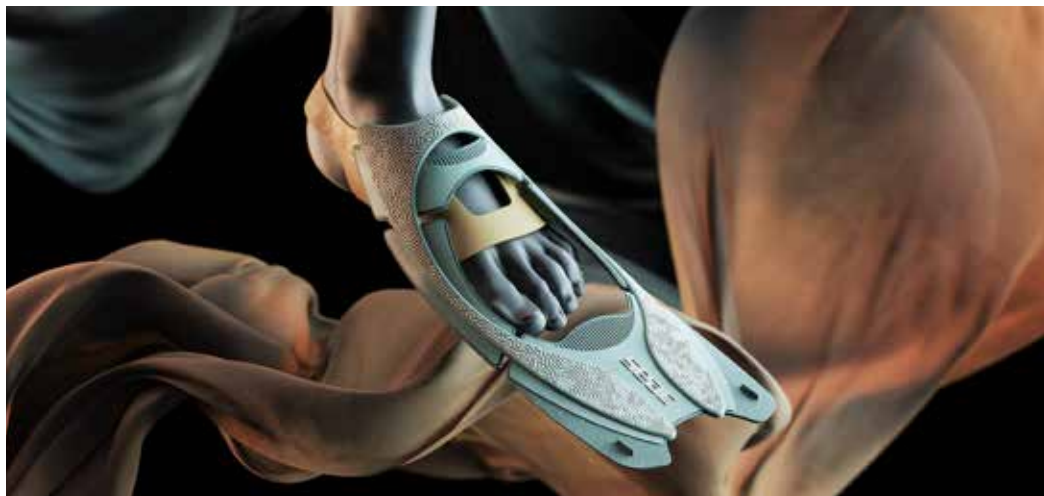
NMASA Design / Javier Masa (SE)

ARTIFACTS FOR A SCUBA DIVING UTOPIA

A wave of design innovations has emerged to confront the challenges looming over scuba diving in an age defined by the environmental crisis. NMASA Design and SEAC Sub lead a comprehensive examination of the impact of scuba diving, scrutinizing various facets ranging from fin production to distribution processes and even the behaviors exhibited by divers beneath the waves. Their mission? To envision solutions that prompt contemplation on the issue, thereby stimulating ongoing debates and inspiring the sector to reconsider the future of scuba diving. This involves a departure from conventional standardized

approaches, embracing a reevaluation of diving practices and the exploration of novel materials. The result is a collection of artifacts—solutions that span from concrete interventions in the tangible, immediate realm to more speculative, disruptive solutions with eyes set firmly on a utopian horizon.

NMASA design, SEAC sub
Better Factory
Presented in the context of the *Label4Future* project.
Label4Future is funded by the European Union (European Innovation Council and SMEs Executive Agency EISMEA) under grant agreement No. 101133162.



© NMASA Design



© Creative Robotics

Begüm Hamzaoglu (TR), Karl Singline (AU), Johannes Braumann (AT)

Embodied Trajectories

Bridging Crafts and Technology Through Embodied Knowledge Transfer

Integrating robot programming into crafts transcends mere automation, unlocking and conveying new layers of knowledge. This empirical study emphasizes the generative role of “thinking with hands,” investigating ways to transfer the implicit knowledge embedded in the maker's hands. The technological investigation is based on developing a computational workflow that captures and translates hand movements during interactions with materials and tools into robotic toolpaths. The robot's kinematics are utilized to gain a better understanding of the process, rendering tacit knowledge more explicit. The traditional craft of marbling serves as a case study, showcasing how unique patterns are created

through the rhythmic paths of brush strokes. This exploration highlights how embodied thinking is making connects with visual outputs, offering new insights into the creative process.

Creative Robotics, University of Arts Linz (AT): Johannes Braumann, Begüm Hamzaoglu, Karl Singline, Martin Schwab, Mika Brandhofer, Hanif Haghtalab
The project is realized by the University of Arts Linz and is part of the DigitalWerk Initiative. DigitalWerk is an Initiative within “Digital and Social Transformation in Higher Education (DX)” initiated and funded by the Federal Ministry of Education, Science and Research (BMBWF). Presented in the context of the *Label4Future* project. *Label4Future* is funded by the European Union (European Innovation Council and SMEs Executive Agency EISMEA) under grant agreement No. 101133162.

Isaac Monté (BE)

Stone Printing

With *Stone Printing* I redefine the possibilities of 3D printing by introducing a novel approach that is not only environmentally friendly but also artistically innovative.

At the heart of *Stone Printing* is a self-developed cutting-edge, eco-conscious material. Developed from CaCO₃, a byproduct of the limestone industry, this biobased dough is 75% recycled and free from chemical additives. This material not only boasts a low carbon footprint but is also entirely biodegradable, making it a sustainable choice for the future.

I have engineered an extrusion system designed for cold extrusion of biobased materials. This system seamlessly interfaces with several 3D printers and robotic arms offering versatility in print dimensions.

The final outcome is a series of functional design objects inspired by the spirograph—a geometrical design tool. My collection includes mirrors,

clocks, flowerpots, vases and lamps, seamlessly marrying form and function.

Oviso Robotics
V3DA

With the generous support of Creative Industries Fund NL. Presented in the context of the *Label4Future* project.

Label4Future is funded by the European Union (European Innovation Council and SMEs Executive Agency EISMEA) under grant agreement No. 101133162.



© Isaac Monté

Gijs Schalkx (NL)

The Plastic Car

Gijs Schalkx redesigned an abandoned car to run on fuel made from his own plastic waste. The de-refinery converts this waste back into oil and is installed on the top of the car, making the vehicle independent from existing fossil fuel infrastructure. Built from trash and running on trash, it celebrates the power of DIY and the individual agency it brings, while also challenging our ideas of sustainability and responsible use of resources.



© Gijs Schalkx

This project was funded by the Creative Industries Fund NL, Stichting Stokroos and Stroomversneller Arnhem. Presented in the context of the *Label4Future* project. *Label4Future* is funded by the European Union (European Innovation Council and SMEs Executive Agency EISMEA) under grant agreement No. 101133162.

Better Factory

Better Factory provides a methodology for manufacturing SMEs to collaborate with artists and technology suppliers to develop new and personalized products.

Better Factory is a European Commission-funded project to help manufacturing SMEs collaborate with artists and technology providers to develop innovative, personalized products. The core research question revolves around how art-driven innovation can transform manufacturing processes. Audiences can witness cutting-edge installations and products developed through these collaborations, such as circular economy office chairs, IoT-enhanced wine barrels, algorithm-driven wheat stem products and mycelium-based construction materials.

This work puts a spotlight on the intersection of art, technology and sustainability. By integrating digital transformation and artistic experimentation, *Better Factory* addresses global challenges like waste reduction, circular economy practices and sustainable production. Artists explore recycling wine waste into bio-materials, developing smart security envelopes and innovating with overused titanium in 3D printing.

Better Factory brings together key European technology, art and innovation actors to create a framework for Manufacturing SMEs. It helps manufacturers enter new markets with customisable products and services, using Business and Arts Mentors and technology partners to explore new business models and digitalise factories. Coordinated by VTT, the consortium includes 28 partners from 18 countries:

- Arts Ecosystem: INOVA, GLUON, WAAG
- Art Supplier: In4Art
- Tech Centres: Fraunhofer IPA, AIMEN, SUPSI, Slovakia National Centre of Robotics, INESCITEC, Cyprus University of Technology
- Industrial Clusters: Transylvanian Furniture Cluster, Slovenian Tool and Die -Development Centre, Latvian Federation of Food Companies, CLUTEX, Bydgoszcz Industrial Cluster Tool Valley, Pécs Baranya Chamber of Commerce and Industry, ICT Cluster, University of Oulu
- Tech Suppliers: INFOTECH, Top Data Science, Holonix, GESTALT Robotics, European Dynamics
- Business Developer: Hermia Yrityskehitys Oy
- Communication: Mobile World Capital Barcelona
- Open Call Management: FundingBox
- Legal Framework: time.lex

This project has received funding from the EU's Horizon 2020 programme under grant agreement No. 951813.

David Rickard (GB/NZ)

SmartEnvelope

SmartEnvelope is a new product developed by a consortium formed of the envelope manufacturer Plast-Farb, technical specialist AndTech and the artist David Rickard. This new type of postal product can be linked to online content relevant to each and every separate envelope via individualised QR codes and an innovative database. Alongside digital connectivity, the physical design of the envelope has also been re-invented, addressing the current throw-away culture of postal envelopes by turning used envelopes inside-out to reveal a new product ready for use.



Model H2-Vision: Energy Transition in Action

A Project by the H2 team and the LINZ AG apprenticeship workshop

Welcome to our interactive model—immerse yourself in four vivid scenarios illustrating the integration of hydrogen into our future energy system: scenarios of the current energy system in summer and winter show energy flows of today that are independent from each other. In the future, these flows of energy will be coupled by hydrogen: excess green electricity production will be used to produce H2. This hydrogen will supply industry, district heating and specific, otherwise difficult to decarbonize mobility applications with green, gaseous energy via H2 pipelines. Unused hydrogen will be stored in natural geological formations underground. In winter, this stored hydrogen can be used to meet increased energy demand, either directly in the form of hydrogen, or in efficient combined heat and power (CHP)

plants to produce carbon-neutral green electricity and district heating. See how the energy flows between stations change and adapt over time. This model illustrates the potential of the energy transition and highlights the key role of hydrogen as an enabler of a climate-neutral energy future. In short, hydrogen makes summer's green energy available in winter.



© LINZ AG / Fotokerschi

Linz Center of Mechatronics (AT)

Shadowgram: Collective visions on sustainability and circular economy

A mechathon approach by Linz Center of Mechatronics and the Ars Electronica Futurelab

Ars Electronica Futurelab's innovative social brainstorming *Shadowgram* offers a unique blend of creativity and practicality, providing an engaging platform for collecting inspiring and thought-provoking projects. Together with the Linz Center of Mechatronics, Ars Electronica is inviting audiences this year to share their hope-giving projects in areas of the energy transition, circular economy and sustainability. By allowing participants to transform their shadows into tangible vinyl stickers and add visionary projects on a speech-bubble, the installation will function as a central festival statement on energy and climate issues, material research, circularity and environmental awareness. This interactive fabrication not only stimulates creativity but also encourages environmental literacy and activism, making abstract concepts like circular design and sustainability more accessible and personally

relevant. The relative anonymity of the shadow image promotes open expression, enabling participants to freely share and brainstorm digital approaches to environmental challenges.

This project is being realized as part of the COMET K2 Competence Center "Symbiotic Mechatronics". COMET competence centers are financed by the Republic of Austria (BMK and BMAW), the participating federal states and the participating companies and research organizations. These projects are managed by the Austrian Research Promotion Agency (FFG).



© Tom Mesic

FUNKEN ACADEMY

The projects developed and featured in the framework of *FUNKEN Academy* showcase artistic experiments with different scientific topics, as data, fungi or DNA.

Kacper Krajewski (PL)

Adapted Artifact 258

A lamp, once used by humans, gets overtaken by nature. The lampshade transforms when reishi mushrooms grow through its weave structure, consuming the fabric. The fruiting bodies' shape and size naturally adapt to their environment, creating a unique object that is also a record of a space. The lampstand is made out of mycelium, the main part of fungi, usually spreading through materials to absorb nutrients. Here, it had been grown in a specific manner to achieve a durable material out of its root-like structure.

Adapted Artifact 258 explores transient human influence on the world and precise adaptive responses of the biosphere. After we are gone, nature will cleanse, adapt, reform and repurpose artifacts of our existence.

Supported by *FUNKEN Academy* / Fraunhofer IWU / Klub Solitaer e.V.

This project has been developed and is presented in the context of the *FUNKEN Academy* project. *FUNKEN Academy* is co-funded by the Creative Europe Programme of the European Union.



© Kacper Krajewski

Pai Litzenberger (DE)

Ghostly Collector

Ghostly Collector explores whether fiction can make new scientific innovations more accessible. By linking nanotechnologies such as DNA folding and protein design with artistic storytelling, the transmedia installation challenges the notion of object permanence. *Ghostly Collector* is a multifaceted ghost, whose identity figures through micro-performativity. In the installation it is represented as a 3D-printed DNA Origami that finds its voice through a poem reflecting on its desire to perceive light. This desire is translated into an exoprosthesis with help of predicted protein structures prompted by the poem. *Ghostly Collector's* desire for motion is captured in the drawing. The video shows how it shifts shape as an ice sculpture, melting from the artist's body heat. Fascinated by the invisible forces shaping our world, the artist uses scientific techniques to develop virtual environments seeking to provoke thought about the existential implications of DNA Origami and protein structure prediction.

This project was initiated in the framework of *FUNKEN Academy 2023*, organised by Klub Solitaer e.V. in association with Fraunhofer ENAS. Special thanks to Julia Hann and Mathis Janßen (Fraunhofer ENAS), Jan Gebauer (University of Cologne), artist duo Carolin Liebl and Nikolas Schmid-Pfähler (mentors at Funken Academy 2023) and typographer Chan Sperle for his font Lucid. This project has been developed and is presented in the context of the *FUNKEN Academy* project. *FUNKEN Academy* is co-funded by the Creative Europe Programme of the European Union.



© Pai Litzenberger

Eugénie Desmedt (AT/FR)

How to negotiate with a material

Mycelium, the root-like structure of a fungus, is increasingly being used as an ecologically friendly alternative to conventional materials in packaging and construction. The research project *How to negotiate with a material*, traces the process of putting organic matter to scientific and economic use. To be seen are the results of artistic experiments with mycelium, such as dried Reishi mushrooms growing from paper waste, animated 3D-scans of moulding fungi as well as materials utilized in the cultivation process: FFP2-masks, latex gloves, syringes. By examining the imposition of human needs and expectations towards the mycelium throughout the experiments, the project sheds light on the protocols of power and control that come into play when using another living being for the production of a good.

Concept, Design and Videography: Eugénie Desmedt / Composition and Sound Design: Hendrik Klatte / Original Reishi mushrooms represented in the 3D-scan: Noor Stenfert Kroese / Supported by *FUNKEN Academy*, Fraunhofer IWU, Ars Electronica Biolab, Klub Solitaer e.V. This project has been developed and is presented in the context of the *FUNKEN Academy* project. *FUNKEN Academy* is co-funded by the Creative Europe Programme of the European Union.



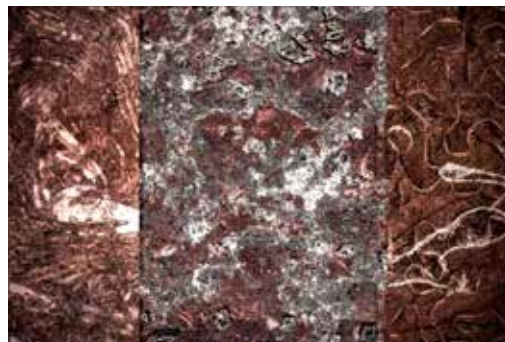
© Eugénie Desmedt

Ioulia Marouda (GR)

Infinitesimal

Infinitesimal is an experimental animation that explores what lies within the gaps of scientific imaging by imagining what movement might mean at the nanoscale and how it would be perceived if visible to our eyes. A DNA origami is so minuscule that even with an Atomic Force Microscope (AFM), researchers can only capture a snapshot of its final stage through a process called characterization. When introduced to the AFM microscope at Fraunhofer ENAS, the artist was intrigued to discover that each image it produces takes approximately 20 minutes, capturing only the final stage of Origami Folding. This leaves a significant gap in our understanding of the intermediate stages, including how origamis would move and what forms they would take. The work departed from three images characterized during the laboratory time of Funken Academy. Abstract generative animations were crafted on top of them, transporting the viewer to the imaginary realm of such scales.

This project was developed in the framework of Funken Academy 2023, organised by Klub Solitaer e.V. in association with Fraunhofer ENAS. With thanks to Carolin Liebl and Nikolas Schmid-Pfähler for the artistic mentorship, as well as to Mathis Janßen, Julia Hann and the whole Fraunhofer ENAS team for the scientific support. This project has been developed and is presented in the context of the *FUNKEN Academy* project. *FUNKEN Academy* is co-funded by the Creative Europe Programme of the European Union.



© Ioulia Marouda

Erwin Jeneralczyk (PL)

Safeness

The work was created during an artist residency at *FUNKEN Academy* in collaboration with the Fraunhofer Institute. It stems from experiments with encoding information in metal artifacts using advanced 3D printing technologies. The process involved writing a dedicated algorithm to examine the frequency of occurrence of digits from 0 to 9 within the sequence of prime numbers. The stochastic relations of the digits were encoded in ten printed matrices, revealing specific patterns emerging from the sets of prime numbers which are irregular in nature. These patterns are also translated into sound, allowing listeners to explore and interact with specific parts of the auditory sequence. It investigates the interplay of stability, emerging from chaotic and random mechanisms, as part of the artist's broader research into the dialectics of noise and signal.

Artist Name: Erwin Jeneralczyk/ Institutions & Organizations: WRO Art Center, Klub Solitaer e.V, Fraunhofer Institute / Technical Support: Paweł Janicki This project has been developed and is presented in the context of the *FUNKEN Academy* project. *FUNKEN Academy* is co-funded by the Creative Europe Programme of the European Union.



© Erwin Jeneralczyk

Linda Lach (PL)

Soft screen

Pump works slowly; it is inherently unproductive, and exudes a dragging feeling. Its sluggishness bends time and screens us from a linear normative experience. It is a performative act allowing for an examination of lossiness and liminality of feedback networks. The unknown oozes from remnants of each cycle. It follows a logic all its own by injecting meaning into recognizable processes of suction and dropping. This intelligent object is connected to a trained network. The dropping water changes the displayed data in real time. It has a digital twin in the form in which it receives data. Consequently, the pump evolves into a physical-virtual ecosystem. Technology has never been innately malicious, but we made it so by forcing it into shapes familiar to us and refusing any weirdness. To truly befriend it, we must speak with genuine empathy towards it. At the brink of this self-wrought

collapse, this pumping machine could be the last thing clemently screening us from peril.

Courtesy of the artist and Wanda Gallery. This project has been developed and is presented in the context of the *FUNKEN Academy* project. *FUNKEN Academy* is co-funded by the Creative Europe Programme of the European Union.



© Linda Lach

Applied Virtualities Exhibition

To ensure the potential future of XR for social engagement and collaboration, we should not linger in immersive escapism but instead design grounded experiences that augment our bond with the actual world around us.

— Boris Debackere, *Realities in Transition* partner at V2_Lab for the Unstable Media

Christl Baur (DE), Vanessa Hanneschläger (EU)

Extended Reality in Practice

Over the last decades, we have embraced a new technology that dissolved the binary of virtual and real to merge and blend physical and digital spaces. In the general public perception, “Extended Reality” (XR) technologies, which most prominently manifest in the forms of Virtual Reality (VR) and Augmented Reality (AR), allow us to access the “Metaverse” and are predominantly employed by the gaming and entertainment industries: with companies like Apple and Meta investing substantially in the development of the technology and high culture venues like Salzburg Festival or Bayreuth Festival employing it, XR has become a substantial economic factor.

Despite these developments, many people have yet to make their first contact with the technology and take their first virtual steps into the Metaverse. Meanwhile, many fields, disciplines and industries are already integrating XR technologies into applied contexts. In medicine, virtual spaces are employed not only to teach skills like

operations and to visualize anatomies, but also for treating patients with mental health conditions or degenerative mental diseases like dementia. Pilots are trained to fly virtual skies before boarding their first physical cockpits, soldiers learn to fight on virtual battlefields, influencers and models present digital fashion at Metaverse design weeks, architects design virtual homes before building them and their customers furnish the brand new virtual homes before going shopping for the perfect dining table, digital prototypes speed along the highways of the Metaverse before they turn into real world cars—to name just a few examples of XR applications. In the cultural and heritage sector, ancient cities, endangered environments and destroyed historical landmarks (like the Notre-Dame cathedral) are rebuilt in the Metaverse.

Like all big technological developments and digital evolutions, XR brings up questions of Open Source development, inclusivity and

sustainability. How do we make sure to keep key technology a publicly available good? How do we make sure that all, including the economically disadvantaged and impaired, have equal access to the digital and virtual spaces of our society? How do we design technologies in ways that minimize the impact on our endangered physical surroundings and support its preservation? Art also allows us to explore the nature of simulation and delves into the question of how we re-construct and re-conceptualize ourselves as society in simulated reality. What is the role of the individual, the role of the group in Virtual Reality? Do the borders between the self and the non-self become more fluid in simulated spaces, and what impact does that have on the nature of collaborative processes?

Europe is invested in an approach to XR that takes these key issues into account. The project *Realities in Transition*, which is co-funded by the Creative Europe programme of the European

Union and gives the context for this exhibition, focuses on artistic XR that explores not only the intellectual investigation of XR as a medium of expression and creation, but also the technical dimensions of developing XR technology in sustainable, open and inclusive ways. The projects we showcase in this exhibition are prime examples of such approaches, covering a variety of fields such as environmental preservation and documentation, architectural and archival applications, reflections on social justice as well as immersive artworks and performances. They demonstrate that artists are today, as they have been from the beginnings of this technological development, the key players in developing our imaginaries within and about the Metaverse.

This exhibition and all exhibited projects are presented in the context of the *Realities in Transition* project. *Realities in Transition* is co-funded by the Creative Europe Programme of the European Union.

Annika Boll (DE), Eirini Lampiri (GR), Gökay Atabek (TR), Lam Lai (HK), Merve Sahin (TR), Mihai Gui (RO), Silvana Callegari (CO)

Department of Interfaced Dimensions

You are invited to step into a world of play, interactivity and uncertainty. Observe, follow or collaborate with your fellow participants to navigate your way through alternative realities. Interchange roles and actively engage in a play of surveillance and manipulation.

Department of Interfaced Dimensions (D.I.D) is an

interactive Mixed Reality Experience that combines game mechanics with virtual worlds and the materiality of kinetic props to explore themes of identity, agency and control.

This project was developed in the context of a hybrid residency at V2_ Lab for the Unstable Media in Rotterdam. Seven artists were invited to jointly explore contemporary topics such as Virtual, Augmented and Mixed Reality, Artificial Intelligence and Machine Consciousness, Data Privacy and Surveillance, Simulation Theory, Existential Risk and Future of Humanity as they are raised in the 1964 SciFi-novel Simulacron-3.



© Department of Interfaced Dimensions

The group reflected on the creation of XR experiences with a strong creative and artistic component to create a collective experience that, in its core, considers the concepts of human interaction, group dynamics and empathy. The outcome of the residency, which utilized Open Source tools and offered guidance from experts, is Department of Interfaced Dimensions (D.I.D).

This project has been developed at V2_ Lab for the Unstable Media in the context of the *Realities in Transition* project and is presented as part of a *Realities in Transition*-funded exhibition. *Realities in Transition* is co-funded by the Creative Europe Programme of the European Union.

Thierry Loa (CA)

21-22 CHINA

We live in the Anthropocene epoch marked by the human influence on the planet. This 360° VR experiential non-fiction film takes us on a meditative journey for a rare and profound look inside China where rapid urbanization, major industrial development and massive changes are transforming its landscapes. Shot over two years and through its non-verbal narrative of immersive real-world imagery, evocative soundtrack and montage, *21-22 CHINA* offers a unique cinematic journey from above across the world's second largest superpower at the dawn of the Anthropocene.



© 21-22 CHINA

Producer and director: Thierry Loa / Associate producer: Zheng Zhong / Music composer: Philippe Le Bon / Image editor: Ray Shine / Project coordinator: Jean Daniel / Production company: HELLOHELLO / Funding partners: Canada Council for the Arts, Conseil des arts et des lettres du Québec, Conseil des arts de Montréal

Adelin Schweitzer (FR)

#ALPHALOOP

The core research question of *#ALPHALOOP* centers on exploring the intersection of the sacred and technology through the concept of techno-shamanism. The work challenges the conventional dichotomy between nature and technology, proposing that both are integral manifestations of reality. Inspired



#ALPHALOOP at TurFuFest Caen © deleteere

by Timothy Leary's theories on cybernetic shamanism and enriched by a research trip focusing on the myths and cultures of northern Quebec, the project critically examines Extended Reality (XR) technologies, the ideology of innovation and spirituality. The audience experiences this as a 50-minute performance that merges 360° cinema and live performance. Limited to up to six people per session, participants follow a guided path led by two antagonists, HIM (a shaman) and the MÉTA (a technomancer), while equipped with

DIY Mixed Reality headsets. This immersive setup transforms their sensory perception, blending physical and digital realities of the world around them.

Artistic Direction: Adelin Schweitzer / Write & Play: Fred Sechet & Adelin Schweitzer / Dramaturgy: Pina Wood / Software Development: Naoyuki Tanaka & Gaëtan Parseihian / Sound Design: Lucien Gaudion & Gaëtan Parseihian / Co-Production: Crossed Lab / Deleteere / Station Mir / Partners & Supports: Cnc-Dicréam / Région Sud / Drac Et Scan Région Auvergne Rhône-Alpes / Région Normandie / Consulat De France Au Québec

Thierry Loa (CA)

21-22 USA

We live in the Anthropocene epoch marked by the human influence on the planet. *21-22 USA* is a 360° VR experiential non-fiction film revealing real-world environments and activities across the United States of America, from the iconic American megacities, to the vast sprawling suburbs and highways, to the oil industry, to the territories impacted by climate disasters, and more besides. This unique immersive film (shot over three years) invites the audience to discover anew from above in VR the world's largest superpower at the dawn of the Anthropocene.



© 21-22 USA

Producer and director: Thierry Loa / Music composer: Philippe Le Bon / Image editor: Ray Shine / Project coordinator: Jean Daniel / Production company: HELLOHELLO Funding partners: Canada Council for the Arts, Conseil des arts et des lettres du Québec, Conseil des arts de Montréal

Paula Maya Strunden (DE/FR)

Alison's Room

An xR Archive

Alison Smithson (1928-1993) was an early protagonist of New Brutalism in architecture and a founding member of Team 10 with her partner Peter Smithson (1923-2003). They worked from Cato Lodge in South Kensington, where Alison had a private workroom separate from their combined home and office. The Smithsons' home and office, including Alison's workroom, no longer exist in their original state. The life-size installation reconstructs the room from a photograph taken by family friend and photographer Sandra Lousada, combining spatial experiences with text documents and image collections. Special tools, buttons and a speaking cat help visitors navigate storylines, allowing them to experience designs like the *House of the Future* (1956), the *Hexenbesenraum* (1996) and the *Parallel of Life and Art* (1956). As visitors move through *Alison's Room* and interact with the objects, they explore the multisensory nature of memories and speculate on knowledge production through new forms of embodiment.

Artist: Paula Strunden / Curator: Dirk van den Heuvel / UX Coding: Joelle Galloni, Malou Minkjan / Sound Design: Daniel Helmer, Max Liebich / Voice Over: Laura Cameron Wilson / 3D Modelling Support: Daana Bolot, Bats Bronsveld, Ruben Cahors / Building Support: Eric Crevels,

Henry Holmes, Tanja Drinhausen, Stefan Strunden, Joshua Neli / Team Nieuwe Instituut: Fatma Tanış, Ben Sharnier, Stefan Prins, Tom Prins, Bart Smits / Graphic Design: Delphine Lejeune / Special thanks to: Anna Bach, Louisa Hutton, Evert Klinkenberg, Soscha Monteiro de Jesus, Bodo Neuss, Max Risselada, Simon Smithson, Soraya Smithson and Ines Zalduendo

Alison's Room is part of Paula Strunden's doctoral thesis on multisensory perception through Extended Reality models, supervised by Angelika Schnell at the Academy of Fine Arts Vienna, within the framework of "TACK: Communities of Tacit Knowledge Architecture and its Ways of Knowing", funded by the European Union's Horizon 2020 programme under Marie Skłodowska-Curie Grant Agreement No. 860413. The installation was developed and first presented at the Nieuwe Instituut Rotterdam in November 2022 as one of the prototypes for a Virtual CIAM Museum, a collective archive-based project of the Nieuwe Instituut, the Jaap Bakema Study Centre and TU Delft, initiated by Dirk van den Heuvel.



© Sander van Wettum

Céline Tricart (FR/US), Maëlle Holtzer (FR), Julie Roué (FR)

FIGHT BACK

FIGHT BACK is a VR experience offering a self-defense crash course, leveraging VR's potential for learning and muscle memory. Participants enter a dreamlike world where stars disappear, replaced by mysterious dark entities. They learn combat methods, simple stances and techniques to identify danger, resist threats and finally fight back. Inspired by Empowerment Self Defense, it suits beginners and experienced gamers. Each level saves a star, unlocking personal testimonies and new techniques. Céline Tricart's past works, like "The Sun Ladies" and "The Key", deliver politically engaged messages with emotion and poetry. *FIGHT BACK* continues this mission, using VR to combat violence against women.

The game offers real-life self defense techniques, using hand tracking to develop instincts and muscle memory, promoting self-defense benefits. *FIGHT BACK* aims to save lives, tapping into VR's educational and therapeutic potential.



© COVEN

Staatstheater Augsburg (DE)

Erwartung

Mono-Opera by Arnold Schönberg as Single Player VR-Experience

How to transform Opera into a new era? Thanks to the immersive effect of Virtual Reality, the viewer becomes part of the story: once players put on the VR headset and pick up the control module, they are immersed in a nocturnal, eerie forest in which a woman searches for her lover. Players take on the role of the woman wandering through the forest and drive the plot through their own interactions. The real world disappears almost completely from our perception, allowing us to immerse ourselves even more deeply in Schönberg's music and thus experience the emotional study of the (alien) human psyche.

Idea & Director: André Bucker / Art design & production: heimspiel GmbH / Dramaturgy: Sophie Walz / Creative Director, Art Director: Frank Patzke / Unreal Engine Developers, 3D-Artists: Ludwig Blankenhagen, Niklas Stich / Unreal Engine Developer: Aleksander Großmann / 3D-Artists: Andy Probst, Fabian Tomac / Sound

design: Jürgen Branz / Musical direction: Domonos Héja / Soprano: Sally du Randt / Recording, editing, mixing, Audio montage: Moritz Kobel, Julius Busch, Christopher Heck, Christian Sonnbergen, Matthias Zimmer-Hirschmüller, Alexander Fick / Production management: Silvio Wiesner / Musical rehearsal: Volker Hiemeyer, Szilvia Mikó, Michael Wagner Co-funded by the Creative Europe Programme of the European Union, with the kind support of Theaterfreunde Augsburg.



© Heimspiel GmbH

Stefan Kainbacher (AT), Robert Lang (AT), Isabel Jäger-Nemec (AT), Stefani De Albuquerque Besnyi (BR), Niklas Kübler (AT), Benedikt Hermle (DE), Daniel Malin (AT)

FOHRAMOOS

A digital conservation project for Fohramoos

The digital preservation project of *Fohramoos* in Dornbirn is conducted by a group of students from the design department at the Vorarlberg University of Applied Sciences in the course on interactive systems. Guided by lecturers Stefan Kainbacher, a media artist, and Robert Lang, a sound engineer, this course focuses on experiential design and experimental interfaces to create a holistic experience. Adopting a multidisciplinary approach, we documented Fohramoos using non-invasive methods. Our techniques included 3D scanning of the terrain and field recordings of the moor's natural sounds, complemented by a live performance with modular synthesizers. Our aim is to create an interactive exhibit that immerses visitors directly into the world of Fohramoos. Central to this is an innovative haptic interface, enabling

a physical and emotional connection to the moor. Through this interactive installation, we aspire to increase awareness and appreciation of peatlands as a vital part of the ecosystem and climate protection.

Created by BA InterMedia students at Vorarlberg University of Applied Sciences.



© FHV / Stefan Kainbacher

CAMPUS

Since its inception in 2002, the collaboration between Ars Electronica and the University of Arts Linz has celebrated exploration in media arts and culture. The Campus Exhibition is a vital platform, showcasing talents from international higher-education institutions that take unique approaches to teaching and creative practice. Each year, this program invites universities from around the globe to present projects by students, alumni and professors that reflect their missions and endeavors. The Campus format highlights diverse educational philosophies and artistic methodologies, providing a unique opportunity to explore the identities, historical contexts and contemporary practices of participating institutions. This offers insights into the evolving field of media arts and design education.

This year's festival theme, "Hope—who will turn the tide" is an active call to recognize and empower the forces behind positive change. It emphasizes that belief in the possibility of change is crucial, but that belief must be coupled with vision, cooperation and action.

The featured institution this year is the Moholy-Nagy University of Art and Design. Known for its commitment to interdisciplinary exploration, the university will present projects exploring how contemporary artists and designers navigate and shape our rapidly changing world. Their contributions span topics from cutting-edge technology and augmented realities to critical dialogues on societal and environmental issues.

What significance does seeing have in relation to hope?
What would seeing be like if it not only impressed
with clear vision but also directed its attention
to in-between spaces and realms of possibility,
a seeing that dances around the blurriness
instead of trying to penetrate it?
What do those who see dream of?

— **Manuela Naveau, Kunstuni Campus@
Ars Electronica Festival Curator**

The Campus Exhibition 2024 welcomes 42 international universities, including longstanding contributors like Bauhaus-Universität Weimar, National Tsing Hua University in Taiwan and the School of the Art Institute of Chicago. New partners such as the University of Nebraska-Lincoln, Simon Fraser University in Vancouver and the National University of Singapore bring fresh perspectives, enriching the exhibition with diverse viewpoints and innovative approaches.

Additionally, the University of Arts Linz presents contributions from 18 of its own institutes, reflecting the institution's internal diversity and commitment to pushing the boundaries of media arts and design. The works presented this year spotlight artists and students as the true changemakers—the ones who will turn the tide. Their projects range from explorations of Artificial Intelligence and immersive media to investigations of social and ecological concerns, embodying the belief that creativity and collaboration are key to addressing the challenges of our time. We are also happy to announce the inaugural Ars Electronica Campus Award, rewarding the best project within the Campus Exhibition. This occasion highlights emerging talents and the educational institutions that support them, providing a platform to recognize and celebrate excellence in media arts and design.

The Campus Exhibition 2024 stands as a testament to the power of hope and the collective pursuit of understanding in navigating the evolving landscape of our world. It underscores that while belief alone is not enough, it is the critical starting point. With vision, cooperation and a willingness to act, these creative minds are poised to drive the positive change we need.

UNIVERSITY OF ARTS LINZ (AT)

Lynceus' Dream

At times we wish that we could foresee the future, whether near or distant, what might unfold in the world. Individual foresight and eyesight merely share etymological roots, with the latter, seeing, retaining some objectivity among us sighted creatures. Human vision, as a complex biological process, is shaped by the proximate empirical world. This intimate bodily connection renders a “disembodied” vision virtually inconceivable. However, the aid of optical devices and technical visual prostheses has allowed for the development of a distinct form of vision, reaching beyond the immediacy of our bodily experience. In many domains, vision is now delegated to technology. New tech sees for us—deep into our world, even into the future—leading to vision becoming increasingly detached from the body and its physiological functions. What does this mean for us? Lynceus (from the Greek for “lynx-like”), a character from Greek mythology, had a special gift. Not only did he possess a keen and alert eye, helping him recognize our world’s beautiful moments, he also had a technical eye, allowing him to see through people, walls and objects to the very core of our world. As one of the most important Argonauts, his clear vision, both near and far, was an advantage. Johann Wolfgang von Goethe regarded Lynceus as remarkable. In his drama *Faust II*, Lynceus, the tower warder, announces the arrival of Helen in the third act and witnesses Mephisto's arson in the fifth act. The song of Lynceus the tower watchman begins with an ode to sight and the world:

*To see is my dower,
To look my employ,
My charge is the tower,
The world is my joy.
My glances afar light,
My glances light near,
On sun, moon and star-light,
On woodland and deer.
In all the eternal
Adornment I see,
Well-pleaséd with all things,*

*Well-pleaséd too with me.
Ye eye-balls entrancéd,
Whate'er ye have seen,
Where'er ye have glancéd,
So fair hath it been !*

The first part of the poem breaks off abruptly. Nature's harmony seems but a memory, an internalized vision, while a looming threat of danger and devastation waits:

*Not alone though to delight me
Am I posted here so high.
What a horror to affright me
Threatens from the midnight-sky!
Glancing sparks stream helter-skelter
Through the lime-trees' double night;
Ever wilder glows the welter
By the draught fanned fiercely bright.
Ah, the inner hut is flaming
Moist and moss-grown that did stand there,
Speediest assistance claiming,
Yet no rescue is at hand there.
Misadventure oh how dreadful!
Woe is me! The good old folk,
Once about the fire so heedful
Victims fall they to the smoke.
Flames are flaring! Glowing redly
Stands the black and moss-grown frame.
Kindly souls, if from the deadly
Hell they could but rescue them!
Lambent tongues of flame it launches.
'Twixt the leaves and 'twixt the branches.
Withered boughs that flicker burning,
Briefly glow and fall, I see.
Ill-starred eyes, such sight discerning!
So far-sighted must I be!
Crashes in the little chapel
Burdened 'neath the branches' fall.
Barbed flames already grapple,
Wreathing, with the summits tall.
Now unto the roots the hollow
Trunks are glowing purple-red—
What the eye once loved to follow,
With the centuries is dead.*

Lynceus, the tower, a time marked by multiple crises and the many questions surrounding the power of sight: these are the starting points for the University of Arts Linz's contribution to *Hope—who will turn the tide*, the theme of this year's Ars Electronica Festival. On Linz's Hauptplatz a tower built by *die architektur*, a department of the University of Arts Linz, allows visitors to reflect on themes of vision and sight, offering a variety of interpretations. The idea of having a tower rise over Linz's Hauptplatz is something Paul Eis and Maximilian Meindl have been playing with for the last two years. Yet the tower is not meant to be seen as a symbol of power or control. On the contrary, the idea is based on critical

self-reflection and encourages the ability to see different options: How do we see? Who sees for us and influences our perception? What is it we want to see?

Is it possible that Lynceus has grown weary of his analytical and predictive vision? Does he envision a mindful vision? A vision that not only impresses with its clarity but is aware of its own limitations and directs attention to openings and potential. A vision that engages with obscurity playfully rather than attempting to lift its veil? This brings up the question of what happens after vision. What is next? What would you dream of if you could see everything? In short, what are Lynceus' Dreams?

LYNKEUS TRAUM

3.-8.9.24

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

Barbara Jazbec, Sylvia Leitner, Reinhard Reizenzahn, Alexander Wöran

Project Management of Kunstuni Campus@Ars Electronica Festival

Paul Eis, Maximilian Meindl

Architects of Tower Hauptplatz

MOOI DESIGN

Design

Translation of the excerpts from *Faust II*
by Albert G. Latham (Goethe, Johann Wolfgang
von: Goethe's Faust: parts I and II, London 1912)

KUNSTUNI CAMPUS

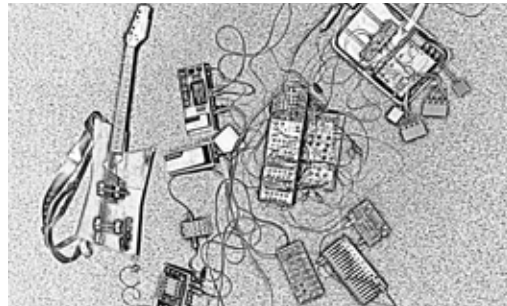
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POSTDIGITAL LUTHERIE

Olli-Pekka Lankinen (FI), Boris Shershenkov (RU/AT)

Technobiocommunication protocols

Sound performance



© Olli-Pekka Lankinen

Pushing to the extreme the latest tendencies in the musical industry, performers use neo-cybernetic principles to design their own electro-acoustic, analog and (post)digital sound devices capable of making musical decisions. Forming the techno-biological ensemble, human and non-human performers can communicate with each other using different signal systems such as visual signs, gestures, CVs and digital protocols to explore new forms of behavior-driven interaction in a common acoustic field.

Boris Shershenkov (RU/AT)

Luminiferous

Performative spatial sound installation



© Boris Shershenkov

New technologies such as digital screens, LED devices and power-saving lamps are filling our environments with technogenic light streams containing phonoptic information hidden from the human eye, but located within the temporal limits of our auditory perception. Using a light-sensitive spatialization system in the form of the dodecahedron—the fifth Platonic solid, representing the element of aether—the audience can performatively explore the precomposed light-soundscape.

Ozan Tezvaran (TR), Gundega Graudina (LV)

OGDL

Feedback Club



© Ozan Tezvaran

OGDL is a duo of Ozan Tezvaran and Gundega Graudina. They met during their Postdigital Lutherie studies at the University of Arts Linz. OGDL merges noise, ambient and deconstructed club in experimental music performances, often held in unusual locations ranging from zoos to churches. Their concerts are a mixture of lullabies, screams, sad pop tunes with an oomph, tape loops, field recordings, feedback and layered string textures, to name a few.

MEDIA DESIGN

Vera Dittenberger (AT), Rosa Schwarz (AT), Mika Brandhofer (AT), Iris Reisenberger (AT)

CrochetGPT



© Vera Dittenberger

So far, only humans possess the ability of complex crocheting. No machine can produce something comparable. But what about Artificial Intelligence? How justified is our fear that AI could replace humans in all their abilities? We explored the creative symbiosis of human craftsmanship and Artificial Intelligence by immersing ourselves in the crochet instructions of ChatGPT. The results turn out to be quirky creations, which often have little to do with the prompt.

TIME-BASED AND INTERACTIVE MEDIA ARTS

Lisa Studener (AT), Pat Göckert (AT)

An der Kassa musst' ich an dich denken



© Lisa Studener

What is falling in love, and how does one experience it? The documentary thoroughly explores the multifaceted theme of falling in love, shedding light on various realities through the perspectives of its protagonists.

Alejandro Villaseñor (MX)

Rivity



© Alejandro Villaseñor

This project showcases a live collaboration between a drummer and an electronic-based musician, improvising until they unite in harmony. It is accompanied by visuals that synchronize with the evolving performance, creating a cohesive and immersive experience.

Cécile Bucher (CH)

Entre deux mots

Entre deux mots is an audiovisual and immersive dance piece developed for the deep space environment. Fragmented words and past conversations echo in the visualization in an abstract manner while performers navigate between the seen and the unseen, the spoken and the unspoken. The soundscapes have been created by the media and sound artist Carlotta Borchering (DE). Special thanks to Joachim Smetschka, Manning Dong and Geon Kim.

Sidse Rebien (DK)

HUMAN BREEDER: PROTOTYPE: 01

Cyborg Feminism and the Future of Technology

Human Breeder: Prototype: 01 is a sculpture made of metal, paper and bio-foil. Recordings of breath are implemented inside a sound system to give the artefact mechanical lungs and the association of life, which also grows within. The cyborg is a metaphorical figure that blurs the boundaries between human and machine, nature and culture, and it challenges fixed categories of identity. The artefact is built on theory about cyborgs and feminist technology studies from female thinkers.



Entre deux mots © Cécile Bucher



HUMAN BREEDER: PROTOTYPE: 01 © Sidse Rebien

Isabel Schulz (AT)

everything beautiful and everything dead

This animated short aims to experiment with an abstract way of storytelling—reminiscent of poetry—in animation. In the story we are transported to a foreign, drab world made up only of greyscale, where its inhabitants strive for a way to turn their world colorful. They experience their biggest breakthrough—colorizing organic matter—but absorbed by excitement, they never stop to think about the consequences this endeavor might have on their world and themselves.

Hannes Buchwieser (DE)

NOUMENON

NOUMENON shows microscopies from the Bio Lab of the Ars Electronica Center, featuring microorganisms like tardigrades and amoebas, revealing a hidden world alongside images from the NASA archive. It showcases environmentally harmful "glitter" which creates striking optical effects, while nothing living remains in the sample after it is added to the water. The effects of our actions are as incomprehensible as the universe's vastness. *NOUMENON* questions our perceived meanings but offers no answers.



everything beautiful and everything dead © Isabel Schulz



NOUMENON © Hannes Buchwieser



ILLUMINATED NOTHING © Emilia Vogt



Im Lot © Noah Berger

Emilia Vogt (DE)

ILLUMINATED NOTHING Under Influence in 24 Hours

A public 24-hour act of doing nothing: non-action is contrasted with external influences, reversing the roles within the context of art. In *ILLUMINATED NOTHING*, performer Emilia Vogt spends 24 hours in a publicly visible room doing nothing except basic life-sustaining needs like sitting, standing, drinking, using the toilet, etc. Seven lights in the room can be controlled via an interactive website, called illuminatednothing.de. The performance is viewable on-site and via live stream worldwide.

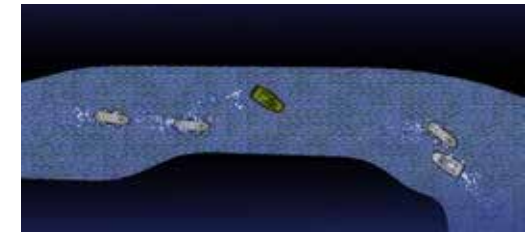
Noah Berger (DE), Josef Hamberger (DE),

Emilia Vogt (DE)

Im Lot

Performance

Im Lot was originally an installation by Josef Hamberger, featuring hundreds of sheets marked by Rosa Still, an Alzheimer's patient. Rosa, now deceased, wrote nearly all her thoughts, from basic needs like "I'm hungry" to expressions of her fear of death. In the performance, collaborating artist Emilia Vogt will scan these sheets to preserve them. The scans will be displayed visually and made audible throughout the performance.



Sojakas Boating (Arcade version) © Jakob Florian Luckeneder



a² © Pal Klex

Jakob Florian Luckeneder (AT)

Sojakas Boating (Arcade version)

A post-human boat delivery/taxi game

Sojakas Boating is another playable excerpt from the *Sojakas-Universe*: A dystopian sci-fi universe with critical undertones. The game takes the players to an absurdist cyberpunk version of Venice and places them in the roles of delivery/taxi drivers, competing for the high score and avoiding water traffic. Accidents occur while being sworn at by the non-playable characters in many languages and dialects. The contents of the insults are put in context and translated (to EN/DE).

Pal Klex (AT)

a²

The video installation *a²* addresses physical and psychological expectations placed on people socialized as men. The artist assumes the role of a man under pressure, symbolized by a self-optimization coach. This tension leads to an endless optimization loop, a constant interplay between food, sport and the pressure to live up to the image of the toxic-masculine man.

Camera: Pat Göckert / Actor: Ivo Cerwenka



Like a hippie on an island © Friederike Weber



Paragon © Carlotta Borcharding

Friederike Weber (DE)

Like a hippie on an island

Like a Hippie on an Island by Friederike Weber explores the concept of freedom by asking various people abstract questions. Questions like “What color is freedom?” invite the interviewees to reflect on the topic. The documentary features 11 people of different ages, backgrounds and beliefs, allowing them to share their personal views on what freedom means to them. The film tackles a complex, individual and political subject with an interesting and original approach.

Carlotta Borcharding (DE), Semi Lim (KR), Veronika Maidukova (UA)

Paragon

Performance Film, Deep Space

Paragon tells a story of two characters, their dynamic with each other and their relationship to light and darkness. The performance is based on an interactive program responding to movement within a sensory tracking system. The projected images, the geometric shapes, define the radius of action and interaction of the performers. The choreography tells the story of two avatars who become their own characters and finally interact with each other and with their source of light.



Sachen die keinen Grund haben/things for no reason © Ronja Hoffert



Bare Souls © Elena Jäger

Ronja Hoffert (AT)

Sachen die keinen Grund haben

Things for no reason

In the rarest events, it is satisfying to accept not knowing things, although it seems like the easiest and most satisfying thing to do, because all you must do, is nothing. Or not?

Without knowing what it is, the whole theme about nothing caught my interest (intensively). So, I started to do nothing and let myself film while I was doing nothing. By the time I thought I knew how to do nothing, I started to observe and document what exactly was happening when nothing happened.

Elena Jäger (DE)

Bare Souls

The work arose from the problem of having unrealistically high expectations of myself when it came to the perfection of a work of art. To compensate, I chose techniques where I could not influence the outcome as much as I would have liked (pottery, drawing and for the first time 3D-modeling and -painting). The figures are expressions of feelings and thoughts—free of judgment. They can be seen as an attempt to move away from the pressure of perfections.

Sharon Nesyt (DE)

What Awaits Out There?

Acryl on Canvas, Accompanying Sound

What Awaits Out There? invites viewers on a journey into the unknown. The work consists of a painting and an accompanying sound installation. The painting explores the beauty of a future world, still open and uncertain to us humans. The sound represents the here and now—the concrete human experiences in the moment. Capturing everyday dialogs, it encourages viewers to reflect on their own perception. Together, both elements combine the indefinite future and the specific “here and now.”

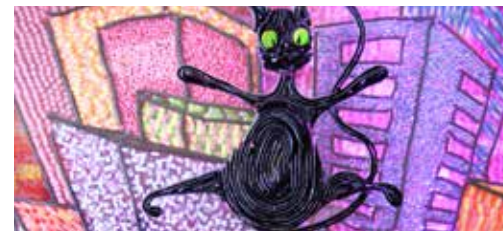
Maryam Ibrahim (DE)

Catfeet

Gummy bears are artificial objects designed in vivid colors, with bright smells to generate an assumption of ongoing fun. In *Catfeet*, the famous candy is taken out of its consumption context and instead transformed into a material that provides a variety of patterns. Furthermore, it has a complex relationship with light where it reflects, reacts transparently or even changes color. The main character, a naive, mysterious cat, faces the struggle of aimlessly falling into the unknown.



What Awaits Out There? © Sharon Nesyt



Catfeet © Maryam Ibrahim

Ariathney Coyne (GR/US), Hazem Wakaf (SY)

Lost Iterations

Lost Iterations is a visual experience, approaching abstraction and narration. A random reconfiguration of light, movement, cameras and humans leads to organic, hypnotic and abstract visuals. The artists playfully experiment with complementary concepts: movement and stillness, human and machine, and their protagonist—light and its shadow. Through thorough curation, they create an autonomous being, free to run and dream, as a story of stillness, life, death and rebirth glitches through.

Teodor Dumitrache (RO)

Persona

Inner Exploration Machine

Persona is an experimental, interactive, audio-visual exploration of how we constantly change our inner selves. With a control surface, it is possible to change the two halves of the virtual psyche to assemble a new persona. In this implementation, each variant of the psyche has an accompanying sound; sounds combine to convey feelings that cannot be described with words. *Persona* invites you to reflect on your own inner self.



Lost Iterations © Ariathney Coyne



Persona © Teodor Dumitrache



SHE MAKES ME FEEL © Stella Weiß



mushroom universe © Elena Katharina Richtsfeld



The Mark of Them © Hazem Wakaf



tell me everything about love © Julian Holzer

Stella Weiß (DE)
SHE MAKES ME FEEL
 A Multisensory Installation About Experiencing Sapphic Love

This work highlights the emotions of two women discovering their true sexualities together for the first time. Three different surfaces (Plaster Pussy, Soft Spheres, The Layers In Between) were made by the artist to serve as a projection backdrop. The video consists of several heavily altered clips from her personal archive. The visuals are complemented by a self-written poem for her favorite person, voiced by an AI, together with electronic music by Levianth & Acejax: Real Love [NCS Release].

Hazem Wakaf (SY/BR), Mahsa Jalili (IR)
The Mark of Them

The Mark of Them is a poetic digital installation navigating the depths of alienation and the fractured identity of being an outsider; too Eastern for the West, too Western for the East, non-belonging and constantly defeated.

Elena Katharina Richtsfeld (AT), Hannes Buchwieser (DE)
mushroom universe

The project *mushroom universe* creatively displays mushrooms to inspire curiosity and appreciation for fungi and science. It combines minimalist art with scientific concepts, featuring living mycelium in terrariums, videos, photos, mushroom paper, dried mushrooms and spore prints. Key collaborator Hannes Buchwieser contributes with detailed microscopies, enhancing the project's artistic and scientific depth.

Julian Holzer (IT)
tell me everything about love

The short film *tell me everything about love* is a personal artistic exploration aimed at describing and depicting love. Inspired by the artist's own curiosity about love, having never experienced it firsthand, the movie explores this emotion through interviews and recordings. The recordings feature dancers and a couple who portray symbols of love in a performative manner.

Daniel Walter (AT), Sofiiia Zeifert (RU)
Linear Dialogue

Linear Dialogue is an improvisational piece between a guitar player and a dancer who are both trying to read the other person's movements and actions to sync with each other. The performance is visualized with a reactive patch made in Max Msp which functions as a backdrop projected on a screen. This is the second iteration of the project, which was further developed by the two creators, Daniel Hans Walter and Sofiiia Zeifert.

Milena Stępień (PL)
Obsessive Realities
 let yourself feel a little paranoia

what if you live out the darkest thoughts / re-creating the unimaginable outcome / diving into and / exploring paranoia / obsessive realities / the worst that could happen / that one scene, that could not have been real



Linear Dialogue © Daniel Walter



Obsessive realities © Milena Stępień

Janik Valler (DE)
echoes of ferro

An arm raises dust, shaping it into a drip-like form before allowing it to settle back into its original state. It is a cyclic procedure of chance, existing somewhere between control and chaos. The mechanism remains constant, yet each outcome is distinct and unique.

Joachim Smetschka (AT), Holunder Manuel Heiß (AT)
LINIE 101

An interactive light installation consisting of 101 light bars, a touchscreen and tracking sensors: for the first time ever, it seems to have become possible to move through space at the speed of light without huge danger.



echoes of ferro © Janik Valler



LINIE 101 © Joachim Smetschka

Lynn Mayya (SY), Florian Klammer (AT)

Universal Story

Interactive Dance Performance

Universal Story is a collaboration between Time-based and Interactive Media Arts, University of Arts Linz and the Anton Bruckner Private University. It follows a hero and their journey in three parts: departure, initiation and return.

Maxemilian van der Meer (DE)

Dream States

stuck at the station

Dream States captures the unique warping of reality and perception in dreams, which only becomes apparent when reflecting on them after waking up. Recurring dreams of being stuck at a train station / on a train going nowhere are reinterpreted as 3D-scanned environments. They are projected into space from a moving model train, controllable by visitors.



Universal Story
© Lynn Mayya

Dream States
© Maxemilian van der Meer

Klaus—Special Episode #2
© Daniel Walter

Murmur
© Lynn Mayya

Daniel Walter (AT)

Klaus—Special Episode #2

Klaus is a man of European origin who emigrated to America and attempts to showcase his life from his small apartment. He aims to share his experiences on his own YouTube channel with the world, hoping to build a small community with which he can interact. *Klaus—Special Episode #2* is an installation specifically designed and created for the exhibition venue, featuring a looped episode.

Lynn Mayya (SY)

Murmur

Sound Installation

Murmur is a sound installation that creates a sensory trip within space and body; it harnesses the qualities of white noise. The aim is to create a soothing hypnotic space by simulating the wind's movement and the changes the thin surfaces dance to.

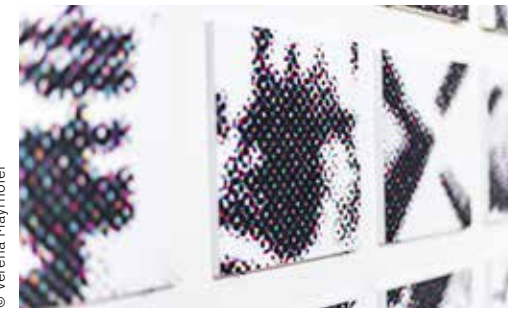
TIME-BASED MEDIA

Verena Mayrhofer (AT)

Eigengrau

Inherently Gray

© Verena Mayrhofer



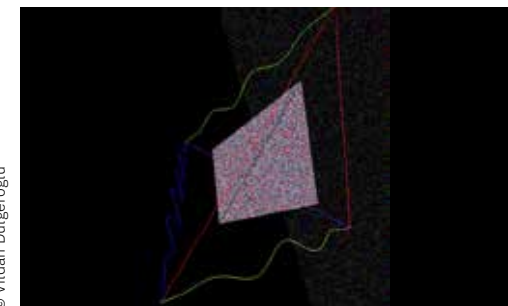
Eigengrau is described in German, as well as in English, as that color which one perceives in complete darkness. Since a perception of black is only possible with simultaneous bright contrast, black exists for humans in the external, but not in the internal. The abstract forms are dissolved by a coarse color grid and are only perceived in their color and form when viewed from a greater distance to the images.

Vildan Dülgeroglu (TR), Güney Tombak (TR)

HyperHuman

The Phase Space of Human Experience

© Vildan Dülgeroglu



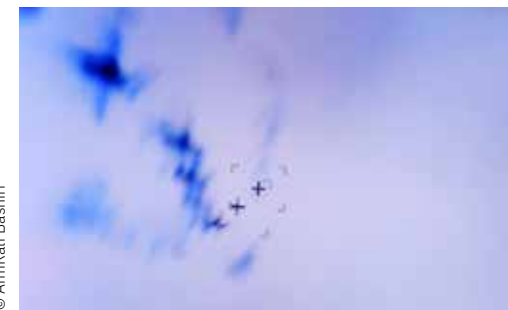
A phase space is a diagram that defines all possibilities within a system. *HyperHuman*, composed of a phase space diagram, exists through the dark possibilities of our personalities, drawing from our losses within the systems we create and inhabit. By digitalizing extreme individuality, *HyperHuman* survives, mirroring our undefined forms through phase space visualization. This exhibition reflects our complex identities, capturing the essence and enigmatic facets of human nature.

AmiRali Bashiri (IR/AT), Sashe Urdovski (MK/AT)

Disrupted Reality

Output as Input as Output

© AmiRali Bashiri



Disrupted Reality is a collaborative live video-audio performance/installation project where equipment serves as the medium rather than just tools. Input devices are being fed with the same material they are producing. Therefore, there is a considerable time delay in this re-feeding process. The linear flow of events is being disrupted. New narratives of reality form as it is presented.

Lesia Kvitka (UA), Cameron J Laing (GB/LU), Miriam Strasser (AT), Alina Tofan (RO), Alberto Monreal (ES), Lucía Callén (ES), Alec Ilyine (BE), Salomé Méndez (CO), Fernando Fernández Sánchez (ES)

Biophony: Dancing Nature

© Lesia Kvitka



The *Biophony* art project, from interdisciplinary research at the MolinoLab Residency in May 2024, showcases the synergy of technology, science, art and human interactions. This collaboration illustrates how humans can create with nature using technology. Nine international artists integrated SymbioWare technology with plant life, recording plant impulses and converting them to MIDI for unique audio-visual art pieces. The results include documentary and multisensory audio-visual artworks.

Simon Hehl (DE)

Dirty Data

© Simon Hehl



Whenever we think about data and data-processing systems, we mostly think of something clean. So, what do we mean when we use the term “dirty data”? What does “dirty” signify? What makes our data dirty? And how do we deal with it? *Dirty Data* is a research-based artwork about the different narratives and perspectives regarding the term “dirty data.” It includes digital and analog elements and embeds the discussion in a pop-cultural environment.

Stephanie Bergwinkl (DE), Caroline Alena Bergwinkl (DE)

Blütenstaubzimmer

Pollen Room

© Stephanie Bergwinkl



Two artifacts from the family archive—our grandma's poetry album from 1943 and our granddad's clothing as a Bavarian police officer after 1945—are featured. Artifacts from our father's side act as pollen, as the male part that contributes to inheritance. By re-enactment, we appropriate and interpret the artifacts into the present. We invite visitors to reflect on their reappraisal of the past by telling us about it through a piece of paper they place in the doll's house—the outline of our grandparents' house.

Isabel Wöckl (AT), Ellinor Brandenburg (DE)

sehen, gesehen werden, sich selbst sehen und drunter, drüber, gegenüberstehen

see, be seen, see oneself and stand under, over, opposite

© Isabel Wöckl



A figure crafted from multiplied and distorted fragments of various people and body parts: not an individual but representing a group that is shaped, altered and defined by its environment. Visitors are invited to wander through the space and take a closer look at the installation, placing not only their gaze but their entire body in relation to the figure on display, reflecting their position and perception within this web of emotional and physical identities and influences.

Sanaz Rafii (IR)

YOU WERE ALWAYS THERE

© Sanaz Rafii

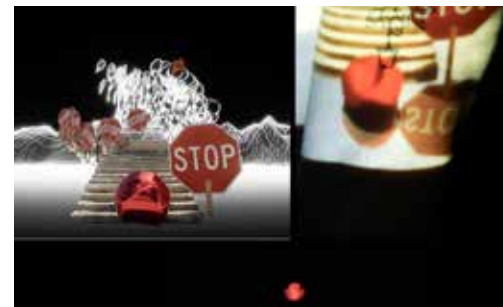


This project revisits significant pages from Iran's history with the focus on the presence of women in Iran and the struggle of the people for freedom. I captured these photos during the human chain event amid the presidential election period in 2009. This period marked a crucial turning point since the revolution in Iran. We lost hope of improvement within the current regime. We continue on the path to freedom, with sorrow in our hearts, yet still moving forward.

Onur Sekmen (CY/TR)

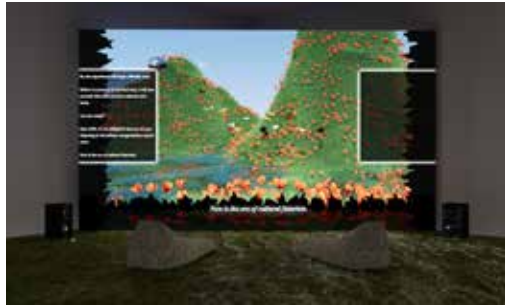
Gomboc in Space

© Onur Sekmen



Gomboc in Space is created through a callandrepsion technique formed between Gökçe Göbüt, Neslihan Yakut and Onur Sekmen. Visuals from Göbüt's art game Quasicritical and Yakut's text *The Space* are brought together by Sekmen in a media form that explores the relation between body and space using the form Gomboc as the body in an extraordinary space. The mobility of this body within the space and the structural stance against it form the main line of questioning.

Yinglin Zhou (CN)
Cultural Reorganization



Cultural Reorganization is a textual-video piece based on her research on cultural issues. Described as a fictional narrative, it falls under her concept of cultural futurism. The narrative envisions an experiment of Earth's civilization reorganization after human extinction, exploring cultural relativism, inclusivity, diversity and addressing issues like cultural hegemony and homogenization. Zhou proposes unique ideas on cultural evolution, its methods and cultural empowerment.

Jieyuan Huang (CN)
The Garden of Earthly Delights—Bird, Human and Geology 1&2



Inspired by Bosch's work, the first video uses generative adversarial networks and 3D graphics to create a digital Garden of Eden. Birds, humans and geology are rendered as virtual forms, symbolizing technological algorithms. Birds warn of risks, coding humans represent algorithms, and geology signifies the vast power consumption of AI and blockchain. The second video loops algorithm interfaces, global electricity maps and Earth's plates, echoing the first video's black box theme.

GRAPHIC-DESIGN AND PHOTOGRAPHY

Nadezhda Ivanova (RU)
Confusion

The project aims to address loneliness, digital insecurity and dependency on social media. Through three AR animations, everyday life scenarios are depicted, showing how people interact with the digital environment, which, unfortunately, is not always safe and often brings feelings of envy or loneliness. The message is simple: the internet is not evil—we should not fear it—but we must not blindly trust everything we see, nor rely entirely on its capabilities.



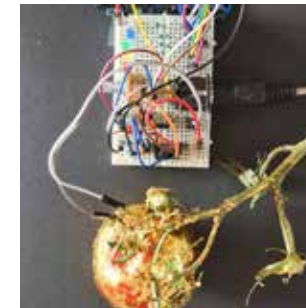
© Nadezhda Ivanova

VISUAL COMMUNICATION

Rehab Hasanen (EG)
The beauty of decomposition

7 days of more-than-human impressions

It all started when I began observing the bio trash-can and my flatmates' consumption habits. I realized they would buy many vegetables and fruits, let them rot without consuming them, or throw them away owing to small defects. This led me to think of ways to highlight the meaningful value of fair consumption. Moreover, I started studying bio-product surfaces in the kitchen more closely, leading to an interesting discovery about the beautiful visuals and sounds created during decomposition stages.



© Rehab Hasanen

Anika Haider (AT), Jakob Hauser (AT)
Regimes of Growth

Given beneficial environmental conditions, algae populations double their numbers every few hours, pushing ecosystems past tipping points. Algae goes from a crucial energy base to a destructive force. Just like algae blooms, the continuous growth regime of our economy wrecks havoc on the planet's ecosystems. *Regimes of Growth* is a model of capital flows in the economic system, where the distribution of nutrients into containers induces destructive exponential growth in algae cultures.



© Ronja Addams-Moring

MEDIA CULTURE AND ART THEORIES

Andrea Hörndler (AT)
Dreaming in bubbles

Sometimes we build dream worlds; we float in bubbles. We leave the world behind us. We dive into new worlds. Technological progress is often a springboard that catapults us into fictional worlds and allows us to jump from bubble to bubble, to stay in some for longer, in others not so long. Sometimes, however, we feel overwhelmed by time and technology and the bubbles serve as safe spaces. Here, too, we dream ourselves into other worlds, free from technology, surrounded by dreams.



© Andrea Hörndler

Inga Morawski (DE)
2022

2022 deals with the year 2022 from the artist's perspective and places it in relation to world events. For a year, she took a photo every day. The 365 exhibited personal photographs are accompanied by 365 screenshots that capture politics and world events during the same time: missing out on spring during a Covid wave; flying to Italy during climate protests; falling in love while Russia invades Ukraine; starting at screens, hands tied. How is the artist's life connected to the world?



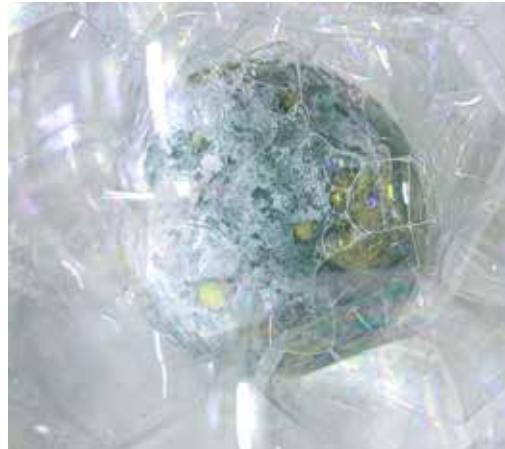
© Inga Morawski

SCULPTURAL CONCEPTIONS / CERAMICS

Younggon Kim (KR)

Gnop gnop man

It is an interactive artwork with a shell-shaped base and contains abstract sculptures of eyeballs and a penis. Viewers use an air pump to create or burst a bubble man, engaging individually or in team games. The piece modifies Botticelli's *The Birth of Venus* and explores themes of masculinity, duality in patriarchal societies and true masculinity. The bubbles represent weak, imaginary men, with the wind symbolizing the destruction of hatred and the human role in shaping emotions.



© Younggon Kim

Jieun Kim (KO)

Flow of Thought

This project, themed “waves of emotion,” immerses viewers in a whirlwind of feelings, highlighting emotions' fluidity like water. The artwork visualizes the complexities of emotions through water's movement, symbolizing their power and beauty. By combining visual and auditory elements, it captivates the senses, inviting viewers on an emotional journey. Exploring the diversity of emotions, the artwork offers a space for deep emotional responses and appreciation of water's beauty and power.



© Jieun Kim

Aban Salehi (IR), Gundega Graudina (LV),
Hooshyar Zaheryani (IR)

The GPS signal lost

The idea for this project came during my early days of migration when I left Iran. In a new place with no memories or sense of belonging, the most frequent sound I heard was the map guide helping me find my way. Often, I got lost in the city. To understand and emotionally connect with my surroundings, I started wandering, recording my voice and ambient sounds and creating a map that captured my emotions and the environment's sounds. I aimed to build artificial memories.



© Aban Salehi

FINE ARTS / CULTURAL STUDIES

Noel Fischer (DE)

silent dancefloor



© Noel Fischer

Where is the collective healing process? The more privileged ones need to look more beyond the spectacle. especially now that “the scene” is exposed to so much hype. It is not just the real-estate market that is gentrifying the dance floor. Gentrification also comes from within the club. We as a potential community must be aware of that. This all could be so much more caring.

FINE ARTS

Hanna Sheu (AT)

AI ANALOG—BREAKING THE CHINESE ROOM



© Hanna Sheu

The short film *AI ANALOG—BREAKING THE CHINESE ROOM* explores and questions Searle's thought experiment. The protagonist seeks answers from Alexa and ChatGPT but receives unsatisfactory responses. Turning to four fortune cookies, they reflect on the wisdom revealed: power, wisdom, vigilance and charitable deeds. The central question remains: Does AI have a soul? The film prompts contemplation about the nature of AI and human consciousness.

Armin Alian (IR)

Plastic Flowers



© Armin Alian

Plastic Flowers is an audio-visual installation about personal narrative, cultural symbolism and societal dynamics through the lens of an Iranian artist in Austria. Reflecting the rich pictorial and literary history of flowers in Iranian culture, this experimental biography delves into the shifting cultural meanings in both the artist's journey and the broader societal context. The project displays scenes of family gatherings and parties in Iran as well as people's everyday life in Austria.

Luzia Stempfer (AT)
Malassezia

DIY synth noise

Malassezia is music for introverts, who would have preferred to stay at home with the houseplants. The live performance uses a setup consisting of small, self-soldered synthesizers and a vintage, out-of-tune zither, instead of new, expensive equipment. The noises drone through ears and bodies, letting the surrounding floral installation vibrate.

Domen Hitrec (SL)
Emergence Layout

The artwork *Emergence Layout* integrates traditional stained-glass motifs and Islamic patterns with contemporary digital technology and intricate fractal mathematics. Crafted by hand, this unique light-box collage painting invites viewers to explore the conceptual theme of embryogenesis, focusing on the process of cell division during blastulation.



Malassezia
 © Luzia Stempfer

Emergence Layout
 © Domen Hitrec

Flachspüler
 © Samuel Haas

un:alive:obduction
 © Catrin Manoli

Samuel Haas (AT)
Flachspüler

An AI-generated image shows parts of a toilet and its glitchy connection to the sewer system. The toilet is an object we are all familiar with and an interface to the canal system that forwards our excretory products. This happens in repressed space. AI is also an interface, but in the vastness of the web. With the help of aesthetically oriented AI, an image is digitally formed into an analog toilet. Sculptures then highlight the inconsistencies of this attempt from the repressed space.

Catrin Manoli (AT)
un:alive:obduction

A voyeuristic stare at a lifeless animal body being autopsied: a sound is created by the contact between the flesh and the guided scalpel blade. Keeping non-human animals godless is an idea of power that human animals can have over anything that can be suppressed. Melodies and scenes create a horror show of confrontation that questions speciesism and our transience as human animals.

Sheida Ramhormozihosseinzadeh (IR)
سیمرغ
Simurgh: Wings of Existence

Simurgh: Wings of Existence is an interactive kinetic sculpture inspired by Object-Oriented Ontology and Persian mythology. Reflecting on the interwoven nature of existence, the sculpture embodies Simurgh's wisdom and unity. By holding hands before a mirror, viewers activate the wings, merging their consciousness with the sculpture. This interaction mirrors Attar's poem "The Conference of the Birds," highlighting the interconnectedness of humanity and the realization of collective essence.

© Sheida Ramhormozihosseinzadeh



DESIGN AND TECHNOLOGY

Irene Posch (AT)
Crafting Futures Lab

The *Crafting Futures Lab* explores the future of crafts, crafts of the future and the design of futures. It was initiated to provide a place for research and design practice and education that inquire into the social, technological and aesthetic interactions of crafts and digital technologies. It serves as the central platform for associated teaching, research and collaborations. We are opening the lab to the public for the fourth time as part of the Ars Electronica Festival, focusing this time on the diverse approaches and formats that have been created in the lab over the past few years: design as multiplier, design and the creation of design knowledge in interaction with materials and design in community with other living beings. We showcase a collection of toolkits for novel approaches to technology and design teaching and release the open-source archive where they are now available.

Lera Entmayr (AT)
All Pigeons go to Heaven
Wohin denn sonst / Where else?

My activism and art desires to highlight the misery of city pigeons. Not only their role as residents of our urban spaces, but also how governments apply unethical and unproductive measures to control their population. In my case, I also critique providers of spikes, nets and other technologies meant to repel them, by appropriating these in my practice. I directly observe the consequences of these measures in my drawings, prints and objects, which are part of my installation *All Pigeons go to Heaven*.

© Lera Entmayr



The presentation of artifacts provides an insight into current projects. Work-in-progress presentations provide an outlook on ongoing and future inquiries. In workshop and talk formats, we invite visitors to become part of the lab.

With contributions from: Laura Devendorf, Monja Hirscher, Michael Kramer, Katharina Mayr, Elizabeth Meiklejohn, Julia Moser, Valerie Moschner, Irene Posch, Lilo Viehweg
www.craftingfutures.net



© Irene Posch

FASHION AND TECHNOLOGY

Sookie-Celeste Simair (AT) Trans Voices

Trans Voices aims to raise awareness of the diversity of trans- and gender-non-conforming people, who often hold back their voices for fear of discrimination. In interviews with three trans people, emotions are analyzed by AI and used to change the surface of a 3D object. The object alternates between organic shapes and sharp, crystalline structures. The animation reflects the emotions of the interviews; selected images are used for cyanotypes; and jacquard fabrics are implemented to create a clothing collection.



© Sookie-Celeste Simair

Hannah Pekarz (AT) cooling algae

Hannah Pekarz explores the possibilities of sodium alginate used in clothing by creating a biomaterial that has a cooling effect on the body. In her bachelor collection, *cooling algae*, she works against the highly technical production and creates her own sustainable biomaterial out of sodium alginate, a powder made of dried algae. By mixing the alginate with water and glycerin, yarns and surfaces can be produced.



© Hannah Pekarz

Gerald Brandstätter (AT) WHY ARE WE SO RUDE?

We are producing, consuming and disposing at an ever-increasing rate. The *WHY ARE WE SO RUDE?* collection addresses this concern, seeking alternative resource management strategies. Inspired by a possible post-plastic world, vibrant garments tell the story of a different society. Wasteful production processes are replaced by a closed-loop material cycle based on cellulose fibers. Natural binders such as alginate and methylcellulose enable transformation into colorful, rich-textured textiles.



© Gerald Brandstätter

Lia Larrea (EC/US) PULMONAUT

An Exploration of Art, Science and Breathing Technology for Fashion Design



© Lia Larrea

Pulmonaut explores the intersection between technology and design through the science of breathing and the art of glassblowing in a sculptural fashion context. As astronauts explore the depths of space, pulmonauts explore the depths of their breath. Hand-crafted, wearable glass instruments aim to visualize breathing techniques as a shaping technology and universal language while co-creating with Linz-based glassblower, Günther Mausz, to amplify craftsmanship as an art of our future.

TEXTILE ART AND DESIGN

Woonji IM (KR) Sodium Alginate Yarn Samples Project 2023



© Woonji IM

This project explores the use of yarn made from seaweed-derived sodium alginate as a bioplastic. Over 100 samples of 10cm segments of yarn are dyed using spices, tea powders, cosmetics, markers and paints to highlight recyclability. This project serves as a reference for future artistic work, especially in sculpture using crochet and knitting. It demonstrates eco-friendly practices in response to the fashion industry's environmental impact.

Aleksandar Murkovic (HR) pisskino



© Aleksandar Murkovic

This project is about taboos, fetishes and fun. By focusing aesthetic value around objects, I hope to construct a kind of unreal beauty, combining surreal elements in digital space. I created this short using Blender 3D software. Bathrooms are intimate and safe spaces traditionally hidden in Western society. This aspect enhances the film's playful depiction of and fascination with urine, creating an absurd graphic interpretation of bodily fluids and ceramic objects.

INDUSTRIAL DESIGN

Felix Grabmaier (AT), Bernhard Grabner (AT), Dominik Inreiter (AT), Alexios Klits (DE), Jakob Mair (AT), Leonhard Pauli (AT), Florian Steidl (AT), Alexander Werth (DE), Liam Wohlwend (LI)

UN.DISCIPLINED

A critical design laboratory for desirable future visions



© Florian Steidl

Our world is created through visions. What do images of a positive future look like? Can speculative design encourage and inspire us to imagine a different future technology? In a combined course in the industrial design department, we take a closer look at design as speculative practice to challenge assumptions and paradigms in the creative process. Collaborative narratives shine a light into unknown future settings and present “what if...?” scenarios with a twist.

Supervision: Elke Bachlmair (AT), Oliver Herwig (DE), Barbara von Rechbach (AT)

Verena Langthaler (AT), Marco Mrcela (AT), Maximilian Kanzler (AT)

Nexus

Audiovisual Performance on the Complexity and Interconnectedness of our World



Nexus explores the subtle and often overlooked connections between the opposites and contradictions that shape our world. The combination of music and audio-reactive visuals creates an immersive experience that invites viewers to navigate the spaces between digital and analog, dialog and discourse, sound and silence, and light and darkness. The audio-visual project strives to connect extremes, bridge differences and discover the beauty in the connections between the poles.

Lucas Rupp (DE), Hans Trinkaus (DE)

Smell Check

Smart device for detecting hypo- or anosmia



© Lucas Rupp

Smell Check determines whether a person has completely or partially lost their sense of smell. For this purpose, the device combines electroencephalography (EEG/brainwave measurement) with a scent application. Since the loss or reduction of the sense of smell is considered as an early warning symptom for neurodegenerative diseases such as Parkinson's or Alzheimer's. These could be detected earlier and therapies could be initiated in time. Also, the loss of smell can indicate certain viral diseases.

ARCHITECTURE

Lisa Ackerl (AT), Merlin Grossmann (AT)

BAUBONANZA beta

AI-supported tools enable rapid production of market-friendly illustrations—also in the architecture and construction industry. *BAUBONANZA beta* generates architectural renderings from hand-drawn sketches. The juxtaposition of human-made input with AI-generated results encourages reflection on one's own perception of architecture. It also questions the reduction of architectural productions to commercially-optimized representations.



© Lisa Ackerl

Daniel Bracher (AT)

Wirtschaftsräume

Business Premises

A spatial view of the economy. A cinematic essay about places of production and services in forestry and heavy industry, tourism and transport and the underlying infrastructures that cross our everyday spatial life and yet remain mostly hidden.



© Daniel Bracher

Daniel Schöngruber (AT)

postCITYlife

Bildung ins Zentrum

postCITYlife is a tongue-in-cheek interpretation of current education and construction policy processes in Linz. The short film, created with the help of generative AI systems, uses surreal sequences to tell the fictional story of the founding of the postUNI on the site of the former postal distribution center at Linz's main train station.



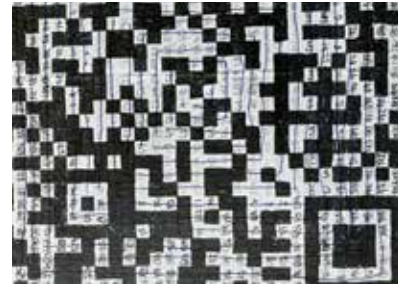
© Daniel Schöngruber

SPACE AND DESIGN STRATEGIES

Robin Renner (AT)

remain unexplained

The mixed-media installation pays tribute to our deepest feelings that we fail to express in words; occurrences that our minds cannot grasp; to people prosecuted for having no acceptable explanation; to us letting go of written identities. “In a world, a society, a mind that fully intends to put absolutely everything into words, it is an act of self-empowerment to let my momentary environment explain me.”—Robin Renner



© Robin Renner

Lorenzo Iannantuoni (IT)

rrRrotoVeniceEe

From the observation of the site-specific choreography of Venice's low-tech landscape

A design intervention was conducted based on empirical observations of public spaces in Venice. Immersing himself in the local reality, Lorenzo analyzed the low-tech micro-systems in Venice that impact daily life. The project reimagined typically Venetian low-tech objects, such as carts, to reverse-engineer their functionality, proposing a rotational molding machine powered by their movement. This initiative aims to investigate the relationship between low-tech and public spaces.



© Lorenzo Iannantuoni

PhD-PROGRAM

Ellie Kyungran Heo (KR/GB)

THE GLORIOUS LAMENT



© Ellie Kyungran Heo

THE GLORIOUS LAMENT encounters the recumbent body of a fallen tree, which unfolds a stage for new connections and relationships and, thus, new life. It explores the process and ways we envision the ecological cycle of life and death, joy and grief in it, and beyond. In doing so, *THE GLORIOUS LAMENT* celebrates the life of the dead tree and expands our perception of belonging to the more-than-human being.

Jung In Lee (KR/AT), Kevin Blackistone (US/AT)

GOYO

Dance and Interactive Visuals



© Jean Claude Grieco

The choreography aims to express the concept of “flow” through physical movement, accompanied by interactive visual effects. It depicts the passage of time, with movement expanding and unfolding sequentially. Once breathing initiates, the body expands dynamically, resembling an infinite form within the fluidity of motion and floating visuals. This choreography explores movement within its structure, integrating visual effects that connect space and senses.

Maria Esperanza Sasaki Otani (PE)

BEEHIVE

Interactive installation for playgrounds



© Nomi Sasaki

BEEHIVE explores how the big data sector, particularly YouTube, threatens children's rights when they play. By integrating sensors into playground elements, *BEEHIVE* turns children's movements into digital actions—scrolling and video playback on the YouTube Kids app—transforming play into data. The artwork uses the metaphor of honey production to help children better understand data collection and processing. *BEEHIVE* is part of the DADA-TATA research project.

Jürgen Buchinger (AT)

Epizoons

Generative art as catalyst of multispecies relationships



© Jürgen Buchinger

Epizoons are fictional lifeforms made out of ceramics and electronic sensors that react to their environment with changing voices and sound. The project draws inspiration from Lynn Margulis' theory of evolution by symbiosis and Donna Haraway's concept of “becoming with” of all lifeforms. It explores ways of audiovisually relaying the invisible human-made changes in our environment and its effects on us and our non-human co-lifeforms, and fosters awareness of our not being alone on this planet.

HyungJun Park (KR/DE)
Somniloquy

© HyungJun Park



Somniloquy (Sleep Talking) is Park's ongoing PhD research on human and machine dreaming, exploring the unconscious aspects like dreams, unlike traditional AI research that focuses on consciousness. He aims to recreate his dreams using AI text and image recognition algorithms. Park has recorded 100 of his dreams and collected around 10,000 cell phone photos over the years. He conducts studies to match his past visual experiences with content from his dreams.

Erika Mondria (AT)
ARTEFACT

© Erika Mondria



Is it only an electromagnetic field or is it a glimpse into the sixth and seventh senses of humans, defined by the biochemist and researcher Rupert Sheldrake. You can explore the range and intensity of your own electromagnetic field by interacting with the *ARTEFACT* installation. Via your electrical impulses you can influence and design a unique digital color formation. Are humans able to influence the magnetic field of other beings as well?

Hanny Wijaya (ID), Qi Shi (CN), Sicheng Wang (CN)
Equality | Equity

In between gender roles and cultural perspective

© Hanny Wijaya, Qi Shi, Sicheng Wang



The artwork *Equality | Equity* represents the idea of "balance" through a kinetic sculpture. Using the combination of Indonesian and Chinese shadow puppets, the artwork will represent the genders and cultures, while showing the balance between traditional heritage and contemporary technology. The shadow play aspect and reflective materials will motivate the participatory element of this artwork and evoke reactions from the audiences toward the concept of gender equality and equity.

Carolyn M. Amann (AT), Marta Beauchamp (IT/UK), Amir Moradi-Bastani (AT/IR), Emanuel Gollob (AT), Martin Höfer (DE), Eva Kadlec (AT), Caroline Salfinger (AT), Samet Yalcin (TR)

Research Collective heterotopia

A relational space created by practice

The PhD Research Collective of the University of Arts Linz is a bottom-up structured doctoral program for artistic research. The Collective uses the exhibition space to explore exhibition-making as a collective research practice and a relational site for activities for the group to interface with

the public. The focus is on spinning a net of connections between individual and interdisciplinary art practices and on sharing the process and progress of collective work.



© Marta Beauchamp

Melissa Ryke (AU)

Last summer's yield

© Melissa Ryke

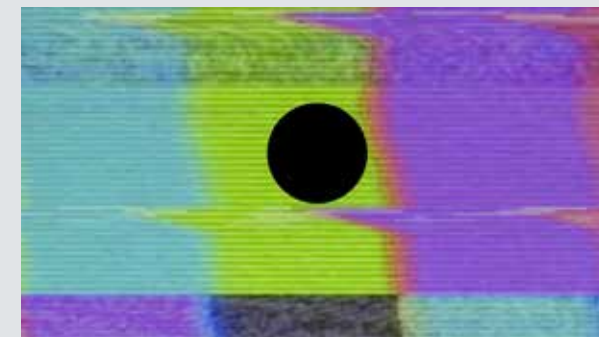


An array of clay slip sculptures that function as haptic instruments forming a multichannel "garden." Fossil-esque or embalmed, akin to sea shells, they conceal secrets within. The sound composition builds an ethereal non-linear narrative that stems from a two-year observation of an urban garden in Brussels. The holding of these brittle sculptures allows for the retention (witnessing) of fragile ecosystems that are typically too drawn-out to comprehend.

DORFTV—Radical Broadcast

In 2024, DORFTV will once again set up its studio in the former "Studio Schirmmacher," at the Infopoint of the University of Arts Linz at Hauptplatz, and invite guests for an afternoon/evening. Students, teachers from the University of Arts Linz and artists will present their projects in a live open house broadcast and talk about their social concerns and perspectives. This year's special hosts are "Art Discount 24," a television format for young, new art that brings art to the people in the style of home shopping programs. The presenters and performance artists Clemens and Pauli will present the works of art live on their show. A project by Malina Mertlitsch

and Jacqueline Böhm; moderation: Clemens Stöttinger and Paul Riedmann, in cooperation with DORFTV. Friday, September 6, 2024



© Elena K Richtsfield

SOUND CAMPUS

Sound Campus is a program presented in collaboration with Ars Electronica and University of Arts Linz, from September 3-5, 2024. This year's edition *Sound Campus—Sonic Fever* takes the shape of a carrier bag of sounds and diverse forms of musical expression. Looking to the power of sound as catalyst and shapeshifter, it proposes a polymorphous stage for fiction, imaginary spaces and anachronistic possibilities.

Fostering a culture of solidarity, we embrace sound works that explore alternative shared environments and shared auditory experiences. In this way, we focus on the potential of sound as a tool for challenging normative and dominant narratives, replacing them with ones of sharing, caring and responsibility. The curated program includes artistic and performative acts, selected through an open call, in cooperation with partner universities and students from the University of Arts Linz. A distinctive feature developed in the context of *Sound Campus—Sonic Fever* is

the audio walk developed by: AmiRali Bashiri (IR/AT), Çağla Gillis (TR/US), I-ID (IR/AT), Mehmet Çolak (TR/AT), Milena Stępień (PL), Sashe Urdovski (MK/AT).

Curatorial Team: Gabriela Gordillo, Andreea Vladut / Design: Viktoria Angyal / Social media communication: Angélica Sabina Piñeros / Sound Technician: Reinhard Reiszahn / Technical Support: Klimentina Milenova



FIFTITU%

entangled homes: A Queer-Feminist Art Festival

FIFTITU% is a networking center established in 1998 to promote and support women, trans, inter- and non-binary individuals in the arts and culture scene. It serves as a feminist forum, offering a platform for artistic projects, fostering regional cultures and supporting innovative digital projects. The intersectional art festival showcases queer-feminist perspectives through performances, music, art exhibition and talks from September 5 to 7, 2024, at Linz Main Square, WHA Gallery and Salon FIFTITU%. The exhibition *entangled homes* explores themes of home, identity and belonging intertwined with power dynamics. It blends analog and digital spaces, featuring diverse artworks including comics, GIFs and memes. Selected works will be displayed at WHA Gallery, University of Arts Linz.



Artwork: *lauter, laute Fotzen* by Rebekka Hochreiter
Artistic Realization: Rebekka Hochreiter and Leonie Reese
Production: FIFTITU%, © Violetta Wakolbinger

INTERFACE CULTURES

NOUS

20 years of mediating art, technology and society at Interface Cultures (IC)

The Interface Cultures department turns twenty this year! Now, it is a common trait of any anniversary, and particularly ones that conclude a decade, to make you reflect on the past, present and future. It is similar with an institution; anniversaries cause us to marvel at how many people have contributed to its evolution, and how many more will do so in times to come.

NOUS, the title of this year's IC exhibition at Ars Electronica, picks up on this spirit of introspection, asking what IC has been, what it is and what it will become. *NOUS*. French for "we". But what is this "we" exactly? Is it something that keeps changing? It would be tempting to say yes. After all, in the field of digital art, which reacts quickly to the advances in technology, nothing stays the same for long. Fancy an example? Since the official initiation of IC in 2004, the density of transistors on computer processors has increased from 1.4 to 144 million—per square millimeter! And let's not get us started on the whole AI thing. But there is more to it. We like to think that IC encompasses a definitive stance and creative approach, rooted in addressing the complexities of technology with artistic curiosity. *NOUS* does not stay within the confines of the department. It is open and collaborative, characterized by plurality

of thought and a willingness to learn new things. In this sense all the artworks in this IC exhibition share the same DNA with works in previous years, reflecting the continuity of the IC stance. At the same time, students' highly personal and individual artistic explorations, their manifold interests and innovation, are manifested and realized in an ever-shifting technological framework.

One layer deeper, *NOUS* also represents philosophical concepts from antiquity used to grapple with the nature of reality and cognition, fundamental questions of how we are able to understand, recognize and think. These questions are never entirely answered and are revisited to this day with the epistemological tools at hand. Knowledge and technology changes, but some questions always remain. But for sure there are many styles in trying to understand and make sense of the world. Just as Ars Electronica has done so brilliantly since its founding, IC seeks to do so by mediating art, technology and society. Together, we will continue on this path through this tumultuous time we call the digital age.

Faculty: Manuela Naveau, Laurent Mignonneau, Fabricio Lamoncha, Michaela Ortner, Gertrude Hörlesberger, Alexander Wöran

Liyuan Dong (CN), Weichen Zhang (CN)

City Culinary Journey



© Liyuan Dong

This is a microwave-based interaction experience where you can taste the signature dishes of a city and listen to its stories. Set the city parameters in the tangible microwave, choose the ingredients and wait for the AI to find the prepared dishes. The geographical environment and cultural atmosphere of a city influence its food. The cultural identity generated by food also plays a vital role in defining a city. In the project, users understand the relationship between the city and food.



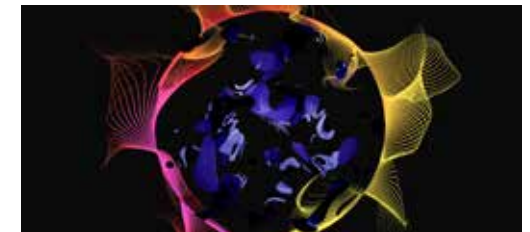
The AI is on vacation © Till Schönwetter



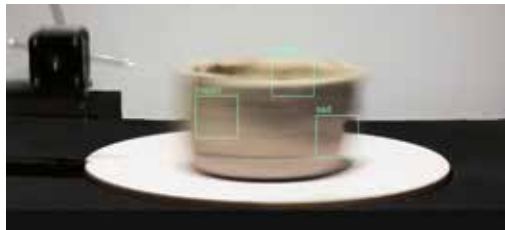
GODSPEED © Andrea Corradi



EchoCore © Rene Preuer



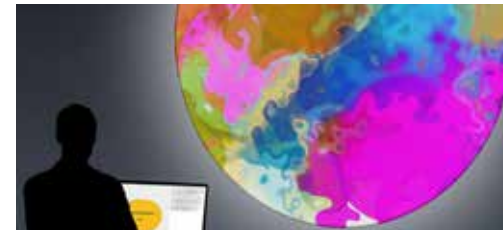
Blue Danube © Sofia Talanti



Tangible AI © Salma Aly



The Scream of Music © Daniel Fischer



I am, We are © Yuseung Lee



4everfeed © Maria Orciuoli

Till Schönwetter (DE), Miguel Rangil (ES)
The AI is on vacation

The AI is on Vacation humorously subverts the initial promise of a helpful assistant by presenting an AI that is taking a break. Set against a sandy, beach-like backdrop, this GPT-based model playfully dodges typical utility-driven responses, offering evasive replies that challenge the expected functions of such advanced tools. This project combines the initiative to replace Till's receptionist job with an AI assistant and Miguel's PhD research at Universitat Politècnica de València.

Salma Aly (EG)
Tangible AI

Tangible AI is an interactive installation that explores the evolving relationship between Artificial Intelligence and human emotion. It utilizes AI to detect and interpret the emotions of the audience through facial expression. This data is then employed to dynamically alter the shape of the sculpture, creating a dynamic and responsive experience. The sculpture serves as a visual representation of the audience's emotional landscape.

Andrea Corradi (IT)
GODSPEED

Godspeed explores the Doppler effect as a compositional tool using a drone equipped with speakers to create real-time harmonic shifts. This acoustic performance is being tested through the support of qujOchÖ in the southern harbor district near the former Quelle department store, the LINZ AG sports field and the Hello Yellow Velodrome. Feel how these dynamic soundscapes reshape the perception of everyday environments through motion.

Daniel Fischer (AT)
The Scream of Music
 yodeling over the danube

The Scream of Music is an innovative audio installation in a public space that reinterprets national identity, communication and borders. An iconic image from *The Sound of Music*, associated with Austria, is transformed into yodeling music and transmitted across the Danube in Linz using an LRAD (long range acoustic device) loudspeaker. The yodeling is decoded back into visual information, transferred onto postcards via AI audio pattern recognition and assembled to reveal the complete picture.

Rene Preuer (AT), Mathias Gartner (AT), in collaboration with Ingrid Graz (AT, Johannes Kepler University)

EchoCore
 Heartbeat-Responsive Interface

The human heartbeat pulsates as an echo of our innermost feelings and longings. In *EchoCore*, this essence comes to life through illuminated and malleable soft spheres, awaiting the touch of the viewer. Through touch, the heartbeat is imprinted, setting the spheres in motion. Within this dynamic, an inimitable engagement emerges between the individual and the spheres—a choreography of pulsating colors and continuous transformation that explores the relationship between emotion and aesthetics.

Yuseung Lee (KR)
I am, We are

How do you perceive yourself, and how do we see ourselves? *I am, We are* is an interactive installation with two sections, "I am" and "We are." In "I am," users complete the sentence starting with "I am ...". AI analyzes and visualizes these responses, assigning emotional scores. Users can send their results to the "We are" space, where scores blend and move organically, reflecting the AI's view of our collective identity.

Sofia Talanti (IT)
Blue Danube

I want to sleep in the arms of the Blue Danube

The artist's brainwaves, used as input for the visual output, bring the project to life. Through a data visualization and resolution of mental health issues (depression and PTSD), the artist gives space to numbers and data collection to catalyze thoughts as a time factor. Through a process of "detachment" and visualization of reaction states, it is as if they are taken out of the brain and seen with third eyes.

BCI database by Researcher Alessandro Benedetto

Maria Orciuoli (IT)
4everfeed

Alessia_3K, now the face of an AI-powered video ad, scrolls her way through self-staged caricatures and CGI effects for the era of mass entertainment. The artist blends fiction, the lexicon of online performances and the generative paradigm to stage ads scripted by TikTok's AI assistant. With its unsteady camera and montage speeds, the world of *4everfeed* is imbued with algorithmically-infused irony, capturing how platform labor shapes people's lives, the urge for optimization and possible worlds.

Emma Silvana Tripaldi (IT)
Technosymbiosis
 Feedback feed

The project delves into the relationship between users and algorithmically-driven social media, designed for personalized content selection. It presents this relationship as a symbiotic connection where both influence each other. The algorithm keeps adjusting content based on the non-human user feedback, continually analyzing data to categorize the user and curating a constant flow of new information to keep it engaged.

Martina Pizzigoni (IT)
(Very) Neural System

(Very) Neural System delves into the intricate dynamics of identity construction in the digital age. Harnessing the power of AI, a hyper-realistic emulation of the artist's persona emerges as an amalgamation of seemingly authentic features collected from major companies. This digital simulacrum, a dystopian doppelgänger interacting in real time, invites viewers to cross into the twilight zone between physical reality and virtual existence.



(Very) Neural System © Martina Pizzigoni



Technosymbiosis © Emma Silvana Tripaldi

Danielius Šermukšnis (LT),
 Mantė Elelueta (LT)
What is it like (to be)?

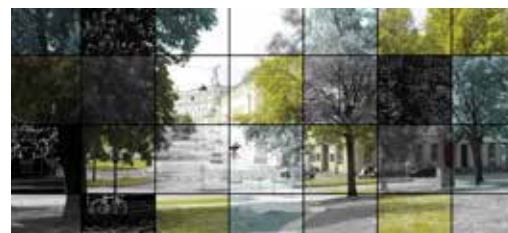
Have you ever dreamt of being a bat? *What is it like (to be)?* is an immersive experience that delves into the individual's relationship with their environment and senses using echolocation. The artwork invites the viewer to take on a new role of a creature locating itself by emitting sound, while others observe the newly-made hybrid organism and its performance. Consequently, participants are prompted to question their understanding of what is familiar and unfamiliar in human existence.

Camilla Scholz (DE)
Through Other's Eyes

Through Other's Eyes delves into the subjective nature of perception through an interactive video installation. Videos of everyday life in Linz are fragmented into an interactive collage of human, animal and computer vision. While it cannot replicate exactly how others see the world, it serves as an imaginative exploration of visions different from our own, demonstrating how diverse realities can coexist and highlighting how our perception of the world is deeply personal.



What is it like (to be)? © Danielius Šermukšnis



Through Other's Eyes © Camilla Scholz



Symphony of a Koi © Flavia Luna Somarriba Perez-Desoy



Ghosts © Ahmed Jamal

Flavia Luna Somarriba Perez-Desoy
 (ES/FR/NI)
Symphony of a Koi
 Interactive Sky

This project is meant to help hospital patients feel calm. It features a concrete audiovisual environment with intuitive, game-like interactions, allowing patients to momentarily escape the stress of their situation. These interactions are designed to accommodate the constraints of the hospital setting. Beyond relaxation, the project seeks to restore a sense of self, often diminished in a sterile, clinical environment.

Ahmed Jamal (EG)
Ghosts
 Machine or Ghosts

Ghosts is an interactive installation that uses sensors and robotic arms to create a dynamic, playful space. It challenges the expected behavior of machines, sometimes responding to users, sometimes not, creating confusion and mistrust. It represents the glitches and distractions of everyday life and aims to make machine interaction more human. *Ghosts* performs actions to attract attention, embodying philosophical concepts such as existentialism, absurdism, phenomenology and interactionism.



Shock Value (or Cadavre Exquis) © Alessia Fallica



Self-eluded © Lilly Stelzer

Alessia Fallica (IT)
Shock Value
 (or Cadavre Exquis)

Shock Value is an exploration of how image generation positions itself in the stratified issue of digital violence and gore voyeurism, and how the medium employed for its production—Artificial Intelligence—influences its impact and consumption. Working with text-to-image open-source AI models, the artwork serves as a socio-anthropological experiment, compelling the audience to confront an “exquisite corpse” of graphic and disturbing imagery and valuing their reactions as research data.

Lilly Stelzer (DE)
Self-eluded

Perception shapes our reality, a reality in which we seek understanding, yet fear the feeling of being exposed. Can we truly grasp the essence of others? What happens to our understanding of reality when perception itself becomes elusive? These questions are embodied in a sculpture that attempts to hide on interactive screens. The installation explores the tensions and philosophical questions surrounding various facets of perception.



On the breathing wings of a horse © Maria Dirneder



New Cartographies © Behiye Erdemir



Création Nocturne © Maria Konstantinova



code void © Alexandra Zlatanova

Maria Dirneder (AT)

On the breathing wings of a horse

On the breathing wings of a horse is an interactive art installation that merges human breath with the essence of equine movement. The horse's gait captures a unique breath, intertwining with the rhythm of nature. This project explores the symbiotic relationship between humans and horses. When the human breath becomes the wings of the horse, then Pegasus (a winged horse in Greek mythology) comes alive as a digital Centaur (a hybrid between human and horse) in the interactive installation.

Technical support: Frederik

Maria Konstantinova (RU)

Création Nocturne

A mystical ceremony is conducted to honor and nurture a rare species, *Création*, blooming for just a single night. *Création Nocturne* is a participatory performance that invites visitors to study and reflect on the causes of existential terror-induced insomnia through collective meditation. Developed within the framework of Focus Oriented Art Therapy (FOAT), it explores the potential of interactive art in psychological practices.

In collaboration with RedSapata, Sonnenstein Loft.

Behiye Erdemir (TR)

New Cartographies

Is a roadside with poor signal reception an inside?

New Cartographies explores the unseen landscapes of electromagnetic space. Transmitted images capture snapshots of this landscape at specific moments and locations, visually representing the dynamic electromagnetic spectrum. Variations in clarity and distortions reflect the flux of electronic activities, offering glimpses into our digital habits. Viewers are prompted to ponder distinctions between interior and exterior spaces in this realm.

Alexandra Zlatanova (BG),

Daniela Vásquez (SV/ES)

code void

The first time the nightmare appeared, its cruelty impressed and amused me. The more afraid I became, the more frequently it returned, fueling a fear of going mad. This had to stop. "I will understand the pain, the reason, the connection, the memory, through weird, friendly, abstract lines." And it was gone. The lines acted as a code. Now they are the building blocks of the animation, triggered by the conductive pattern on the roll. This is not encrypted; it is non-decodable.

Sule Suarez (CO), Lukas Romero (CO)

Super Tapestry

Audiovisual Performance

Super Tapestry is an ambient proposal that blends into an experimental ensemble: live coding, a phase vocoder in Max and guitar with effects pedals. *Super Tapestry* is a collaboration between musician Lukas Romero (Niu Toronja) and visual artist Sule Suarez. These improvisations are based on the idea of using space as a source of inspiration. They are driven by the desire to craft immersive sonic landscapes, rich in textures and ambient sounds.

Viktoria Angyal (HU)

Echoes of the past

Echoes of the past is an interactive installation that collects, records, organizes and fuses the memories of the audience together. Visitors are invited to contribute by talking about their pleasant childhood memories, which are then presented as a collection. The system also considers the process of reconsolidation, revealing how fragile memories are and how they can change with the passage of time. An additional, pre-recorded video serves as a memory trigger next to the presented result.



Super Tapestry © Sule Suarez



Echoes of the past © Viktoria Angyal

Ahmad Aiuby (EG)

Post-humanity Zoo

First Chapter: Frog's World

In 20xx, a deadly pandemic outbreak killed 60% of humanity. A disaster has led a group of zoologists and environmentalists to build a zoo as an archive of what capitalism/humans, which/who caused this pandemic, have done to our environment. *Post-humanity Zoo* is a multisensory installation which uses the zoo as a system and environment at the intersection of nature, wildlife and urbanity, exploring the potential role they might play in preventing the next pandemic. Frog's World is the first chapter of this zoo.

Doğuş Karlık (TR)

io

io (in/out) is a term used for the interface of signals or data received or sent by a system. It can also be interpreted as inside and outside. This device stands at the point where those two meanings dissolve into each other. An artificial auditory environment is generated inside the helmet from the video stream of the outside. Being outside becomes being inside; outside becomes the input; output becomes a feeling.



Post-humanity Zoo © Ahmad Aiuby



io © Doğuş Karlık

Leonardo LASER Linz

Lab Songs Vol. I

Scientific revolutions lie not only in discoveries but also in changes in their practices, goals, protocols and evaluation methods. The laboratory, originally dedicated to scientific work and characterized by rigor and dedication to experimentation, now resonates across disciplines, promoting creativity and collaboration. Through our guests' experiences and songs, we will explore the laboratory as a heterotopic space capable of generating new agendas and structures for collective creation. *Hosts: Fabricio Lamoncha (ES) & Christa Sommerer (AT)*

Pecha Kucha

20 years of Interface Cultures

Pecha Kucha is an event celebrating the 20th anniversary of Interface Cultures (IC) at the University of Arts Linz. Select alumni will give short *Pecha Kucha*-style talks, discussing their artistic and career evolution since earning their degrees and presenting current works in progress. They promise to share how IC is still a part of their lives and recall funny anecdotes and stories from their time at the department. The talks are intended to be creative and engaging, supplying valuable information about the Interface Cultures master's degree and future career options for a broader audience, along with providing just the right amount of nostalgia for visitors already privy to and a part of the IC cosmos.

Speakers: Mar Canet Sola, Ioan Cernei, Ricardo O'Nascimento, Vesela Vladimirova, Vanessa Vozzo, Qian Ye, Maša Jazbec, Kristina Tica, Nathan Guo, Ivan Petkov, Hannah Perner-Wilson, David Wolkerstorfer, Mihaela Kavdanska, Andreas Zingerle.

BIP on Critical Data

What is wisdom in a calculated world?

The Blended Intensive Program (BIP) on Critical Data is an Erasmus+ program with partner universities in Sevilla (Spain) and Limassol (Cyprus) and the University of Arts Linz (Austria). It was established to address issues, challenges

and perspectives in a technology-dominated world. Students and professors of the three institutions engage in regular knowledge transfer sessions throughout the academic year. The aim is to develop artistic concepts and prototypes revolving around the field of critical data, artistically and scientifically exploring data and data-processing systems from a critical viewpoint. The progress and status of the ongoing BIP collaborations are presented at *Ars Electronica 2024*.

Cyprus University of Technology in collaboration with CYENS Centre of Excellence: Georgia Rose Demetriou, Valeria Loizou, Antoniou, Katerina, Panayiota Georgiade, Georgia Demetriou, Maritini Aresti, Rafaella Kastrou, Anastasia Theodorou, Kyriaki Makri, Katerina Constantinou, Evgenia Solomontos, Styliani Michael, Theopisti Stylianou-Lambert, Kleanthis Neocleous, Alexia Achilleos, Myrto Aristidou; University of Sevilla: Irene Ballesteros Alcaín, Jacobo Sabogal, Carmen Pérez, Juan José Mora Galeote, Maria del Mar Juan Martorell, Yolanda Spínola Elías

GUEST PROJECT

Bruna Petreca (BR), Ricardo O'Nascimento (BR), Marianna Obrist (IT), Christopher Dawes (UK), Nona Shabanova (RU/CA), Sharon Baurley (UK)

Circular Consumer Experience

Research by the Textiles Circularity Centre reveals that linking human well-being with material flow contributes to reducing textile consumption. Visitors will experience a multisensory VR simulation of the future High Street and will use a special keyboard to express their well-being. Each key represents one of the well-being dimensions for textile circularity. By pressing keys that resonate with their feelings, visitors create a shared tapestry of well-being, reflecting collective and individual states of well-being.



© Chris Lee

FEATURED PARTNER UNIVERSITY

Moholy-Nagy University of Art and Design Budapest (HU)

FUTURESENSE

“Despite all canons, all inflexible laws, all technical perfection, this inventive potency, this generic tension which defies analysis, determines the character of every work of art. It is the outcome of intuitive knowledge both of the present and of the basic tendencies of the future.”

—László Moholy-Nagy, From Pigment to Light, 1936

The works exhibited at FUTURESENSE aim to understand and reflect on the current anomalies and challenges of the present, interpolating towards the future, creating a space where questions, considerations and possible solutions coincide. The exhibition is a curated selection of artworks and design prototypes by students of the Moholy-Nagy University of Art and Design (MOME). Utilizing an array of tools and mediums resulting in physical installations, animations, soundscapes, graphics and hybrid materials, the selected works offer profound reflections on the multifaceted challenges stemming from the intricacies of contemporary networked society.

Each work represents a unique perspective, offering viewers an immersive journey through the complexities of our time within the surroundings of its sociocultural environment.

These artworks were selected from the culmination of student works, drawing primarily from graduation projects at the Design Institute, the Media Institute, the Doctoral School, the Stefan Lengyel scholarship grantees, accompanied by research endeavors from the MOME Innovation Center.

Curators: Judit Eszter Kárpáti, Ágoston Nagy, Esteban de la Torre

Exhibition Management: Judit Gottfried, Andrea Kovács

Éva Darabos (HU), Domonkos Erhardt (HU), Nikolett Fábrián (HU), Vivien Hárshegyí (HU), Bence Hlavay (HU), Melinda Kádár (HU), Marcell Mostoha (HU), Nikolett Veress (HU)

Animation selection

Graduation film selection of the Animation Department of Moholy-Nagy University of Art and Design



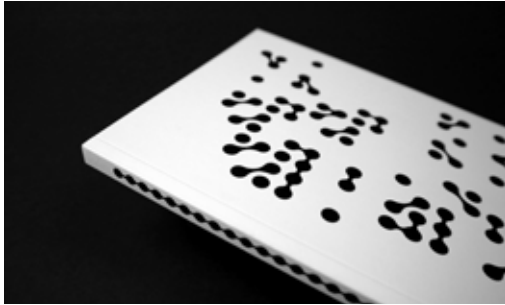
© Éva Darabos

MOME Anim's collection of animated short films features some of the most compelling and visually stunning works from the university's history. *BEST of MOME Anim* exemplifies the creative excellence and artistic diversity of MOME Anim's masterpieces. MOME Anim has been captivating audiences with its recent hits as well: its latest works explore diverse themes, from whimsical fantasies to thought-provoking narratives.

Petra Pilbák (HU)

Resonating Stories. An Alternative Edition of *White Noise*

© Petra Pilbák



Resonating Stories redefines the contemporary reading experience by combining language, code, visual notation and sound to create an alternative reading experience for Don DeLillo's novel *White Noise*. The project aims to bridge the gap between print and digital media by exploring innovative multimedia approaches and integrating the senses to enrich the reading experience. This approach fosters a deeper connection with the text and enables a more immersive interaction with literature.

László András Halák (HU)

Thread of Life

Synthetic and organic lives are equal in the eyes of gods

© László András Halák



After handling human fates, the Moiræ turn to exercise their power over a rudimentary AI: a cellular automaton. Synthetic lives are born from chaos and randomness harvested from the environment, and as the three Greek goddesses of fate spin, measure and cut, the synthetic lives unravel like holes punched into a long strip of paper. When their time is up, the thread is cut, and the sole proof of once-existing lives collect under the installation in an ever-growing pile of synthetic sediment.

Rita Madarász (HU)

FutureStructure

© Rita Madarász (HU)



I explore the transformation of our attitude to physical materials with the rise of digital technology through this interactive woven installation that reacts to its environment and starts to move without any touch. Reflecting on the disappearance of diversity in tactile cognition, digital technology as an agent indirectly creates connection, leaving behind the most basic form of perception associated with textiles: tactility. The movement in response highlights the structure of weaving itself.

Balázs Ágoston Kiss (HU)

Exoskin

© Balázs Ágoston Kiss

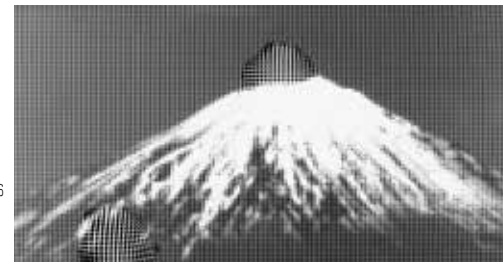


Since the beginning of time, man has sought to understand and the forces shaping the surrounding world. The advance of technology has the biggest impact on the future of the environment and various species, resulting in radical changes. *Exoskin* is an art project inspired by the realm of augmented sensations. Its main goal is to explore unconscious feelings and connections towards body prostheses and human + machine interaction with a focus on intimacy and eroticism.

Sári Zagyvai (HU)

Sketches of an Excursion

© Sári Zagyvai



Throughout my work in the photo lab, I have been turning everyday visual imagery into abstract art. I replaced the negative film with an electric display. The found images go through a transformation that can be linked to a spontaneous process and cannot be repeated. Analog and digital layers are integrated in my work. The known world becomes an abstract creative language through varied intervention techniques. My images are unique, unrepeatable copies.

Viktoria Biki (HU)

The Right to Be Forgotten

© Viktoria Biki



The Right to Be Forgotten questions the excessive sharing of personal data. It explores the options for deleting one's online identity from cyberspace. Inspired by biomimicry, the concept draws parallels between the tropical boxfish's defense strategies and privacy protection mechanisms. Can you truly disappear online in a future where AI might keep your virtual self alive? And can the solution be analog?

Ágnes Petrucz (HU)

Hello, generated_name!

© Ágnes Petrucz



Exploration of data-ism through an installation that bridges physical and digital spaces, featuring non-human digital entities called data-humanoids. It reflects the fragility of human data-based identity.

Polina Velyka (UA)

Exit Strategies

A digital product for mediating contemporary practices of death, grief and memorialization

In the contemporary world, terminally-ill individuals often become absorbed into a system that views them primarily as patients. Declines in physical and mental capacities lead to a loss of autonomy and a sense of total disintegration. This project explores agency at the end of life by creating a digital legacy, using a diary of an unknown person with a palliative diagnosis as an example. It is an attempt to keep the connection to loved ones while fostering introspection and a sense of control.

Viktor Varga (HU)

Beep-boop

A kinetic installation that previously spent 100 hours machine learning and attempting to maximize the attention of the viewers of an online video-chat platform by changing its own movement. The aim of the work is to raise the question: how anthropomorphic is this behavior, both in practice, and as the gesture of an unnecessary, self-deluding effort? Given that machine learning in this shape and form could never find an optimal solution, the work of the machine is unnecessary.



Exit Strategies
© Polina Velyka

Beep-boop
© Viktor Varga

Dung Dkar Cloak
© Judit Eszter Kárpáti

Food of the future
© Melinda Doktor

Judit Eszter Kárpáti (HU),
Esteban de la Torre (HU/MX)

Dung Dkar Cloak

Dung Dkar Cloak is an interactive installation that combines digital jacquard weaving, sound synthesis, fractal geometry and algorithmic thinking to unfold matter into the visual and sonic domains. The augmented textiles are hybrids and provide a rich multi-sensory experience: complex haptic interactions with the woven fractal patterns control sound synthesis processes in real time. The *Dung Dkar Cloak* series was developed at the Material Research Hub within Innovation Center of the MOME.

Melinda Doktor (HU)

Food of the future

Growing, eating spirulina microalgae

The project is aimed at developing a photobioreactor for cultivating microalgae—the superfood of the future. The designer wants to explore their potential in terms of small-scale production integrated with urban spaces. The compact growth unit comes with a set of tools which are useful in both production and consumption. As part of the research and design process, the author analyses the methods of processing microalgae as well as their composition and utility.

Only Tomorrow Association (RO)

Only Tomorrow Speculative Lab

The *Only Tomorrow Speculative Lab* project was part of the Timișoara 2023 European Capital of Culture, a cultural program.

“Only Tomorrow” refers to the object of the reverie-like states of mind in which one feels inspired and hopeful while thinking about the near future with the sense that it is within reach. The exhibition is a foray into the speculative approach to current issues, exploring developments, solutions or diversions of situations through the eyes of young artists. Speculative thinking is a way of embodying the “as if”, envisaging a scenario about the future or something imagined that does not yet exist and answers real questions and problems with solutions that combine creativity and imagination with technology and science. The works were created following four guiding ideas: speculative thinking (as artistic methodology), relevance to the present (world-based ideas), interactivity

(the works should be interactive, usually involving technology), reference to research and laboratory of ideas (the works should be open and transparent regarding the artistic research on which they are based). The young artists are students from four Romanian universities: West University of Timisoara, Faculty of Arts and Design; UNATC Bucharest—Interactive Technologies for Performing Arts and Media, New Media Design; Babeș-Bolyai University Cluj-Faculty of Theatre and Film, Digital Interactive Arts; Aurel Vlaicu University Arad, Faculty of Design.

Concept: Nita Mocanu, Marius Stoica / Curator: Marius Stoica / Artists: Sânziana Gheorghe (Faculty of Arts and Design, West University Timișoara); Andrada Băleanu, Simona-Diana Chiru, Lorena Cocora, Radu Condrache, Caty Șamata (ITPMA, UNATC Bucharest); Flavius Coman. (Digital Interactive Arts, Faculty of Theater and Film, UBB Cluj); Ana Farîma (Faculty of Design, Aurel Vlaicu University Arad)

Andrada Băleanu (RO), Lorena Cocora (RO), Radu Condrache (RO)

Banat în Banat

Banned in Banat

In the year 3000, several musical styles are banned. The audience has turned into space explorers discovering a portal to recompose the first lost genre: manea (an ethno-music style popular in Romania). This work references a recent event in Timișoara’s collective memory: the “banning” of manea by a former mayor. Presented as a booth, it challenges visitors to solve a sound puzzle to decipher the forbidden music.



© Doar Măine Association



O2 Touch © Doar Măine Association



Fragrancy-Forged Memoryscapes © Doar Măine Association



Is somebody there? © Laurian Popa



Robots on Mars © Doar Măine Association

Flavius Coman (RO)
O2 Touch

The work proposes a sensory interaction mediated by technology between the two great kingdoms of life: the animal and the plant kingdom. The tactile exchange is transformed by the Arduino controller into visual stimuli and sounds. We invite the participants of this exhibition to reflect on the impact that the human species brings to the natural world and the awareness of the sensitive balance through which life is possible, as plants are the main food and O2 producers.

Ana Farîma (RO/MD)
Is somebody there?

The mother of the Forest / Muma Pădurii is a character from Romanian folk stories. She is an ugly witch, dressed in plants, who lives deep in the forest and scares people away. The AR work presents this character as a positive one that smiles in the beginning, but will turn sad with a distrusting grimace on seeing people, as a reaction to the destruction of the environment. Now she is wearing plastic-polluted clothing appearing in the Mures Floodplain Natural Park that is part of Arad in Romania.

Simona-Diana Chiru (RO),
Caty Alexandra Şamata (RO)
**Fragrancy-Forged
Memoryscapes**

Step into the world of advanced mental health research with our installation, which explores the transformative progress of mental health methods, propelled by technological innovations that amplify therapeutic outcomes in the year 2055. The work is a speculative take on the idea of a memory testing laboratory for mental health. The visitor can follow a ritual where test strips impregnated with different fragrances will trigger discreet video mappings in Timișoara.

Sânziana Gheorghe (RO)
Robots on Mars

In the video game, the user controls a robot on the planet Mars that can interact with boulders and express its thoughts in sentences. After three minutes of playing, the robot breaks down and the game restarts. The project proposes a correlation with two philosophical works: *The Myth of Sisyphus* by Albert Camus and the writings of Ray Brassier on the absurdity of life in the context of the colonization of Mars by humanoid.

Spiel & Objekt Master Studio, Ernst Busch University of Theatre Arts Berlin (DE)

()&&();

Theater is a social art form in which co-poietic feedback loops between various physicalities can be tested as indisputable concepts. Exploring technology as a tool for translation into new experiences and social relationships is at the heart of the Spiel & Objekt MA programme. Spiel & Objekt believes that the combination of technology, critique and theatrical methods enables genuine participation and connections between people and species that critically reflect different aspects of society and our environment. Audiences will explore unknown worlds, immerse themselves in dreams, uncover their desires and compete for prizes. With every show, participants

get a chance to playfully “turn the tide” and change the course of events. There are contexts, technologies and tools to try out as “carriers of hope”. Our campus space will constantly change, with various time-based and interactive performances available at selected times. The space will change from futuristic feminist worlds to strange planets to dreamscapes and games of chance. Despite their diversity, all the settings and performances will constantly complement each other when viewed individually.

Mari Hakyopan, Friedel Hänsel, Veronika Rišňovská, Leonie Kopineck, Jonas Olbrich, Jeffrey van der Geest

Friedel Hänsel (DE), Leonie Kopineck (DE), Vero Roza Risnovska (SK)

There always will have been worlds

Everything that breathes cares and is cared for. You enter a world and merge with it—a society shaped through care, through action but also inaction. The simple acts of collective and individual efforts can change the world. *There always will have been worlds* is a participatory theater piece that explores the thin lines and boundaries between caring, carrying and controlling.



© Maximilian Grosser/HFS

Jonas Olbrich (DE)

Fortune's Crumbs

The neoliberal ideology tells the fairytale of a world in which everyone can make it. In reality, however, injustice is increasing every day. This is because no efforts are made to actually reward hard work, nor would meritocratic principles even be feasible in a society based on the division of labor. Fortunately, the times of injustice are over. Whether you call it God, fate or destiny, chance takes over the distribution issue. Shape society without merit. Chance decides what is fair.



© Maximilian Grosser / HFS

Mari Hakopyan (UA)

WishWhoosh

In the fabric of existence, woven with threads of intention, lies the profound influence of wishes. Yet, the journey of a wish is not merely unidirectional. Just as wishes shape matter, so does matter reciprocally mold wishes. Harness the transformative power of loose sand to build and destroy everything your world should consist of fluently. As we navigate the labyrinth of life, let us remember the impact of our wishes, like the transformative power of loose sand.



© Maximilian Grosser / HFS

Jeffrey van der Geest (NL/AU)

Slaap Lekker

Grieving is hard. Sometimes we laugh, sometimes we cry, sometimes we cannot escape and sometimes we just feel. It can even happen that the people we have lost visit us in our dreams. Is it our subconscious playing a trick on us, a touch of hope, or perhaps a silent message trying to reach us? Imagine if we could pause for a moment instead of simply moving on and cast renewed access into those dreams.



© Maximilian Grosser / HFS

School of Culture and Design & Department of Computer Science, Communication and Business—University of Applied Science Berlin (DE)

What if ...?

What if ... everything we do, create or conceive can be both good and evil?

The exhibition examines the use of modern, advanced technologies with the concept of dual-use, the principle that in all fields of science, research results that open up great opportunities can also be misused and that we must therefore constantly mediate between these two poles. Everything in the exhibition is interactive and utilizes technologies such as augmented and Virtual Reality, ubiquitous computing and electroencephalography, digital twins and Artificial Intelligence. It will take you deep into the dilemmas of environmental pollution and hybrid nature, neuroethics and mystification, as well as the abyss of death and its digital overcoming. What if ... you could have a conversation with

a historical person who has already died and has been recreated by AI and VR? A fascinating thought? What if ... we could do the same with a deceased person from your own family and offer you the chance to have one last conversation with them? A terrifying thought?

Welcome to the world of dual-use!

The media artworks shown in the exhibition are use cases that demonstrate both the social and scientific relevance of technology. They convey media competence, allay fears, develop critical faculties and represent relevant experiences.

Welcome to the world of the future generation and their values and skills that will turn the tide.

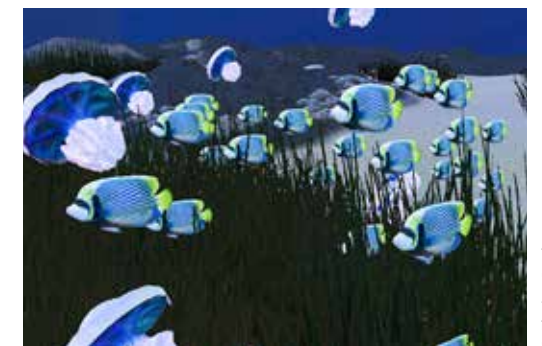
Curator: Prof. Andreas Ingerl / Technical Director: Thomas Kemnitz / Mentors: Prof. Pablo Dornhege, Prof. Dr. Johann Habakuk Israel, Lukas Ruoff

Florian Becker (DE), Jen Funke-Kaiser (DE), Jannik Kolb (DE), Yannick Polzer (DE), Mouhannad Kindakli (DE), David Schnichels (DE), Delia Morgan (DE), Paula Woerndl (AT)

Coral Reevival

What if we save the coral reefs?

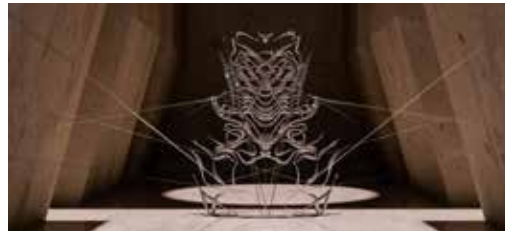
Coral reefs are vital to both coastal and marine life. Their degradation has serious consequences for both ecosystems. This project presents a coral reef on a Mixed Reality board that users can navigate through and watch the corals grow. Depending on how you behave in the reef the corals will bleach and die or the health of the reef will improve. The installation takes us to a place where the global consequences of our actions, otherwise so very abstract, can be directly experienced and understood.



© Florian Becker



What if machines had always been rooted in nature? © Jonathan Grupp



Mystic Hystera © Nele Basler



n≠1 © Chantal Piszczkowski



What if we already know you? © Felix Henke

Anton Bürkle (DE), Jonathan Grupp (DE)
What if machines had always been rooted in nature?
 Kinetic Garden

The world is at stake, the woods are on fire and the climate is in turmoil. Our predatory relationship with nature detaches us from the physical world and technology seems to accelerate our problems. But this garden offers a space for nature, technology and people to slow down and find healthier ways of interaction. What would the world look like if we used our powers to care for our planet and each other? Change can be built by anyone using simple materials and widely available technology.

Chantal Piszczkowski (DE)
n≠1

What if they were with us once again?

Through the expansion of VR and AI, the *n≠1* project facilitates transgressive encounters with digital twins of deceased persons—whether historical figures or relatives. Before the festival, participants can submit details about their loved ones, which facilitates communication to share unspoken words. This project challenges us to explore the ethical and emotional impacts of such technology and prompts a reassessment of human connections in our digital era.

Nele Basler (DE)
Mystic Hystera
 What if we truly look at the female body as it is?

Mystic Hystera is the visual examination of the mystification of the female body in medicine. Hysteria in women was considered common and chronic. Although it was classified as an illness, the symptoms were synonymous with normal functioning female sexuality. This diagnosis declared unwanted women insane so as to get them out of the way and make them invisible. Dive into the virtual world of *Mystic Hystera* and observe truly, listen carefully and debunk the mysteries attributed to women.

Emilia Vivian Gents (DE), Felix Henke (DE), Chantal Piszczkowski (DE)

What if we already know you?

In the era of Brain-Computer Interfaces, we explore the critical interface where human thought meets Artificial Intelligence. Through a job interview with AI, applicants illuminate the subtle influences of technology on human consciousness. This dialog opens new perspectives on autonomy and control and challenges us to critically question the limits of human agency in the context of neuroethics. What changes in our understanding of autonomy might arise?

MA Design & Computation, Technical University Berlin (DE)

Virtual Matters

Virtual Matters showcases the ongoing research and unfolding methodologies of a new, post-disciplinary practice developed as part of the joint interdisciplinary and research-based Master's program Design & Computation of the Technical University Berlin and the Berlin University of the Arts. It features a selection of works by three generations of students, from first-year graduate students to those presenting their final Master's research. Positioned at the intersection of art, science, society and technology, these works explore and reveal exemplary epistemic, poetic and aesthetic strategies for understanding and addressing a diverse range of issues related to today's rapid technological and societal transformations.

As reflected in the exhibition's title, a common thread connecting these different works is their theoretically informed—engagement with the

digital or virtual, not as an immaterial realm of passive mediation, but as a multi-faceted and inherently active, affective and productive kind of materiality: from generative AI agents and algorithms that influence decision making, the relationship between in-game photography and real-life war zones, or the shifting temporalities of techno-capitalism and the legacies of predictive modeling to virtual ecosystems that evolve and adapt—installations, theoretical frameworks and practical prototypes invite visitors to reconsider their relationship with digital technologies and to envision more nuanced and inclusive ways of coexisting with virtual matters.

The exhibition is curated by the Design and Computation master's program and the trans- and post disciplinary platform, New Practice in Art and Technologies. The master's program and the platform are the result of a collaboration between UDK Berlin and TU Berlin.

Max Baraitser Smith (UK)
Word Association Games

Language learning is a messy process. Word association games can shed light on this process by showing which words/concepts people connect together. This project looks at how dynamic maps make it possible to follow other people's lines of thought, and suggest a way of thinking about collective knowledge in terms of overlapping pathways.



© Lars Pflüger

Fabian Schneider (DE)
Similar Processes

The installation *Similar Processes* reflects on the constitution of algorithmic procedures as they assemble in computational models. The experimental setup of the simulated worlds exposes the controls of their own design, collapsing into stable configurations at one moment while chaotically oscillating in another. Shifting from different contexts—from epidemiological simulations to atmospheric models of the climate—each simulation run diffuses into the next.



© Fabian Schneider

Pietro Lugaro (IT), Alessandro Mac-Nelly (DE)

ACV (Algorithmic Cultural Vandalism)

ACV (*Algorithmic Cultural Vandalism*) is an interactive installation work, in which symbolic language, in its most diagrammatic aspects, is used as a tool for constructing an algorithm. The aim is to reflect on the relationships between magic and technique, human and non-human, and to explore the mental cartography that expresses the differences between sign and meaning, undecidable zones, towards an aesthetics of immanence.

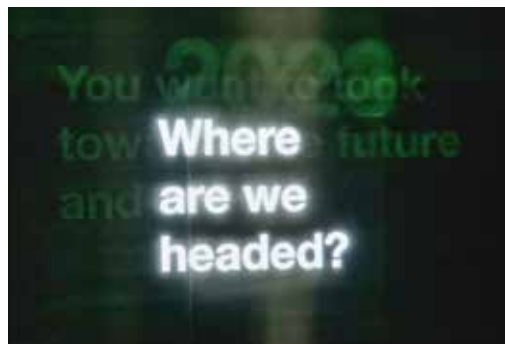


© Pietro Lugaro

Anna Kraher (AT)

Today Is Yesterday's Tomorrow

Predictions are bound by time-related parameters. On the one hand, predictive models use data from the past to predict the future, allowing the past to legitimize present actions. On the other hand, repeated predictions about the future of technology influence which technologies are considered inevitable, thereby borrowing legitimacy from the future. Consequently, both the PAST and the FUTURE can act as justification for actions in the PRESENT, obscuring the present as a site where the distribution of power occurs.



© Lars Pinkwart

Emma Sokoll (UK), Friedrich (DE)

TAWA: Hunde

Since the first domestication of the dog around 19,700 to 26,000 years ago, humans have bred a wide variety of dog breeds, all of which have distinctive character traits, abilities and specializations. The common origin of all breeds is the wolf. The dogs in their present form are adapted, transformed interpretations of this original wolf form. They are the last link in a series of ever-so-slight genetic changes that lead to today's diversity. This variable artificiality is the core of the dog's existence.



© Emma Sokoll



AI Fortune Teller © Su Durakbasa



Arab Futurism © Sarah Omar

Su Durakbasa (TR), Sebastian Painter (DE)

AI Fortune Teller

In a technology-driven world, spirituality is redefined by social media and mobile apps. With the rise of astrology apps and spiritual content, AI Fortune Teller seeks to modernize traditional fortune-telling using AI and digital media, exploring human-machine interaction, spirituality and algorithmic mysticism. While inviting users to evaluate the connection between human agency and machine intelligence, it raises questions about technology's role in shaping spirituality and personal identity.

Sara Oman (EG)

Arab Futurism

Arab Futurism explores a question and movement that aims to contribute to more counterculture in thought and action. Rooted in current political discourse, it summons non-parallel universes where new value systems can be decoded and past-present-future narratives interrogated. The aim is to promote cross-cultural understanding and challenge the notion of belonging. Users can decrypt the map through live images generated using AI.



Digital Mirror © Celestin Meunier



Perpetual Disruption © Lars Pinkwart

Lilu (ID), Manu (DE), Celestin (FR)

Digital Mirror

The Digital Mirror is an interactive art installation that plays with the concepts of curiosity, narcissism and surveillance to delve into the relationship between digital identity and personal agency within virtual spaces. By engaging visitors in a dynamic interaction between their physical movements and digital reflections, the installation draws thematic inspiration from the labyrinth of mythology, exploring modern interpretations of entrapment and self-discovery.

Lars Pinkwart (DE)

Perpetual Disruption

Complex systems produce the belief in a world which is so complex and volatile that change can only be managed by markets and machines. What remains of human agency is to adapt to the perpetual disruptions heading our way, taking place through demos and training. The research project critically investigates resilience and disruption as it relates to the current AI discourse. How can we regain agency and desire in times of complexity?

Orhun Mersin aka kekik (TR), Yağmur Uçkunkaya (TR), Nani Gutierrez (CL)

Ex-Human

Based on a prediction that 90% of online content will be synthetically generated by 2025, the project envisions a near future where digital influencers infiltrate both private and social spheres, even to the extent of appropriating users' identities. These artificial entities reflect on their condition as they transition to self-awareness, as well as on the state of ex-humans (users) as they transition to animals. Are they mimicking us, or are we imitating them?



© Orhun Mersin

Federico Zurani (AL), Engy El-Shenawy (EG)

Exploded Snapshot

How do we convey objective truth through images?

By using an aesthetic-oriented approach, we are studying the methods and processes involved in creating images that give us a sense of reality. From scientific images to news and computer simulations, the aesthetic code used to represent certain events is fundamental in conveying a sense of reliability and reality to the viewer. The topic has many important nodes. For this work we focused on war images.



© Federico Zurani

Manu Sin (DE), Sena Dogan (TR)

COMMON GROUND

COMMON GROUND rethinks space and ownership in Berlin, renegotiating collective decision-making in the face of crises. In an expropriated Berlin, where the conditions of use are decoupled from ownership—and thus from capital, power and discriminatory exclusion—there is the chance to resiliently face and overcome crises equitably. The installation leverages the synergistic potential of data-driven simulation and visual narration to delve into the complexities of crises related to urban housing and displacement. In this way, the transformative possibilities of communal ownership and collective action are revealed.



© Sena Dogan

Theory of Interactive Media, Masaryk University (CZ)

Navigating Through eXistenZ

How to navigate within the parallel and intertwined spaces we inhabit? How to connect to the flow of being, to collective memories, to planetary and individual consciousness? How to navigate our existence?

In a largely ethnographic way, the exhibition explores the connection between art, technology and society and how these elements influence and interact in the various spaces and contexts we inhabit and create. It focuses on exploring the POV experience of existence mediated by our bodies and senses, as well as their technological simulations and prostheses.

The naming of the exhibition is an appropriation of the title of the sci-fi film *eXistenZ* (Cronenberg, 1999) with the aim of promoting a dialog between the film and the exhibition. The plot of the film follows a game designer playing a game she created herself. We are just like her, designers and players of the games we call our lives, trying to get beyond the surfaces of the visible and audible, trying to discern the patterns behind them, trying

to reach beyond the boundaries defined by the rules of the game we play to find direction and hope in the mazes and traps of all these realities. To play these games, we traverse physical worlds (landscapes, cities, bodies, identities) and simulated digital worlds (digital games, social networks and datasets of quantified selves). The exhibits are traces and records of games played not by conquerors but by ethnographers (wanderers, flaneurs and nomads).

Curator, Producer: Jana Horáková / Guarantors: Martin Flašar, Adam Franc, Jana Horáková, Tomáš Staudek / Visual and Exhibition design: Alina Matějová / Technical Support: Michael Franěk
Exhibiting artists: Students of Theory of Interactive Media (MA), Sound Design and Multimedia Technology (MA) and Digital Culture and Creative Industries (PhD)
The participation of Theory of Interactive Media at the Ars Electronica festival was supported by Masaryk University with a grant to support excellent study programs strengthening the excellence of the Theory of Interactive Media (MA) program (MUNI/ESPRO/0821/2023).

Filip Johánek (CZ), Karolína Segěňová (SK), Tin Lai Man (HK)

Navigating through Urban-scape Collecting memories of Brno

The audiovisual installation consists of two parts. The sound part is the result of time-lapse research into the soundscape of Brno and thus presents a sound portrait of the Moravian metropolis. The pictorial part presents Brno captured in photographs, which were subsequently processed into hallucinatory collective memories with the help of machine learning. Sound composition based on field recording and video generated by Artificial Intelligence complement each other in searching for lost time.



© Man Tin



Navigating through Land-scape © Bibiana Hroncová



Navigating through Body-scape © Aneta Chatzigeorgiu



Navigating through Sublime-scape © Jitka Baumannová



Navigating through Data-scape © Adam Franc

Bibiana Hroncová (SK)

Navigating through Land-scape The Four Seasons

The audiovisual work is the result of ethnographic research carried out in the Slovakian countryside. The result oscillates between audio and visual documentation of the current state of the landscape and an aesthetic experiment based on a remake strategy, in which Vivaldi's Baroque composition *The Four Seasons* is transformed into a field recording.

Martina Komínková (CZ), Martin Flašar (CZ),
Luboš Malinovský (CZ)

Navigating through Sublime-scape Resonances and Strings

Two electroacoustic compositions that capture the moments of a person's encounter with phenomena that go beyond everyday experiences of the visible and audible world. Martina Komínková created compositions by the method of improvisation while staying in sacred spaces of churches (Resonance). Martin Flašar and Luboš Malinovský, using methods of non-intentionality and chance, composed Reactor 4S4 inspired by their visit to the Dukovany Nuclear Power Plant.

Aneta Chatzigeorgiu (CZ), Polina Zaytseva (UA)

Navigating through Body-scape Scent of a Rose

The visual part consists of the scientific-artistic experiment Rose Ring, in which the author created an artifact in the form of a ring in the shape of a rose using her own bodily fluids. The result oscillates between jewelry, amulet and body extension. The soundtrack is made up of recorded and amplified sounds of the artist's own body. These have been emancipated from their source to create a composition of signs of life.

Vojtěch Juránek (CZ), Adam Svoboda (CZ),
Dan Klepáč (CZ), Deana Romana Kozubová (SK),
Filip Kratochvíl (CZ), Matúš Nagy (SK),
Erika Capová (SK), Karolína Sedláková (CZ)

Navigating through Data-scape A Gamer's Guide to the Metaverse

The installation is a skill trainer for navigating the metaverse. The virtual gallery is a maze in which visitors discover exhibited works inspired by the history of media arts. Audiovisual essays are results of dialog with the history of media arts, inspired by the challenges of life in the metaverse and online communication.

I.L. Caragiale National University of Theatre and Film (RO)

Over eco-anxiety

Over eco-anxiety presents two works by Lorena Cocora, an ITPMA UNATC Bucharest MA Student and one by Maria Năstase, an alumna of the same program. The presented works share feelings of anxiety in which technology serves as a mediator, catalyst or agent. The penetration of technology into our personal lives reveals a strange organic texture to cold interactions. Confronted with eco-anxiety, Lorena wants to share it with people emphasizing the urgent need for collective action and the limitations of individual efforts in the face of a global crisis. Maria collects old toys, figurines and objects. What started as a process of rescuing damaged, uncollectable toys

has more recently transformed into a process of curating informed by possible scenes that the playthings can be engaged in. Videomaking functions as an interface for playfulness as well as a medium for showcasing the collection and an experiment in creating a digital archive of (old) toys. Maria's practice of video production is based on AI software, and platforms such as ChatGPT, Midjourney, RunwayML technologically bring old toys back into play, patching together broken parts and building digital shrines. The works communicate in a perceptive manner along the thin line from technological apocalypse to techno-hope.

Lorena Cocora (RO)

Help Me, Help You

In my childhood I often immersed myself in imaginative play with dolls during bath time. As the bathtub filled, I would create a narrative in which the dolls were facing an imminent danger. The suspense would build and I would only "save" them at the last moment, relishing in the anxiety. As I reflect on it now, I see a parallel between those innocent moments and the current state of the world. However, unlike my childhood stories, I realize that this time I cannot save anyone on my own.

Maria Năstase (RO)

DOG GOD

DOG GOD is a series of videos that imagine possible scenarios centered around an arrangement of porcelain figurines from the artist's personal collection. It includes scenes from a luxury retreat for curing cynophobia, a place of prayer for the health of one's pet dog or the genesis story of the Dog God itself. The visual techniques used in the videos vary from generating new images as backgrounds, creating new figurines through image blending, or repairing broken figurines through AI healing.

Lorena Cocora (RO)

Miss Beautiful Against Capitalism

In the world of late-stage capitalism, over-consumption, digital addiction and overstimulation, we tend to project our happiness into a future point. *Miss Beautiful* is a manifest against the new age of social media, against late-stage capitalism and everything in between. Just like us, she feels that something that was once hers, was taken away by the fast-paced times we live in. Even the priciest car, phone, house, or social media cannot make you more desirable. But *Miss Beautiful* might!



Help Me, Help You
© Udr Ovidiu

DOG GOD
© Maria Năstase

Miss Beautiful
Against Capitalism
© Iamandi Robert

The School of the Art Institute of Chicago (US)

(re)understanding media: Extension of agency in the global village

Marshall McLuhan published *Understanding Media: The Extensions of Man* in 1964. He posited that “the medium is the message”. Sixty years on, the mass public is still wondering about the meaning of this message. This exhibition serves as a checkpoint to revisit where we are at in the face of the ever-developing electronic age. As a reflection to reexamine the relationship between men and machines, we encourage visitors to rethink and reimagine how media arts rebalance and restore the benevolent aspect of technology in society and culture so as to foster and cultivate a more equitable and hopeful future through

technologies. Counteracting the dystopian media injustice, artists challenge the status quo to regain agency for users of media tools. Through interactive multimedia installations, Sam Anthem, Benjamin Glass, Patrick Glennon, Yuwen Huang and Liang He invite visitors to explore regained agency through arts and technology. Examining blockchain, video games, man-versus-machine, AI-generated contents, bioart and motion-capture, artists create an immersive space where visitors re-learn media tools to build a better and more hopeful world.

Sam Anthem (US) morphological imag(in)ing

morphological imag(in)ing is an interactive multimedia video and sound installation featuring four printed medical images taken of the artist's chest, mapped projections and manipulated sounds of the MRI machine used to take the images. Both sound and mapped video interactively change in relation to bodily movements of visitors captured through a mounted camera. The camera, deciphering specific gestures, invites viewers to play with their body as the projections move the images.



© Sam Anthem

Liang He (CN) How to Become a Punch Card

The project delineates a feedback loop between the earliest and the latest machines considered computers, activated by a human medium as a necessary gear. The algorithm perpetually generates maps and delivers weaving instructions with text and binary codes. They are translated onto the weavings by a human loom operator, who redraws the globe as an after-work diary. The role of humans as the dominators, and machines as the subordinates has been reshuffled and switched over, resulting in a collision of minds.



© Liang He

Patrick Glennon (US) Black Box

Black Box is an iterative project that merges custom synthesizer hardware and video game programming. The game component responds dynamically to the audio output of a light-controlled granular synthesizer activated by an optical sequencer. The game mechanics and narrative arc of the series explore scarcity, labor and automation through visual manifestations of hierarchy and exploitation.



© Patrick Glennon

Ben Glass (US) Divine Nutraceuticals Spiritualina Warrior Blend

This mixed-media artwork is a critical exploration in mystic fabulation, and a critique of the contemporary health and wellness industry. It combines living biology, sound art, Artificial Intelligence tools and critical design. At its core, the work is an artist-crafted spirulina farm, where an algae culture is grown to the vibrations of artificially-generated Gregorian chant music. The harvested spirulina is then transformed into dietary supplements, complete with branding and packaging.



© Ben Glass

Yuwen Huang (CN) In-circle Series

In-circle Series challenges participants to reflect on inclusivity and accessibility on the internet. The project features two interactive websites built on Ethereum smart contracts, blending internet interaction, blockchain technology, creative writing, interactive poems and physical installations. It explores digital artist identity and questions the extent of artistic freedom in technology's seemingly equal power structure, while also raising issues about privilege and technological literacy.



© Mengjun Duan

University of Chicago (US)

Self-Matter

At various scales around us, physical elements self-assemble to give rise to the shapes and life that form our world. In *Self-Matter*, we contemplate such processes to design emergent functional systems in symbiosis with our natural ecosystem. We present pieces that stage the self-organization of artificial lifelike features from interactions echoing the most common elements on earth: water, grains and stones. These “self-materials” blur the distinction between inert matter and embodied intelligence, which the exhibition explores through the functionalization of an inherent balance between self-organization and entropy in nature. Emergent narratives are revealed through external forces, reconfiguration, material memory or energy dissipation, in fluid, granular and robotic installations. The stories that the materials tell invite questioning of our relationship with nature and technology, as well as imagining sustainable

futures where designed objects are a transient state of symbiotic elements. The exhibition will showcase four installations and a performance developed at the University of Chicago through collaborations between physicists, technologists and artists. It will stage recent scientific research on self-organization in reconfigurable architecture, collective robotics and fluid growth. It will involve the live cinema collective *Shapes of Emergence* (directed by B. Saintyves), the Jaeger, Ax (directed by K. Nakagaki) and the Nagel Lab as well as the Visual Art program.

Director: Baudouin Saintyves / Assistant Director: Ken Nakagaki / Installation Artwork: Yousif Alzayed, Severine Atis, Yuntao Gao, Luke Jimenez, Noah Lawson, Ken Nakagaki, Baudouin Saintyves, Willa Yunqi Yang, Yfan Zou / Performance Artwork: (*Shapes of Emergence* collective) Severine Atis, Roiel Benitez, Otto Briner, Ben Kinsinger, Baudouin Saintyves / Laboratories: AxLab (Computer Science), Nagel Lab (Physics), Jaeger Lab (Physics)



© Yousif Alzayed

Yousif Alzayed (KW/US), Severine Atis (FR), Baudouin Saintyves (FR/US)

In the Light of Growth

In the Light of Growth is a light sculpture that displays a recently discovered transition between disordered and proportionate fluid growth patterns. While disorder is predominant in the non-living world, proportionate growth is an essential feature in the morphogenesis of multicellular organisms. The installation highlights a physical mechanism that can impart life-like properties to a simple fluid in motion.

Laboratory: Nagel Lab



© Yifan Zou, Willa Yunqi Yang

Yifan Zou (CN/US), Luke Jimenez (US), Willa Yang (CN/US), Ken Nakagaki (JP/US)

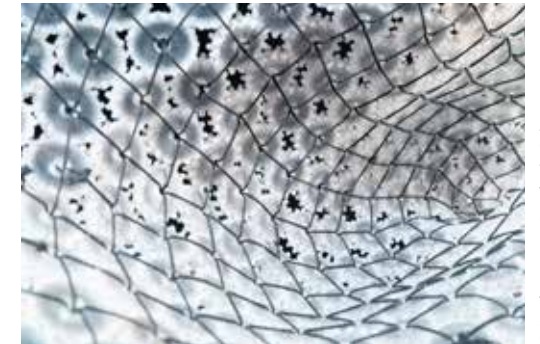
STONES

STONES is an interactive installation that speculates on the vitality in non-living forms. Embedded with custom flywheel-based actuation units, the erodible clay stones can flip, jump and rotate. When held, they offer a unique tactile experience of inertial force. As the stones roam around a landscape relief, their bodies are continuously reshaped and reinvented. The installation invites viewers to contemplate the future relationship between humans, nature and intelligent machines.

Baudouin Saintyves (FR/US), Noah Lawson (US), Yuntao Gao (CN/US), Heinrich Jaeger (DE/US)

Amorphous Stories

A disordered monolayer made of granular objects when connected together can reconfigure to generate self-supporting structures with complex, non-symmetrical curvature. Lighting and optical effects within the “grains” generate patterns that encode a specific reconfiguration history, thus highlighting the material’s ability to “remember.” *Amorphous Stories* is based on ongoing research at the Jaeger Lab on reconfigurable design matter, located at the intersection of physics, material science and architecture.



© Noah Lawson, Baudouin Saintyves, Yousif Alzayed

Shapes of Emergence: Baudouin Saintyves (FR/US), Severine Atis (FR), Otto Briner (US/FR), Ben Kinsinger (US), Roiel Benitez (PY/FR)

Water Organoids

Water Organoids is a live cinema performance using an “immersive microscope” to film and project an invisible and counter-intuitive reality of self-organizing water structures. Physical experiments are performed alongside improvising musicians in front of the audience, as a puppetry of an emerging, primitive form of life. With custom technologies, it explores poetic narratives with real-world materials that force performers to react to unplanned events that are unique to each performance.



© Yuntao Gao

Baudouin Saintyves (FR/US), Heinrich Jaeger (DE/US)

Living Pile

Granulobots form reconfigurable aggregates of robots, each representing a “grain” that can move. Recently developed in the Jaeger lab, such assemblies exhibit self-coordinated collective behaviors emerging from purely mechanical and decentralized processes. By connecting the mind and body via self-organization, it highlights a paradigm for robotic design that blurs the lines between matter, responsive interfaces and intelligent self, with opportunities for more efficient and adaptable machines.



© Baudouin Saintyves

Artcor—Creative Industries Center (MD)

Flow of Tomorrow

Continuous and proactive efforts to preserve cultural heritage and address environmental challenges ensure a sustainable and thriving future.

The exhibition *Flow for Tomorrow* explores cultural preservation and environmental sustainability. It showcases *The Untold Stories of the City*, a project undertaken by Artcor in collaboration with the Moldova young artist community, and *Chronicles of the River*—an installation curated by Oxana Capatina, joined by Bogdan Postolachi (audio) and Vill Mahnenco (visual). The exhibition aligns with the festival theme by intertwining narratives of Chişinău's historical buildings with reflections on Moldova's freshwater crisis. Through graphic illustrations and AR experiences, the first project revives a series of buildings, emphasizing architectural heritage. Meanwhile, *Chronicles of the River* confronts Moldova's severe water scarcity, where half of its rivers have vanished, and 97%

of well-water is undrinkable. This interactive installation invites viewers to trigger natural river sounds by interacting with water-filled bowls, highlighting our interconnectedness with nature and urging sustainable water use. The exhibition contextualizes these issues culturally, socially and scientifically, underscoring the urgency of preserving heritage amid urbanization and addressing environmental degradation.

Chronicles of the River—an installation curated by Oxana Capatina, joined by Vill Mahnenco (visual) and Bogdan Postolachi (audio).

The Untold Stories of the City—a project undertaken by Artcor in collaboration with the Moldova young artist community.

© Illustration by Irina Cleşcenco



The Untold Stories of the Chisinau City

Project undertaken by Artcor in collaboration with the Moldova young artist community

The Untold Stories of the Chisinau City combines the history of Chisinau, architectural monuments, storytelling and technology. This fusion has resulted in graphic illustrations and digital stories, featuring elements of animation, sound and AR. These stories bring to life buildings from the national heritage of the Republic of Moldova.



© 3D visualisation by Villi Mahnenco

Capatina Oxana (MD), Villi Mahnenco (MD), Bogdan Postolachi (MD)

Chronicles of the River Audiovisual Experience

Chronicles of the River addresses freshwater scarcity in Moldova, where nearly half the rivers are disappearing. The installation invites audiences to reflect on our interconnectedness with nature and the need to protect water resources. As visitors interact with water-filled bowls, they trigger natural sounds from specific rivers, creating a symphony that evokes the voice of nature. The project aims to raise awareness and motivate action towards ensuring sustainable water use.

Faculty of Theater and Film, Babeş-Bolyai University Cluj-Napoca (RO)

Artificial Imaginaries for the Future Present

“Imaginary” refers to the “faculty of radical innovation,” that is, the capacity to generate new meanings that become the basis of advanced artistic forms. Artificial mechanisms (such as those epitomized by AI) play a crucial role in this process, not only because they facilitate infinite possibilities for the image and the ways to experience it, but especially because they produce a whole different way of thinking and producing knowledge. One that speaks not so much about our uncertain future, but about our reliable present. Or the other way around! While acknowledging various crises that mark our world today, this project aims to look at and work with all these issues rather optimistically, while mobilizing some of the most future-oriented tools: imaginaries, innovation and art.

The works included in the exhibition address these topics through various strategies of artistic

research that put in the forefront (the future of) human presence as an individual occurrence and as a societal construction, as well as—in a post-human take—the world surrounding us: nature, plants, crystals, data. Technology is employed here both as a means of production and as a philosophical framework in installations conceived at the confluence between art and science (working with geological and biological elements, and communication technology data), or employing human presence as either a self-mythological journey, or as an artificial, intelligent but provocative humanoid being.

Curator: Horea Avram / Artists: Flavius Coman, Adrian Crăciunoiu, Peter Leidl, Florin Marc, Agata Olteanu / Project Coordinators: Rodica Mocan, Cristina Pop-Tiron, Adelina-Laura Bulibasa / Institution: Digital Interactive Arts Master’s program at Faculty of Theater and Film, Babeş-Bolyai University, Cluj-Napoca, Romania.

Agata Olteanu (RO), Teodora Mihăilă (RO)

Memory Pills

Analog photography-based project using AR to tackle the theme of memory and imagination. The public is presented with different iterations of half-burnt 35mm film photographs (hung on the wall) that explore possible pasts through the intervention of objects and processes inside the negative space. The possibilities that arise from this chemical accident will be explored and combined in a transmedia project through AR.



© Agata Olteanu

Adrian Crăciunoiu (RO)

Natura ex Machina

Natura ex Machina is an interactive installation merging virtual and physical worlds, natural ecosystem and the data flux. Through a transparent screen overlaying real objects, users manipulate digital graphics via proximity sensors and gestures. This dynamic interaction transforms visuals in real-time, prompting reflection on humanity's relationship with nature amidst urbanization and technological development.

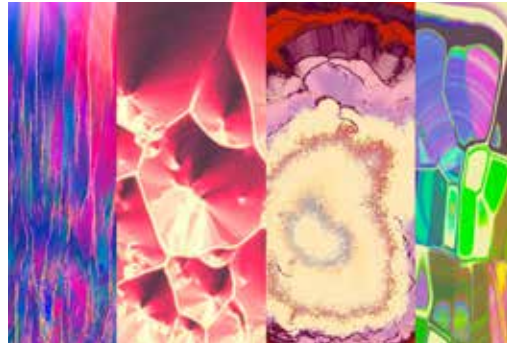


© Adrian Crăciunoiu

Flavius Coman (RO)

Coldness Drawn Together

The work addresses issues of miscommunication, of the lack of caring and connection between people. Taking the literal meaning of the word crystal (coldness drawn together), the installation will show a near-accurate representation of the aftermath of different chemical compounds merging under a microscope and being illuminated with a polarized light. Transferring this to real life, it will help connect with each other. The results could be mesmerizing.



© Flavius Coman

Florin Marc (RO)

Anadary: Shadows of Intelligence

The project proposes an interactive exploration of the impact AI and ML have on human intellectual capabilities, challenging visitors to reflect critically on the question: "Is AI the hope?" The experience consists of a dialog between participants and an AI non-player character (NPC), represented as a female humanoid figure. This NPC will be capable of conducting non-linear conversations in English, trained with a variety of scientific works addressing different future AI scenarios.



© Florin Marc

Peter Leidl (RO)

Packets

Step into a data visualization experience, where mobile phones and Wi-Fi signals will be harnessed in order to craft captivating visuals and haunting soundscapes. As your device connects to the network, watch intricate patterns unfolding and hear rhythms of modern connectivity echoing. Delve into the juxtaposition of surveillance and anonymity, where the boundaries between chaos and control blur, feeling simultaneously empowered and powerless in the face of our digital world's omnipresence.



© Marta Winkler

Virginia Commonwealth University School of the Arts in Qatar (QA)

Fractal Fables

While deeply connected, the complex relationship between language and meaning can be subject to ambiguity, interpretation and cultural variation, reflecting the intricate nature of human communication. Within the context of the Southwest Asia, North Africa (SWANA) region, where myriad languages, dialects and cultural influences intersect, the relationship between language and meaning becomes inherently multifaceted.

Language can serve as both a bridge and a barrier, weaving together divergent threads of history, tradition and identity. Varying media and mediating technological forms can give rise to complexities

and nuances that defy simple interpretation. *Fractal Fables* invites viewers to engage with language not merely as a means of communication but as a lens through which to explore conceptions of meaning within diverse perspectives and experiences rooted in the SWANA and the Far East regions.

Wujood: Basma Hamdy, Shima Aeinehdar, Selma Fejzullaj, Levi Hammett
UNFOLDING REMEMBRANCE: Folding Islamic Principles into Pondering Machines: Hind Al Saad
The Desert and the Sea: Erika Tsuchiya, Ayza Sheikh, Syed Navi
Luminance: Rogsh Emmanuel Garcia
 VCUarts Qatar

Hind Al Saad (QA)

UNFOLDING REMEMBRANCE

Folding Islamic Principles into Pondering Machines

Principles of early Islamic art can be surveyed as a precursor to early computational art. Even though they live in separate eras of time and location, they have threads connecting them through their underlying structures—arithmetic, harmony and the concept of the infinite. This project translates these connections into pondering machines that fold Islamic principles into the medium of computation—developing a computational artistic practice rooted in Islamic spirituality and contemplation.

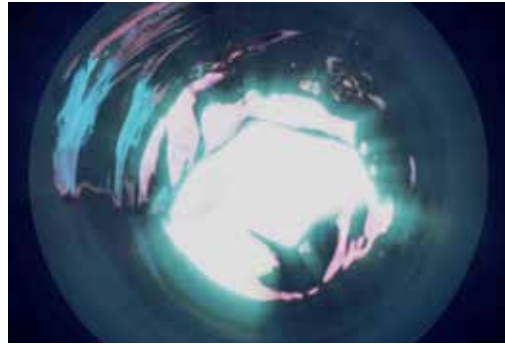


© Raviv

Erika Tsuchiya (US), Nada Abdo (EG), Ayza Sheikh (PK), Syed Navi (PK)

The Desert and the Sea

Based on a poem by Qatari poet Saoud Al-Kuwari, *The Desert and the Sea* aims to create an immersive experience through VR and spatialized sound. With 360-degree footage from the desert and sea, the project seeks to enhance the sensation of immersion through a frameless video format. Sound features prominently with recorded voiceovers, field recordings and spatialized sound design. The intention is to reflect on the natural beauty and history of the landscape, as well as the diverse population of the Gulf region.



© Erika Tsuchiya

Basma Hamdy (EG), Shima Aeinehdar (IR), Selma Fejzullaj (AL), Levi Hammett (US)

Wujood

Wujood is an animated tapestry woven together through a mosaic of electronic components. Illuminated by thousands of LED bulbs, the piece serves as a visual ode to the rooted nature of the Arabic language, emulating the fractal intricacies observed in nature—from the smallest seed to the farthest star. The piece straddles traditional craft and technology, presenting unfolding words through the rhythmic glow of LED panels.



© Basma Hamdy

Rogsh Emmanuel Garcia (PH)

Luminance: A Narrative Lidar Experience

This immersive game invites players to explore the narratives of Filipino culture through the use of LiDAR technology. Using a LiDAR scanner, viewers can navigate a series of nine intricately-designed rooms to uncover scenes from diverse stories of tribes, livelihoods, struggles, traditions, celebrations and journeys of the Filipino people. This journey is accompanied by a poetic narrative that weaves the past, present and future of a vibrant Filipino heritage.



© Rogsh

Festival X Next Gen in collaboration with American University of Sharjah and Dubai Institute for Design and Innovation (AE)

Amplifying the voices of UAE universities

The UAE, both a geographical region and a cultural interpretation, thrives on the juxtaposition of tradition and innovation. Rooted in history, it embraces technology to shape its cultural identity, reflecting a unique societal expression. Festival X at Ars Electronica Campus 2024 amplifies voices from diverse universities: Dubai Institute for Design and Innovation pioneers innovative design education, fosters collaboration and explores diverse disciplines. American University of Sharjah blends traditional and digital art techniques, promoting global perspectives and interdisciplinary teamwork. These faculties represent a blend of tradition and innovation, fostering dialog amid diverse life circumstances. Festival X, along with its partners, showcases technology's transformative potential in culture, highlighting cultural diversity in the way it is used and evaluated.

Festival X Export Team

Amin Davaei: Co-founder and Director, Co-curation; Martin Honzik: CEO, Curatorial Text, Co-curation; Rokhsana Taghvaei: Project Manager; Mona Samadani: Art Director; Shamim Allamezadeh: Graphic Designer; Shaghayegh Fakharzadeh: Graphic Designer; Roshan Takallomi: Coordination and Mediation

Special thanks to Gerfried Stocker, Christl Baur, Katsiaryna Suryna, Zlatan Filipovic, Joanne Hayek and Mirko Daneluzzo



© Festival X

Dubai Institute of Design and Innovation (AE) *ti(d)es*

ti(d)es is an interactive installation that explores the power of collective action in keeping with the theme of this year's festival. The installation embodies the idea of presence in absence, with connection and impact felt across distances. *ti(d)es* features a projection of a generative drawing that mimics the movement of ocean waves, with the tide growing over time to symbolize escalating challenges. Visitors interact with the tide using their hands, but the only way

to turn the tide is through simultaneous engagement with participants in Dubai. This highlights the necessity of global cooperation. The collective performance fosters a form of shared presence between Ars Electronica in Linz and DIDI in Dubai, opening new possibilities for shared experiences and connections.

Curation: Joanne Hayek, Mirko Daneluzzo, Raffi Tchakerian / Creative Direction: Sundar Raman / Team: Adnan Haroun, Nisam Parayil, Abdu Ravoof

Sahar Baniabbasi (IR)
I, Herself

I, Herself is a short animated film created by Sahar Baniabbasi that focuses on over-reliance on AI. The story follows the main character, who stumbles upon a mobile advertisement for a Robohelper who can assist her throughout her daily life: an AI maid of sorts. Going through a rough time in her life, she does not hesitate before making the purchase: it is just too good an offer to pass up. Little does she know that one tap on her screen is about to change her entire life. The film aims to show the positive aspects of AI, while also warning the viewers of the possible negative outcomes if one becomes overly dependent on it.



© Sahar Baniabbasi

Yomna Badr (EG)
SkyBorn House of Wisdom

This Virtual Reality experience showcases the House of Wisdom in Baghdad and highlights inventions from the Islamic civilization. It aims to draw parallels between Islamic civilization and Western myths. *SkyBorn House of Wisdom* intends to immerse the user in a new environment, to use short narratives and videos with the goal of bridging historical narratives. Yet it also offers a captivating and educational journey that enhances understanding and appreciation of the Islamic civilization's impact on global knowledge.



© Yomna Badr

Hend AlShamsi (AE), Jenine AlHamaydeh (PS)
On This Land

On This Land is a project inspired by Mahmoud Darwish's poem that sheds light on the ongoing struggles faced by Palestinians and visualizes the displacement through four stages. These stages mark shifts in the geopolitical landscape with land reduction and conflict. In times when our societies have faced the worst grievances, the arts have empowered people to enact change. Projects like *On This Land* aim to ignite conversations on overlooked issues, aiming for meaningful change.



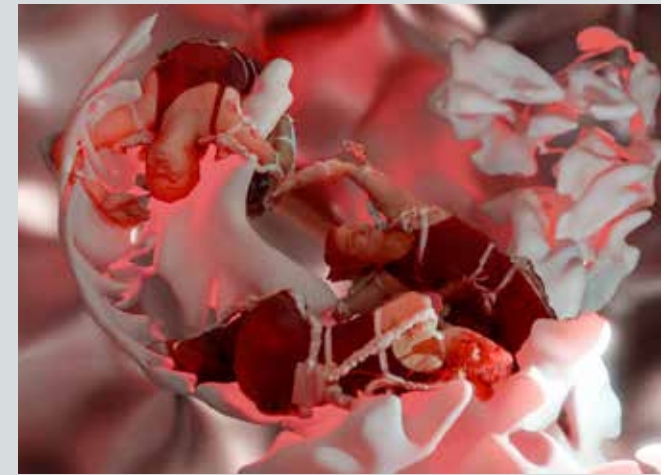
© Hend AlShamsi

Umanesimo Artificiale (IT)

open lab: meat, metal, code

As our identities intertwine more deeply with the digital realm, *transreal* encourages the visitors to challenge traditional concepts of selfhood and embodiment, inviting them to actively engage in the exploration. A defining feature of Umanesimo Artificiale intervention at Ars Electronica Festival 2024 is the creation of an open lab environment where artists work in real time, involving visitors in the creative process. Visitors have the chance not only to gain insight into the artists' research but also to directly experience and contribute to the final artwork as it evolves throughout the festival. Central to the open lab is the question: How do we perceive and embody ourselves within the virtual realm? In the collaborative project *transreal*, contemporary dancer Hannah Wimmer and transmedia artist Maximilian Prag traverse the boundaries of flesh

and code, becoming vessels for a symphony of prosthetic reembodiment. Here, computers and devices become whispers of our identity, sculpting narratives that transcend the digital horizon and echo through the corridors of our collective consciousness.



© Maximilian Prag

Hannah Wimmer (AT), Maximilian Prag (AT)
transreal

In the face of digital (dis)continuities between overload and intuitive understanding of the body, doublings of worlds are renegotiated in *transreal*. The two artists dedicate themselves to the inseparable relationship between bodies and digital space and venture a look under the skin, at the structures and meta-physical conditions of our time. Based on movement captured by a motion capture suit, the space is explored performatively and translated and transformed into both virtual and offline worlds.



© Xenia Sapiro

Computational Media and Arts, Hong Kong University of Science & Technology—Guangzhou (CN)

Convergence: A Melodic Dance of Language, Ink and Emotion in the Cosmos

Exploring the Harmony of Tradition and Technology Through AI and Cultural Heritage

Convergence explores the core question of how tradition and technology intersect to create a harmonious blend of language, ink and emotion in the cosmic landscape. This exhibition resonates with the festival theme "HOPE—who will turn the tide?" by showcasing the transformative power of art and technology in fostering inclusivity, cultural connections and emotional healing, offering a beacon of hope for the future.

The participating artists—including Jiayang Huang, Yue Huang, Yulin Shen, Joshua Nijati Alimujiang, Fiona You Wang, Hiimorit, Jiaqi Shi, Tianyu Lin, Zhen Wu, Changkun Liu and Xingxing Yang—present innovative works that invite audiences to engage with a multi-sensory experience. Upon entering the exhibition, visitors will immerse themselves in a diverse array of experiences, from interactive installations

addressing linguistic taboos to calligraphic art merging Eastern and Western cultures, cosmic nomadism intertwined with ancient chants, a transformative exploration of Uyghur heritage through AI technology and a Virtual Reality journey delving into emotional bonds and affective connections.

The cultural and social context of the exhibition delves into the fusion of Eastern and Western influences, the preservation of heritage inclusivity, the exploration of cosmic dialog through sound and senses and the enhancement of emotional connections in Virtual Reality, reflecting the ever-evolving landscape of art and technology in our interconnected world.

Computational Media and Arts, Hong Kong University of Science & Technology (Guangzhou)

Zhen Wu (CN), Changkun Liu (CN), Xingxing Yang (CN)

Tame

A musical journey embracing affective emotions and bonds in Virtual Reality

VR, often seen as an escapist realm, offers solace detached from real-world constraints. What if we could feel genuine affection here, connecting with others on a deeper level? Inspired by *The Little Prince*, our *Tame* project is a multi-sensory journey exploring taming, bonding and attachment. Players, as the Little Prince, traverse diverse locations, discovering emotional bonds. With generative AI for music, *Tame* enhances engagement and offers a healing, interactive VR experience.



© Zhen Wu

Jiaqi Shi (CN), Tianyu Lin (CN)

Ink Sonata

Ink Sonata merges Eastern and Western cultures using AI to deconstruct piano music into emotions and reconstruct them as calligraphic art. Viewers can explore “calligraphic works” inspired by Beethoven and Pudsey, interact with the art through an interactive piano installation and immerse themselves in the emotional essence of music through oriental ink lines. *Ink Sonata* challenges cultural boundaries, redefining “understanding” in the digital era and showcasing technology's impact on art.

Jiayang Huang (CN), Yue Huang (CN),
Yulin Shen (CN)

Ephemera

Language as Virus, Art as Antibody

Ephemera is an interactive installation addressing linguistic taboos. Using a surreal “virus” as an AI embodiment of banned words, we employ generative models for visuals and large language models for communication. This project simulates a world of forbidden language, prompting introspection on unconscious discourse and AI's understanding of censored language. Our work, proposing *Language as Virus, Art as Antibody* offers new perspectives on language taboos and the art-technology intersection.



Ink Sonata © Jiaqi Shi



Ephemera © Jiayang Huang

Fiona You Wang (CN), Hiimorit (CN)

Hum

After growing up in inner Mongolia, I embraced the nomadic spirit and cosmic nomadism by living in various countries. By converting data from the James Webb space telescope into audible waves and blending them with ancient nomadic chants, viewers can experience a sensory journey that connects them with the universe through organic sounds. This exploration invites audiences to engage with the interplay of sound, senses and human experience, enabling them to actively participate in a cosmic dialog.

Joshua Nijati Alimujiang (CN)

DanceYipékda

AI Encountering Tactile Uyghur Atlas

DanceYipékda is a transformative project that integrates AI technology with traditional Uyghur Atlas fabric to preserve heritage inclusively. The exhibit features 3D-printed sculptures adorned with vibrant colors and intricate designs, inviting tactile engagement. Through dynamic projection mapping, the artwork comes to life, creating a captivating dialog between physical forms and digital enhancements while also fostering cultural connections and inclusivity in the modern age.



Hum © Fiona You Wang



DanceYipékda © Joshua Nijati Alimujiang

National Tsing Hua University, Taiwan (TW)

Anthropogenic Encroachment

Anthropogenic Encroachment aims to provoke critical reflection on humanity's dual roles both as intruder and collaborator within post-natural ecosystems. As Bernard Stiegler noted, we live in a complex epiphylogenetic era. Those of us residing in the Anthropocene epoch find ourselves subsumed by the proliferation of technology. Artifacts of material culture we implement manifest diversely throughout our world, gradually reshaping our behavior, perception and understanding. By reconceptualizing humans as an invasive species within this ecosystem, the exhibition's narrative prompts alteration of participants as intruders into our space. Inspired by *Dogville*, five new works will be situated in a theatrical-conceptual space. *Beggar* imagines the speculative alteration of Dodder's genome for human genetic integration, enabling a direct way for humans to parasitize and consume nutrients from plants. *Vibration and*

Traces focuses on the destructive impact on the environment when minor human acts are aggregated. *Words Nowhere to Go* criticizes constraints on the free speech/expression endemic of internet culture, aiming to reconnect our utterances with environment and people. *Solitude Internet* reexamines how technology may re-embrace our essential nature. *At the Bend of the Street* denotes today's human rights/privacy predicament, employing city maps/private hotspots to symbolize individuals' yearning for liberty and sanctuary amidst pervasive surveillance. These works immerse viewers, provoking thoughts and discourses.

Sponsored by: College of Arts, National Tsing Hua University, Spring Foundation, Graduate Institute of Art and Technology, National Tsing Hua University, Interdisciplinary Program of Technology and Art, National Tsing Hua University

Chun-Huang Lin (TW)

Words Nowhere to Go

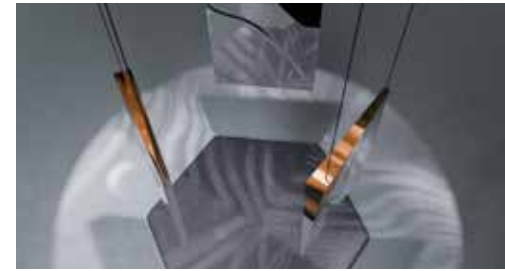
People can encapsulate intimate memories, emotional phrases and posts that had to be removed into barcode stickers, concealing them in the tapestry of everyday life. Through this project, we aim to evade the "textual prison" imposed in the digital age. We hope that one day, people may chance upon these stickers and discover the profound significance of the phrases for that particular "someone," thereby imbuing the cold barcodes with the warmth of emotions and enriching their value and meaning.



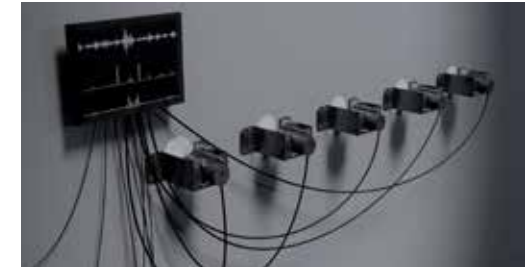
© Chun-Huang Lin



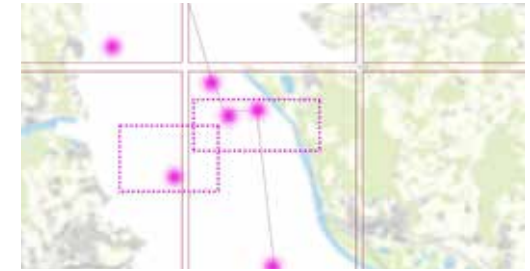
Beggar © Yi Jie WU



Solitude Internet © Wei San Chiang, Yi Yen Chen



Vibration and Traces © Chi-Hung Huang



At the Bend of the Street © Yu-Ching Lin

Yi-Jie WU (TW), Ying-Ying CHIU (TW)

Beggar

Dodder, a plant that thrives in Taiwan, was first documented in *Shennong Bencaojing*. Dodder cannot photosynthesize or absorb water from the soil. To survive, it parasitizes other plants, using unique suction structures to penetrate the host to gain nutrients, causing the plant to wither. To reduce the population of Dodder and utilize it, we have genetically modified its genes to humans, allowing a more direct way to parasitize and consume nutrients from plants.

Wei San Chiang (TW), Yi Yen Chen (TW)

Solitude Internet

As humans began using tools, technology expanded our individual boundaries, yet our consciousness remains confined within our bodies, highlighting loneliness. In this era of information explosion, have we found balance with technology? Have we realized life's truth and salvation through its development, or do we still struggle with misinformation and misunderstanding? This existential struggle is what we aim to express through our artworks.

Chi-Hung Huang (TW)

Vibration and Traces

The artificial earthquake refers to seismic events caused by human activities rather than natural occurrences. As the human population increases, unintentional artificial earthquakes also begin to be created, with even the simple act of human movement contributing inadvertently. Our feet on the ground and paces generate extremely small vibrations and noises with each step, which gradually alters the frequency of the earth, leaving traces behind when vibrations accumulate.

Yu-Ching Lin (TW)

At the Bend of the Street

Representing an oasis filled with freedom. Here we find that technology has gradually stripped away human rights, confining humanity to a cage devoid of privacy, surrounded by invisible jailers and watched by billions of eyes. People become naked prisoners under the shadow of technology. Private sanctuaries offer hope and respite, with each marker on the map showing paradise beyond.

Musrara, The Naggar School of Art and Society, Jerusalem (IL)

Structural Neurosis

Musrara, the Naggar School of Art and Society, Jerusalem, presents fragments of the graduation project of Shaul Dahan. 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 their inclinations, personal and professional abilities.

Shaul Dahan, a student of the Artistic Research Program at the Department of New Music, presents in his own unique voice the work *Structural Neurosis*—a sound installation dealing with the compulsive and neurotic behavior that is an integral part of confession ceremonies and prayers, and the believer's experience of devotion. The repetitiveness, built into the text itself, becomes compulsive when it meets a believer who repeats and confesses a foregone failure.

This leads to an ecstatic feeling on one hand and neurotic behavior on the other. The work creates a worship space that expresses the inherent compulsive behavior and the annihilation of the self in the face of divinity.

The work uses generative and controlled sound systems created in Max MSP and modular for ambisonic speakers. Dahan's research on obsessive compulsive neurosis is based on his personal experience as part of the Ultra-Orthodox community, alongside his work with the construction and creation of repetitive sound systems. The work combines prayers and spiritual rituals of multi-cultural optimism.

Artist: Shaul Dahan (IL) / Development Support and Artistic Escort: Amir Meir, Dr. Yoni Niv, Amir Bolzman / Supported By: Musrara, the Naggar School of Art and Society, Jerusalem & Les Amies de Musrara, France



© Shlomo Pozner

London College of Communication, University of the Arts London (UK)

Making-with

Making-with is a series of discontinuous narratives coming together to tell a greater story of what it is to be more than human. This year's MA Interaction Design cohort at London College of Communication evaluates the ways in which art and design practices of today shape the storytelling of the future through multiple forms, from speculative narratives and filmmaking to practical workshops and investigations of planetary computation. Merging a wide variety of backgrounds and practices, MA Interaction Design sets out to demystify our relationship with the environment through decentralized narratives, in which our more-than-human cohabitants take precedence. What if there was no wind? What might the

more-than-human prophecies of today look like? How can our presence be positive for other beings? By engaging with these new systems of thinking, audiences have the opportunity to explore the embodiment of crisis and survival, of decay and regeneration. *Making-with* invites us to contemplate how we use resources, how we create with others, machines and the environment and what it means to be a part of a sympoietic system. *Making-with* was first shown at the Science Gallery, London in Spring 2024.

Curatorial Text: Sabina Otela / Original Exhibition Organization and Curation Team: Demi Abiru, Sagar Bhat, Shiqing Ge, Zero Minglin He, Hsiang Ting Hsu, Daian Alexa Muñoz De La Hoz, Sabina Otela, Mia Ribic, Elmira Selinova, Adza Tarka



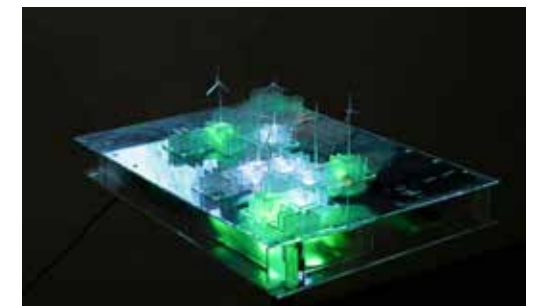
© Anna Diessner

Anna Diessner (DE), Mia Ribić (HR), Zero Minglin He (CN), YuanYuan Hu (CN)

Whispers from the Still

Whispers from the Still imagines a speculative future without wind, depicted from a non-human perspective. This intimate installation consists of fabrics adorned with poems, inviting the visitor into a contemplative space. Touching these poems elicits desperate sounds from the living beings. The interactive installation challenges viewers to confront the fragility of natural forces and reflect on their role in an ever-evolving world.

Sound Design: Bryan Yueshen Wu



© Zeyu Hu

Ying Xiong (CN), Hsiang Ting Hsu (CN), Muqing Yu (CN), Wei Lai (CN)

Green is an Elusive Colour

To address global warming and its associated suffering, countries have begun implementing green transitions. But therein arises the hidden danger of green colonialism. Taking as an example a wind farm project in Norway which poses a significant threat to the natural migration routes of reindeer, and therefore the livelihood of those who live there, this work encourages reflection on whether the green transition as currently applied is unfairly sacrificing the living environment of the minority.

Mo Cheng (CN), Jiachen Qi (CN), Haowei Yan (CN), Xiaochang Wu (CN)

Protection Evolves Destruction

The use of palm oil to replace traditional fuels, with the aim of reducing the greenhouse effect, is causing new problems such as forest destruction. Solutions proposed to address one environmental problem can actually create different and equally destructive problems. The installation is built to illustrate this phenomenon, critically reflecting on material extraction and what so-called resourceful solutions from the past might mean for the future.



© Mo Cheng

Jia Lyu (CN), Zitong Wang (CN), Lintang Kirana Sitaputri (ID), Demi Abiru (IE)

Symphony of Symbiosis

Over 75 percent of the world's soils are degraded—we need to take radical steps to reverse the trend and restore biodiversity. *Symphony of Symbiosis* uncovers the bond between humans, sound and mycelium. This project invites visitors to explore how sound frequencies affect mycelium and how it responds to electrical charges emitted by living beings. By emitting charges that positively affect mushrooms and mycelial networks below the ground, they help heal our soil and improve our ecosystem.

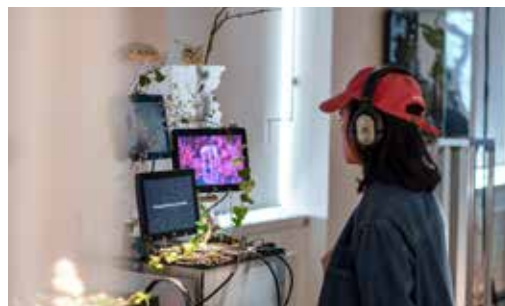


© Lintang

Sabina Oțelea (RO), Sagar Bhat (IN), Shiqing Ge (CN), Ren Han (CN)

The Oracle of Darklings

This techno-biophilic oracle houses an anthology of speculative fabulations exploring the perspective of more-than-human entities in the face of the end of the world. These narratives are presented in the form of visual and sonic simulations of Darklings, creatures of the future whose experiences of climate collapse act as the prophetic dreams of today. This speculative project acts as a critique of seeking knowledge through machines while deconstructing the archetype of the millionaire messiah.



© Shiqing Ge

Royal College of Art (UK)

Beyond the Veil

Unravelling Unseen & Unheard Narratives

In this exhibit, we explore how experimental digital media methods can reveal hidden narratives governed by repositories of official knowledge. Taking the archive, the university, the hospital, the corporation and the scientific institution as sites of exploration, each exhibit interrogates the dynamics of knowledge ownership and visibility in five unique experiential artworks. The goal is to enable a critical dialog between society, technology and science.

Mammary Mountain sheds light on the harrowing struggles of treatment for breast cancer patients, amplifying unheard voices within healthcare systems. The *Materialised Temporality of Dust* invites viewers to experience institutional space and time from a microbial perspective, through the notion of the pluriverse. *Arquivista AI* leverages Artificial Intelligence to visualize alternative historical narratives for incomplete archives. *Seeing Through the Walls of Silicon Valley* inverts the surveillant gaze of social media companies through a VR replica of the tech campus, prompting reflection on power dynamics in corporate

spaces. *Sioscadh* challenges traditional authority by exploring alternative botanical knowledge systems through human-machine-plant performance. Collectively, these experiential artworks aim to liberate captive testimonies and histories, fostering critical dialog and empowering unheard voices. They envision a possibility where hidden narratives are exposed and positive change prevails.

We would like to acknowledge the Dean of the School of Communication, Kerry Curtis, for her unwavering support. The works and collaborations shown here are from tutors of the Digital Direction and Information Experience Design programs.

For *Mammary Mountain*, collaborators include Tara Baoth Mooney and Maf'j Alvarez

For *The Materialised Temporality of Dust*, collaborators include Antony Nevin and Neil Aldridge.

Funding support has been graciously made by the RCA School of Communication and the RCA Research and Knowledge Exchange department. Funding for the *Mammary Mountain* was granted by The Arts Council England National Lottery Fund, the Arts Council Ireland Creative Ireland, Leitrum Country Council (Ireland), Creative Heartlands (Ireland) and Root Interactive.

Dr Carolina Ramirez-Figueroa (MX), Antony Nevin (NZ), Campbell Orme (UK), Laura Selby (UK), Neil Aldridge (NZ)

The Materialised Temporality of Dust

The Materialised Temporality of Dust is an immersive VR experience that uses dust as a material device to explore temporality and investigate the past and future from a microbial perspective. It invites audiences to engage with the notion of the pluriverse, a world of many worlds. Participants re-experience the Royal College of Art's Kensington Campus through the lens of microbial life using adjustable fields-of-view, non-human visual spectrums and audio-light effects.



© Carolina Ramirez-Figueroa 2024



Sioscadh
© Matt Lewis

Arquivista AI
© Nestor Pestana Arquivista AI

Mammary Mountain
© Mammary Mountain 2024

Seeing Through the Walls of Silicon Valley
© Claude Dutsun 2024

Claude Dutsun (GB)

Seeing Through the Walls of Silicon Valley

Seeing Through the Walls of Silicon Valley is a VR installation inviting the public into the private domain of the tech campus. Google, Apple and Meta's campuses testify to their status and influence on public life, yet remain inaccessible to the general public. Inverting the surveillant gaze of social media, Part I—The Platform is a digital replica of Meta's campus created from publicly available images and videos, using architecture as a lens to tell the story of power and aggregated data.

Nestor Pestana (PT/VE)

Arquivista AI

I want a president

Arquivista AI is a research platform that creatively explores the relationships between gaps in historical knowledge and Artificial Intelligence. Through archival research, historical gaps are identified and filled in with alternative histories, deliriums and glitches generated with AI. For Ars Electronica, Nestor Pestana is working with the Archives of the City of Linz to identify a historical gap. Alternative histories will be presented as texts, sculptural artifacts and a projection.

Tara Baoth Mooney (IE), Camille Baker

(CA/GB), Maf'j Alvarez (GB/ES)

Mammary Mountain

Mammary Mountain is an immersive Virtual Reality (VR) experience that explores disease within the body during breast cancer and the body's relationship to the broader context of the land. This immersive experience tells the lesser-told stories of patients and survivors—not only of survival, but of trauma from the life-changing experience of (breast) cancer through a haptic garment, so that audience members / visitors can feel vibration in the area of the lymph nodes where breast cancer grows.

Matt Lewis (GB)

Sioscadh

Sioscadh is a sonic knowledge system built on onomatopoeia, non-verbal sounds, eco-acoustic recordings and the Freesound database. It is an ongoing collaboration between plants, humans and machines. All sounds heard during the performances are drawn from an improvisation between a collection of plants, machines, human voices and the Freesound API.

Design for Performance and Interaction, The Bartlett School of Architecture, University College London (UK)

Sensing Bodies in Space

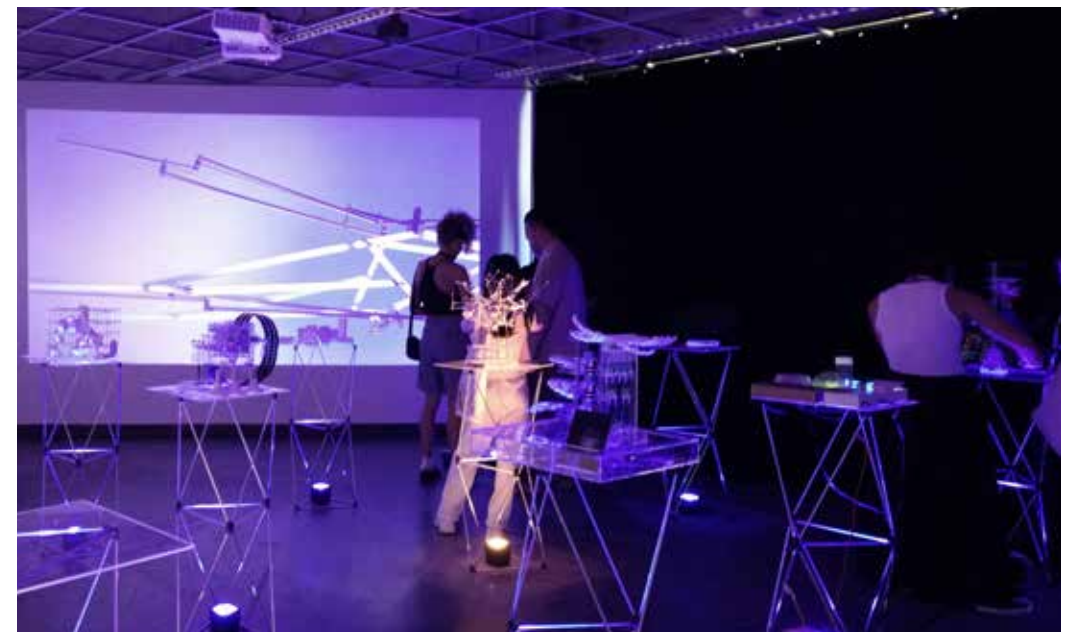
Visitors are invited to explore the relationship between sensory experience and space through a series of interactive installations. The exhibition examines how our bodies engage with and transform the often technologically mediated spaces we inhabit—the senses as mediators of reality. The projects engage different senses—touch, sight, sound, proprioception (the sense of body position)—to create unique environments where physical and virtual spatial boundaries and sensory inputs blend and diverge. The artworks challenge traditional notions of perception, encouraging visitors to become active participants in the creation of their sensory experiences through digitally-mediated processes.

Sensing Bodies in Space also investigates the social dimensions of spatial experiences.

Collaborative installations provide opportunities for visitors to interact with one another, exploring how collective sensory experiences can alter individual perceptions and contribute to a shared understanding of space.

The exhibition aims to provoke a deeper understanding of how the sensing body processes and adapts to the environments—physical and digital—that we move through. This exhibition is not just a showcase but an invitation to reflect on the fundamental ways in which our bodies comprehend and influence the world around us. It challenges us to reconsider the boundaries of our sensory experiences and to appreciate the unseen forces that shape our perception of reality.

Design for Performance and Interaction. The Bartlett School of Architecture, University College London



© Alberto Fernandez Gonzalez

Paul Bavister (GB), Anindia Pradita (ID), Andrew Yu (CA), Sakshi Galkate (IN), Kimverlyn Lim (SG), Demi Gao (CN), Nicole Xu (CN)

Sound space and perception

This installation deals with ideas of cross-modal perception, and how the senses work together to define how we unconsciously perceive our environment. Each sense informs the other, leading to heightened or softened perception of environmental phenomena; for example, the perception of sound can be modulated by the intensity and saturation of color. *Sound space and perception* generates a series of immersive, cross-modal environments that create new realities in the minds of participants.

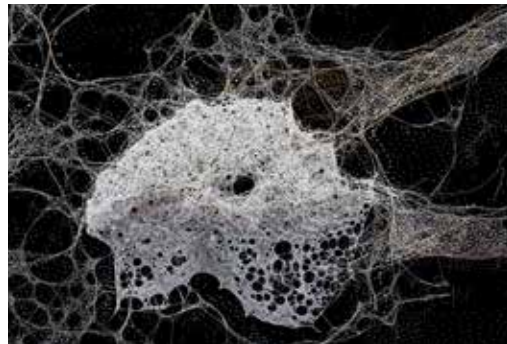


© Paul Bavister

Nikoletta Karastathi (GR), Zimeng Tan (CN), Winnie Ngai Lan Tam (US), Hayze Wan (MY), Ruoru Wang (CN), Rabih Arasoghli (LB), Swaraj Dhuri (IN)

Tactile Narratives

Skin acts as a dynamic medium between bodies and their surroundings, providing diverse stories and perspectives. Through a sensory metamorphosis, *Tactile Narratives* transcends boundaries, unveiling a multitude of narratives through textiles that serve as storytelling interfaces and tactile bridges. The installation invites reflection on how our bodies perceive, comprehend and shape our understanding of the world.

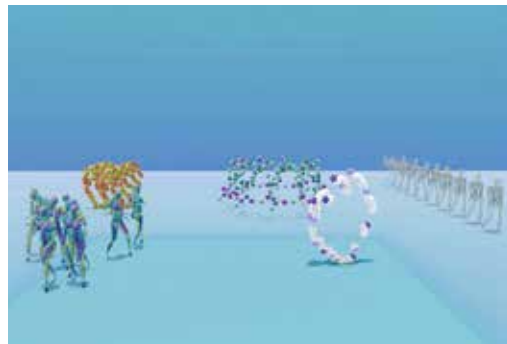


© Nikoletta Karastathi

Alexander Whitley (GB), Zijun Wan (CN), Natsume Ono (JP/US), Leonard Li (CN), Abigail Alvarez Aguilar (GB), Heta Shah (IN)

Virtuality in Motion

Virtuality in Motion explores the translation of human motion into virtual forms. Featuring a collection of bespoke avatar designs and a generative system of choreographic patterning, the installation allows participants to explore how their movement both influences and is informed by the unique spatial, kinetic and qualitative characteristics of the moving forms they are presented with. Participants can also explore the avatar designs and create their own movement sequences using the Otmo software.



© Alexander Whitley Dance Company

MFA Computer Arts, School of Visual Arts New York City (US)

Digital Jigsaws, falling into place

MFA Computer Arts (MFACA) at the School of Visual Arts emphasizes creative experimentation and a multidisciplinary approach to making art with computers and emerging technologies. Rooted in everyday subjects, the works in *Digital Jigsaws, falling into place* alter recognizable objects with interactive software to engage visitors and be shaped by their perspectives. Personal artistic styles translate as tools that explore and reconstruct utility items through humor, optimism and choice. MFACA showcases two of their most recent experimental artworks in this exhibit,

which invite the audience to playful experiences. These creative systems of play promote interactions to warp and shape-shift everyday household items—as well as present a moment to walk with or dance with a projected “companion”. The exhibited works prompt a discourse of optimism through altered perspectives, verging on the absurd. The interfaces change the subjects of the artworks and our perception of them within tailored systems, as their existential pieces fall into place. Only through user interaction do they become complete.



© Kristie Kish

Kristie Kish (US/HU/PH)

Crab

Crab is a multimedia installation that blurs the lines between realities, technologies and species. An immersive collage-jungle-projection where a friendly, interactive crab follows those passing by, constantly searching for their proverbial inner ocean. Through this captivating encounter, *Crab* serves as a poignant reminder of our shared humanity and intricate connection with the broader non-human realm.



© Andres Salazar & Wenyi Zhang

Wenyi Zhang (CN), Andres Salazar (CO/US)

Functionless

An interactive 3D tool exploring how surreal household items can become when we imagine their form apart from their function. The main element of this installation is the connection between the customized software and the analog controller that enables users to craft their own designs. An evolving gallery showcases past creations, inviting and inspiring new users. A real-size stool sculpture is fabricated, blurring the boundaries between physical and digital; giving shape to forgotten items.

School of Arts, University of Nova Gorica (SI)

Look Me in The Eye—The Time is Now!

“HOPE—who will turn the tide” This is indeed the question increasingly on our minds. Who will do it? When? Anytime soon? In which direction will the tide turn? Which tide? Will we do it? But who are we? Are “we” a single entity that can get together and react to make a difference, a positive step towards finally turning this tide?

And are we even wanting the same thing, experiencing the same pain, the same joy, sharing the same concerns? We would like to believe that we do. That we all want a safe future for all of us as a society, for the planet for the world. But how do we see this bright future, even as we do not even share similar views of the present, let alone the past? Conflicts multiply, the “never again” motto

has already been forgotten and trampled over a thousand times. Hope is a strong and helpful feeling, but it directs us to the future. Hoping that it will be better “someday,” that it will be better “soon.” That “someone” will do “something” that will turn the tide. But who will it be, this mighty one who will come and save the world? And will it not be too late if we just wait for it to happen? Hey, let us start with the two of us! *Look me in the eye—the time is now!*

Exhibition Curator: Rene Rusjan / Mentors: Jasna Hribernik, Robertina Šebjanič, Rene Rusjan, Olga Toni, Jan Cvitkovič, Martin Turk / Producers: Rok Govednik, Polona Dolžan / Technical support: Urša P. Bonelli/ Responsible Person: Boštjan Potokar



© Luka Carlevaris

Luka Carlevaris (SI), Tamara Taskova (MK), Blaž Stantič Kobal (SI), Primož Lukežič (SI) Futurama: A Vision of 2086

Through the workshop *Futurama*, students developed new conceptual ideas that reflect today's human imprint on the world and reimagine the future that follows. They had been exploring how the human body will be shaped with the future food, the impact of textiles as a significant pollutant and shedding light on the environmental consequences of our material consumption, Artificial Intelligence as a compassionate and empathic companion and sonic scapes of the new future world(s) to come.



© Ana Evtić

Ana Evtić (RS), Nel Jeraj Sedej (SI) Futurama: A Liquid Vision of 2086

The *Futurama* workshop sparks students' imagination by inspiring them to develop concepts that mirror the current human impact on our planet, envisioning the pathways to come. These two multimedia installations serve as a liquid catalyst for contemplation, prompting viewers to ponder the transformative potential of materials like ferrofluids and liquids in shaping our evolving world and our imagery.

Mentor: Robertina Šebjanič

Polina Bakalski (MK), Luka Carlevaris (SI), Ana Evtić (RS), Milan Bajčetić (ME) Hope and Existential Grief in the Anthropocene

In this compilation by master's students, we encounter an intimate and critical reflection of the time and space in which we live. Confronting and acknowledging the origin of the modern state of "loss of the world" and the hope for "continuing life in the ruins," the foundation on which we can begin to think about new ways of living is represented.

Mentor: Jasna Hribernik



© Ana Evtić

Natalia Polonskaia (RU), Tamara Kirina (RU), Nel Jeraj Sedej (SI)

So, Who Will Turn the Tide? A trio of short cinematic reflections

A selection of short films that present students' personal perspectives on how we perceive or are affected by time and how that shapes us as humans.

Frants: Natalia Polonskaia, 14 min, 2024

I reflect: Tamara Kirina, 4 min, 2023

The Window: Nel Jeraj Sedej, 8 min, 2024

Mentors: Jan Cvitkovič, Olga Toni, Martin Turk



© Natalia Polonskaia

Ana Evtić (RS)

I's

Do we wonder how other people's eyes look at the world? Or do we only see our own in them? Do we fear confrontation, or does it depend on the person in front of us? Are their eyes foreign to us or well known? How do we feel about the whole process? And what do the eyes say about the one to whom they belong? That is what the work is about. Curiosity during the confrontation between two people.

Mentor: Rene Rusjan (SI)



© Ana Evtić

Department of Art Science, Osaka University of Arts (JP)

Stance Poker

Will AI intervention in avatar communication improve our well-being?

The “difference in stance” between people while communicating is a cause of stress and distress. For example, people with different opinions attack each other using language that includes harassment. In addition, there is a social tendency for minority opinions to be drowned out by the majority. Another factor is that physical limitations prevent people from communicating with others as they would like.

On the other hand, in the ever-evolving human enhancement technology, avatars are about to develop into a transformative technology that can not only solve these personal stresses and worries, but also turn the social tide.

We have developed “realAIze,” a system that combines avatars and AI to control appearance, voice pitch, inflection and phrasing in real time, allowing for stance manipulation. Our question is:

Can AI be used to solve the problems caused by this difference in stance? Is the solution appropriate? We aim to determine how extensively visitors accept or reject and embrace or disregard this technology. The experience of the three pieces of work gives the user a sense that mental stress can be controlled by using “realAIze” to address the above-mentioned miscommunications. In addition, users can see a quantified stereotype of themselves as determined by the AI based on their behavior. This makes the user aware of their own stance, and we are convinced that the sharing of individual “stance” among people may direct the flow of the world.

Hideyuki Ando, Department of Art Science, Osaka University of Arts
This exhibition was supported by Osaka University of Arts and JST CREST (JPMJCR22P4).

Nagisa Ono, Haku Aritomi, Masahito Chujo, Tsunefusa Sugao, Hinata Ohkawa, Misato Tamura, Hiroki Komai, Takuma Nishio, Kenji Kubota, Hideyuki Ando (JP)

Because of my stuttering

Stuttering hinders communication by disrupting the tempo of conversation. People who stutter are teased by those who look down on others who cannot do what is taken for granted: talking fluently. But is it bad to not be able to speak smoothly? In this work titled *Because of my stuttering*, the observer feels the frustration of not being able to convey words as intended, by means of AI. Should we rely on AI to solve the issues in our communication? It may be a problem that AI can solve.



© Department of Art Science, Osaka University of Arts

Hinata Ohkawa, Misato Tamura, Nagisa Ono, Haku Aritomi, Masahito Chujo, Tsunefusa Sugao, Hiroki Komai, Takuma Nishio, Kenji Kubota, Hideyuki Ando (JP)

First time standing out

Many feel comfortable dressing the same or conforming to those around them. A few, on the other hand, prefer to change their fashion style and hair color frequently. In this work, observers get an insight into the position of a minority whose sense of self is eroded by the pressure exerted by a large majority.

We do not intend to force acceptance of diversity. We just want you to know that it exists.



© Department of Art Science, Osaka University of Arts

Nana Yamada, Nagisa Ono, Haku Aritomi, Masahito Chujo, Tsunefusa Sugao, Hinata Ohkawa, Misato Tamura, Hiroki Komai, Takuma Nishio, Kenji Kubota, Tomoko Ohtani, Hideyuki Ando (JP)

Kasuhara

Encounters with Customer Harassment in Japanese Convenience Stores

We created artwork that allows people to experience the problems arising from the disparity in stance between employees and customers, by replacing them with animals to provide a comical experience. The observer experiences both the real-world problems and a world where AI filters out aggressive words. AI may also reveal that the participants use different faces depending on their stance. Should the observer rely on AI to correct their behavior, or should they change themselves?



© Department of Art Science, Osaka University of Arts

Laval University (CA)

Capturing the Ether

Transmutations of Intangible Impulses

In a context where digital technologies, the environment and interconnectivity are central concerns, *Capturing the Ether* addresses these issues with curiosity and openness. The project embarks on a quest to capture the elusive essence of wind, a force that knows no boundaries. A metaphor for the fluid communication between the elements, beings and things, this planetary breath becomes the mode through which to consider the world with a sense of hope. Reflecting on wind and its entropic character, the generative installation extends the performative act of data collection into the objects' performativity. Through an electronic and mechanical system, the artists present a poetic and multi-form exploration of air in motion, a conversation between the elements, humans and machines.

To record the air currents, the artists developed tools that are both performative instruments and data collection devices. The data is reinterpreted and used to activate various sonic and kinetic devices. Programming ensures that the mechanisms of pulleys and taut ropes, motors, loudspeakers, fans, projectors and other materials present in the space are activated to perform various actions.

Artists: Pierre Boulanger, Juan David Molina, Triska Sicuranzo Gagné, Samah Saidi (CA) / Collaborators: Myriam Lambert, Félix Tremblay, Guillaume Côté, Carole Siciak (Avatar, artist-run center dedicated to audio art and electronic arts) / Jocelyn Robert (Laval University) / Jacques Samson (Laval University)
With the support of: Première Ovation in partnership with Quebec City, Fonds d'enseignement et de recherche (Université Laval), Avatar



© Juan David Molina Velasco

The Pontifical Catholic University of Chile (CL)

Useful Simulations

Useful Simulations is a project that investigates the hybridization of human and machine. The work consists of a single-channel video installation where a body can be observed performing within a closed system of cameras. There is also an intervention by programming codes, the result of an interaction with AI. It is a research project that deals with human-machine hybridization, as a space of mimesis, which at the same time creates a new type of body and reflections on death and humanity.

From the notion of life as we know it, limited by our biological body, the death drive of the being is explored from a psychological perspective. Death as a desire to detach oneself from the living, seeking the inert. From this end rises the conflict that puts this drive in tension with the search for eternity. To detach oneself from the limitation, from the body that dies, rots and disintegrates. The machine makes sense as a tool to survive the condemnation of the ephemeral. As a system devoid of humanity, based on mechanisms

that provide functionality detached from the biological, with the capacity to evolve, improve and adjust. The research begins with the premise of dying through the machine. Like a symbolic suicide, renouncing one's own identity and fully integrating oneself into the mechanical system, freeing ourselves from what is "human". From this idea, both death and the machine are questioned. Wanting us to be more machine than human, leaving empty humanity. But after the appearance of Artificial Intelligence, humanity as we know it is questioned, and this brings a new and nascent one that comes to life. The reflection of us in the artificial encourages us to want to integrate into this new reality, reminding us of what was lost. A useful simulation that aims to understand the hybridization between human and machine, both living organisms that mimic and converge into one.

Artist and Performer: María Ignacia Maldonado Sánchez (CL) / Research Tutor: Valentina Serrati (CL) / Graphic Artist: Kai Rammsy (CL) / Production Assistant: Trinidad Moya (CL)



© Trinidad Moya (CL), María Ignacia Maldonado (CL)

Art and Technology Lab, Korea National University of Arts (KR)

Woven Echoes: A Virtual Tapestry of Humanity

This exhibition explores how Extended Reality (XR) and Artificial Intelligence (AI) can deepen our connections with cultural heritage and human relationships. It examines immersive experiences that preserve and transmit narratives, traditions and emotional bonds shaping our identity. The exhibition shows how artists use XR and AI to engage audiences with stories, rituals and personal narratives. Audiences will be immersed in virtual worlds, interacting with AI characters, exploring forgotten folklore, witnessing ancient rituals and confronting human bonds.

They will encounter narratives of loss, longing, reconciliation and familial ties. The exhibition highlights how technology bridges tangible and intangible heritage, preserving stories and emotional landscapes defining our societies. Through these immersive experiences, audiences embark on transformative journeys, transcending physical and temporal boundaries. By blending art, technology and cultural narratives, it amplifies the emotional resonance of artistic expressions and fosters deeper connections with our heritage and personal stories.

Eunsil Jung (KR)

Pasi

Wandering the vast sea of Mokpo, South Korea, the audience encounters lonely characters from Mokpo's folklore. Together they reminisce about tales of the past and memories of the lost sea market of Pasi.

Director & Writer: Eunsil Jung / Producer: Kwanghyun Lee / Co-Producer: Sngmoo Lee / Production Manager: Daniel Lee / Project Manager: Woogyong Lee



© Eunsil Jung

Seungpyo Kang (KR)

Ssitgim

Ssitgim is an immersive Virtual Reality (VR) experience of Jindo ssitgimgut, a traditional Korean shamanistic cleansing ritual. The ritual is performed by renowned pansori (epic storytelling through song) singer Chae Soojung and set against the historic backdrop of the Unhyeongung Royal Residence.

Director: Seungpyo Kang / Performance Director: Soojung Chae / Producer: Sngmoo Lee / Production Manager: Jungjoo Lee / Performance Producer: Seung Hee Choi



© Seungpyo Kang

Nuri Jeon (KR)

Diamond Dust

Diamond Dust offers a unique experience with AI characters and advanced haptics. As you crash-land in an ice cave on a snowy mountain, you meet Kardi, an ice fairy. Engaging in heartfelt conversations with Kardi reveals the value of cherished relationships. Participating deeply in these discussions allows you to form a special friendship with an AI. Experience this unique blend of art and technology by sharing your true feelings.

Director: Nuri Jeon / Producer: Sngmoo Lee / Co-producer: Jungeun Kim (Jenny Kim) / Designer: Gaeun Ju / AI Scenario (Prompt): Minkyung Kim, Dageyeom Chung



© Nuri Jeon

Youngyun Song (KR)

Fly To You

Fly To You recounts the poignant journey of Songjeol, who faced the heartache of family separation during the Korean War. For over 70 years, she lived with the uncertainty of her loved ones in North Korea. This project captures her introspection as she writes a heartfelt letter to her old sister, Saetbyul. This innovative VR documentary uses volumetric capture and "NeRF" technology to craft a tangible manifestation of her memories, taking users on a journey over borders and through time.

Producer: Sngmoo Lee / VFX Artist: Grade Eterna



© Grade Eterna

Minkyung Kim (KR), Gaeun Kim (KR)

Redial

Redial narratively depicts the reconciliation of a family torn apart by a missing child. After their youngest sister was lost, the remaining sisters confront their longing, anger and wounds. At the same time, *Redial* takes a structural look at how well the player is listening to the sisters' voice messages in the phone booth. The player comes to understand each sister's perspective.

Producer: Sngmoo Lee (KR)



© Minkyung Kim

Sungkyunkwan University (KR)

Reforming the piece

We believe that art creates new value by breaking down and rebuilding ideas. When we mix different cultures and technologies, we make new meanings that can move people, inspire them and give them new experiences. Sungkyunkwan University (SKKU), a beacon of academic excellence in Korea for over six centuries, has consistently embraced this philosophy. Throughout its illustrious history, SKKU has never taken a superficial approach to the phenomena shaping our world. Instead, SKKU has dedicated itself to the meticulous deconstruction and reconstruction of ideas, fostering interdisciplinary collaborations that push the boundaries of knowledge. This commitment stems from SKKU's core mission: to illuminate the path forward for the integration of art, culture and technology in ways that meet the evolving

needs and aspirations of future generations. In a groundbreaking initiative to realize this vision, SKKU's School of Convergence is joining forces with the School of Art. This collaboration aims to pioneer a revolutionary paradigm in media, one that reflects the university's enduring legacy of innovation and its forward-thinking approach to education and creativity. By bridging these two schools, SKKU is poised to explore uncharted territories in the realm of media arts, setting new standards for interdisciplinary education and artistic expression in the digital age.

Project Directors: Soowan Kim, Sanghun Sul, Hyewon Kang / Organized and Operated by Sungkyunkwan University (SKKU) School of Convergence and School of Art / Project Manager: Jang hyun Kim, Ji Sook Chung, Daniel H, Byun, Changjun Lee

Min Taeho (KR), Jang Yurilm (KR), Dong Jiarui (CN), Sheng Haozhuang (CN), Li Lingjie (CN), Peng Jingyi (CN), Jin Shengjian (CN)

70mK stands for 70 million Koreans.

This project is a large-scale interview initiative targeting 70 million people in both North and South Korea to shed light on the consciousness of the Korean Peninsula. Through interviews with 1,608 people, we hope to create an exhibition that promotes mutual understanding, builds a sense of community among Koreans and share our thoughts and visions as one people.



© 70mk

Su Yeon Lee (KR), Yoo Jeong Kim (KR)

What We Love

Team Sweet Terrorists is a campaigner who warns of humanity's sustainability. Our unpleasant terrors make people think about their influence on the world. *What We Love* brings the messages of their previous campaigns into audience participatory performances. In this project, the visitors enter "what they love", and it is converted to a numerical score based on how much it ruins the world. After all, *What We Love* conveys that anyone can easily become evil even if they do not have bad intentions.



© Sweet Terrorists



© Bloomerry



© Formless



© [S O A R A]



Miracle on the Han River © camp_around

Heesu Kim, Seoyeon Choi, Miseon Jeong (KR)
Bloomerry

Bloomerry aims to revive lost connections and bring social energy to those who need it. Through gentle and warm interactive motions, visitors can bring life to the fading flowers projected in the work. This act shows how small and kind gestures can brighten our shared world. By helping others, we can bring light and energy to our collective lives.

Cai Mingjun (CN), Zhan Hao (CN),
 Choi Taeho (KR), Peng Jingyi (CN)

Formless

The inspiration for our theme originates from a Buddhist term—"zidu." "Zi" means "oneself," and "du" means "to cross", literally translating to the act of crossing a river by oneself. In a broader philosophical sense within Buddhism, "zidu" means relying on one's own strength, through internal effort and practice, to overcome difficulties, escape adversity and achieve inner peace and freedom. In essence, "zidu" is like "crossing the sea of suffering."

Philgyu Choi, Wonjae Doh, Dongkyu Lee (KR)
[S O A R A]

[S O A R A] is inspired by the experiences of three creators who were seeking comfort and wanted to share those feelings with others going through similar emotions. *[S O A R A]* is a VR character that aims to convey a message of consolation to those who stray while finding their dreams and paths. In an era where people face immense pressure and navigate a road full of twists and turns, *[S O A R A]* offers a small but significant sense of comfort.

Kim Gahui, Han Youngseo (KR)

Miracle on the Han River

Korea's rapid economic development has led to profound cultural and social changes. The historical and modern significance of the Han river offers a unique lens through which to examine these changes. As modern individuals, we are all located somewhere on the bridge of our lives. Are you on the bridge, under the bridge or somewhere in between? Finding the answer to this question means for each of us choosing whether to *suicide* or *sustain* in this fast-paced flow of development.

University of Seville (ES)

ASTER+S > ART ^ SEALIFE

SciArt to better understand and care for our marine ecosystems

How can citizens contribute to better understanding and caring for our marine ecosystems affected by the Anthropocene? We focus on understanding how marine life is developing beneath the surface under the influence of climate change, with the aid of citizen science. Citizens contribute to the immense task of discovering new species and monitoring the impact of humans broadly, attempting to influence decision-making on protecting the seas.

Can we turn the tide? Yes, we can, within the framework of ASTER+S and the European Citizen Science project. ASTER+S (Art-Science-Technology-Engineering: Research for + with Society) is defined by our transdisciplinary and social vocation. Our "eco-SciArt" methodology strives for all participants (scientists, artists, engineers, humanists) to develop alterity, dismantling stereotypes and prejudices. A scientist may become an art-inspiring person. An artist can be seduced by the complexity of science. An engineer can contribute to the collaborative conception of an

artwork. All is permeated by a transdisciplinary osmosis, increasing our awareness of the great challenges in empathizing with other people and species. Contemporary Art may awake citizens' curiosity and critical thinking through cross-pollination.

*Transdisciplinary spirits soar high,
through collective hands, they thrive,
shared care, hearts unified
Science and Art combine,
citizens join in the quest,
seas heal and alife*

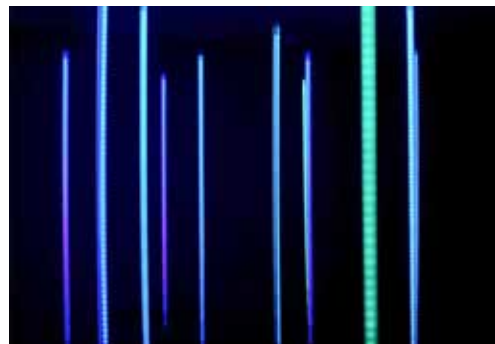
Curator: Rocio Garcia-Robles / ASTERISM research group of the University of Seville / Graphics and Digital Creation research group of the University of Seville / EMBIMOS Research Group of the Institut de Ciències del Mar (ICM-CSIC) / European Citizen Science (ECS) funded by the European Union / Fundación de Aparejadores y COAAT (Colegio Oficial de Aparejadores y Arquitectos Técnicos de Sevilla)
European Citizen Science (ECS) funded by the European Union (Institut de Ciències del Mar, ICM-CSIC); Fundación de Aparejadores & COAAT; Universidad de Sevilla

Cachito Vallés (ES), Áurea Muñoz del Amo (ES), Carmen Salazar Pera (ES), Rocío García-Robles (ES), Carlos Rodero (ES)

Liquid Transparency

Transparencia Líquida

Just as substances in water can obscure its transparency, lack of awareness can cloud our understanding of environmental issues. This SciArt work suggests a dialog about the boundaries between our activity and natural processes, inviting us to think that all parts of the universe are interconnected. It fosters a deeper relationship among humanity and marine ecosystems, turning this underwater walk into a call to action for adopting more sustainable practices and respecting our natural heritage



© Lisa Derksen Castillo

Olga Albillos (ES), Guille Rodríguez (ES), Triana Sánchez Hevia (ES), Xavier Salvador (ES)
**No te conoce nadie,
pero yo te canto**
No one knows you, but I sing to you

This artwork highlights interconnectedness in ecosystems showing that all life forms, visible or invisible, are linked and vital. It emphasizes the balance of opposites within nature and the value of species unseen by humans. The impacts of the Anthropocene on marine life urge us to protect all life forms, recognizing their intrinsic value. Through citizen science and critical thinking inspired by SciArt, we can raise awareness and mitigate climate change, fostering hope for environmental protection.

Helena Hernández Acuaviva (ES), Jesús Ibáñez Martínez (ES), David Orellana Martín (ES), Xavier Salvador (ES)

Sea Invaders

Invasores Marinos

This work reflects on the crisis of invasive species in the Mediterranean, immersing us in the marine habitat to empathize with the ecosystem's situation and contemplate our and other species environmental footprint. By positioning us as invasive species, *Sea Invaders* fosters otherness and a sense of ethical duty to mitigate human impact. It challenges us to rethink our relationship with nature, emphasizing hope through awareness, innovation and citizen-supported science to drive positive change.



No te conoce nadie, pero yo te canto © Lisa Derksen Castillo



SEA Reflection and connection © Lisa Derksen Castillo



Sea Invaders © Albert Giménez



The Dance of Data © Andrea Díaz

Lisa Derksen Castillo (NL, ES), Miguel Mendoza Malpartida (ES), María del Carmen Romero Ternero (ES), Xavier Salvador (ES)
SEA Reflection and connection
MAR Reflexión y conexión

This installation reflects the philosophical concept of perception as a mirror of reality. Just as the sea reflects light, the artwork reflects not only physical light but also, metaphorically, the less visible aspects of marine life. *SEA Reflection and connection* invites us to rethink our relationship with nature, to reconsider human impact on marine ecosystems, serving as a bridge between the known and unknown, the visible and invisible. It emphasizes active citizen science as a key factor in discovering and caring of marine species.

Andrea Diaz (FR, CO), Jose Manuel Higes (ES), Antonio Falcón López (ES), Clara Ortiz Cáceres (ES), Karen Soacha (CO)

The Dance of Data

La Danza de los Datos

The project prompts reflection on reality and knowledge, blurring physical and virtual lines to show that meaning transcends boundaries. Dancing with data in virtual spaces suggests dynamic, participatory interaction with information. It highlights our role in co-creating reality through actions. Addressing global climate challenges, the project emphasizes citizen participation in scientific discovery and conservation. This in turn promotes an ethical framework of shared responsibility, inspiring hope for a better future.

Interactive Media Arts, New York University Shanghai (CN)

The Elastic Umwelten

The Elastic Umwelten is an exhibition that probes how our personal and collective worldview is dynamically reshaped by the continuous integration of the technological paradigm. This noetic expansion results in the repositioning of the outer limits of our consciousness, alerting us to carefully consider the ethical dimensions and societal impacts of living within this ever-shifting post-human reality.

Via the lenses of emerging technologies, critical discourse and creative practice, the exhibition focuses on highlighting pressing cultural, ethical and societal issues such as the evolving narratives of reproduction and artificial motherhood, the death of the Internet caused by automatic news bots, the digital shaping of ethnicity and cultural identity through social media calibrators, the expansive inquiries into what makes us humans as imagined by generative machines and the examination of the cybernetic condition through the composition of provocative exoskins.

This diverse group of works is crafted to bring to light nuanced synergies between humanity and creative practices of emerging media and to spark a reflective dialog on how we navigate the relentless tide of technological progress, while questioning the boundaries between the organic and the engineered within an ever-increasing computational landscape.

The exhibition consists of selected works produced at Interactive Media Arts (IMA), School of Arts & Science, New York University, Shanghai.

Curation & Direction: Stavros Didakis / Artwork Selection Committee: Eric Parren, Gottfried Haider, Stavros Didakis / Project Advisors: Bogna Konior, Gottfried Haider, Marcela Godoy, Stavros Didakis / Supported by the Research Center for Artificial Intelligence and Culture, and the Interactive Media Arts program, at NYU Shanghai. Interactive Media Arts (IMA) @ NYU Shanghai | Research Center for Artificial Intelligence and Culture (AIC) @ NYU Shanghai | New York University, Shanghai (NYU Shanghai)

Siwei Chen (CN), Haoran Wang (CN), Rebecca Xiong (CN), Nuo Xu (CN), Jiapei Yao (CN), Xinyu “Torico” Chen (CN), Wes Firestone (US), Michelle Hua (CN), Jinhe “Anny” Jiang (CN), Zoe Kalamaros (US), Cindy Liu (CN), August Wang (US), Jinyuan (Jack) Xu (CN), Neo Alabastro (US)

Weird Creatures

This project presents a framework for analyzing the human condition: from the superficial self to the emotional and affective dimensions, and the underlying mechanisms of identity, perception and consciousness. Content from personal diaries, poems and philosophical excerpts have been collected and fed into custom generative AI systems that assisted in producing a series of media artifacts (including images, animations and a VR space) that offer a unique view to the human psyche and self.



© Stavros Didakis



NeoHarmony © Denny Wang & David Wang



M(other)hood © Robin Xie



Exoskins © Ken Wu



Wenming Constructs © Phoebe Lemon

Denny Wang (CN), David Wang (CN)

NeoHarmony

This project thematizes the future of news reporting and in general the death of the Internet. In a fully-automatic setup, Large Language Models (LLMs) and Image Generation Models are used to produce an infinite stream of newspaper front pages, informing the reader about ever-different variants of imagined futures.

Yelena Ye (CN), Korrina Poindexter-Benbow (US), Tania Hartanto (ID), Xinran Tong (CN), Jiachen Zhou (CN), Hazel Dai (CN), Peijun He (CN), Jia Xu (CN), Zhiyu Guo (CN), Yasmin Pang (CN), Rainee Wang (CN), Jiayin Fan (CN), Feiyang Zhuang (CN), Ziqi Yan (CN), Jiani Yang (CN), Mia Zhang (CN), Yinyin Lu (CN), Huiwei Wen (CN), Ran Xu (CN), Younian Liu (CN)

Exoskins

Exoskins is a project that focuses on the creation of interactive wearables as a dynamic form of expression and offers speculative insights into the human condition. The work aims to extend the perceived limits of the human body and to provide commentary that engages with and reflects upon contemporary religious, social and political discourse.

Robin Xie (CN)

M(other)hood

This work explores the impact of ectogenesis on motherhood, considering historical perspectives, scientific developments and artistic interpretations. It aims to foster a comprehensive understanding of the evolving dynamics in reproductive technology. By visualizing an artificial womb, the project connects the audience with the concept of future fertility, building a diverse and inclusive narrative on post-feminism.

Phoebe Lemon (US)

Wenming Constructs

The work explores “Wenming” (civilization) as interplay between identity, ethnicity and cyberspace. Often seen in propaganda and policy for economic progress, Wenming is also constructed digitally and corporeally on social media platforms like Kuaishou, where ethnic identity and cultural authenticity are circulated. AI-generated videos displayed on the walls of a “xiao qu” (neighborhood), a key site for political messaging, imagine Wenming’s potential to racialize and orientalize.

School of Creativity and Art, ShanghaiTech University (CN)

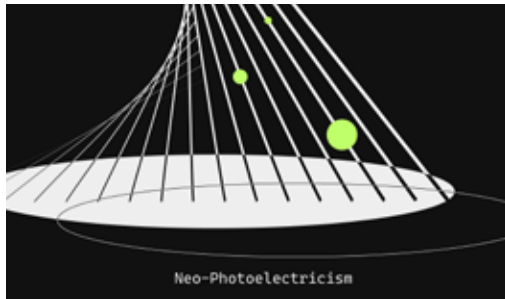
Chronoexistential Prelude

From the timeless memories and biological potential of Cytoophidia to the intricate networks of post-apocalyptic destruction and reconstruction, this narrative weaves through biological history, blending technology with art. It transitions from cellular landscapes under the microscope to ecological warnings in traditional Chinese landscapes. This exhibition is more than a celebration of vitality and survival; it is a profound introspection into the essence of life.

Through technology, we revisit hope, spanning from cellular marvels to societal ecology. We invite the audience into a world where reality and virtuality blur, created through cross-media technology, unveiling life's profound enigmas, deciphering the potency of genes and reimagining

the essence of existence. This journey shows how technological advancements open doors to unknown realms and guide us through the future of life as we envision it.

It is a transboundary exploration under a multilingual discourse, revealing that every being continuously redefines itself in the river of biological history. It presents a cross-disciplinary view that poetically reinvents survival strategies and reorchestrates life's song. Through these pieces, we see biodiversity's richness and humanity's potential to redefine itself through interaction. This is a declaration on the frontier of biotechnology, a manifesto exploring survival's meaning and a proclamation about the prelude to life across the timeline.

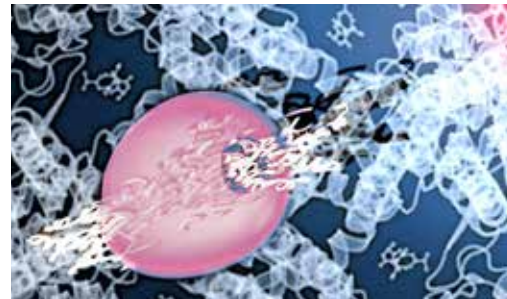


© Yutong Luo

Yutong Luo (CN), Chenchen Du (CN), Chengxuan Song (CN), Yue Fu (CN)

Neo-Photoelectricism

Neo-Photoelectricism stands at the confluence of physics, technology and artistic disciplines, compelling participants to engage in a phenomenological exploration of photons. This exploration underscores the latent power of individual agency and its cascading implications for societal metamorphosis, revealing the interconnectedness of scientific phenomena and human experience.



© Yutao Ming, Xiaoyu Gu

Yutao "GOGO" Ming (CN), Xiaoyu Gu (CN), Yi-Lan Li (CN)

The Cell Snake

The Cell Snake is an amalgamation of AR and interactive sculpture. This installation provides a realm where participants interact with life's codifiers—proteins and “Cell Snakes.” It is a mirror to our bodies' intricate workings, bridging present understanding to future potentials. It is a journey into life sciences that encourages participants to delve deeper into their significance, inspiring the reexamination of the human body and contemplation of endless future possibilities.

Aven Le Zhou (CN), Dong Zhang (CN), DIV Lab—ShanghaiTech University (CN)
Negative Shanshui

Negative Shanshui presents an interactive art experience that merges ecological concerns with Eastern aesthetics, resulting in a disturbing reflection of the environmental crisis. Through AI imaginary synthesis, the participant distorts the idealized landscape (Shanshui), gradually revealing a wasteland. It encapsulates the audience in an ongoing narrative of the clash between humanity and nature, sparking contemplation of their negative impact and fostering ecological awareness.



© Aven Le Zhou

Lyla Zhou (CN), Kexin Wang (CN), Jiahe Dong (CN), Hua Yang (CN), DIV Lab—ShanghaiTech University (CN)

The ReGen Lab

The ReGen Lab merges 3D modeling and VR technology to resurrect endangered flora from Shanghai and its environs. Participants navigate digital replicas of these plants, uncovering their intricate structures and reproductive mechanisms. The juxtaposition of digital interfaces and virtualized plant forms underscores the balance between techné and physis, accentuating the urgency of conservation imperatives while probing the ethical and ontological boundaries of digital ecological preservation.

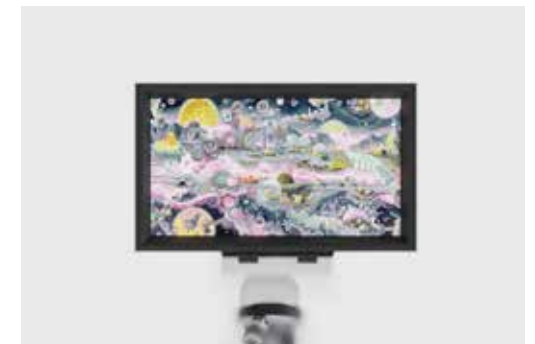


© Lyla Zhou

Qiao Feng (CN), Xiwen Liu (CN), Lezi Lian (CN), Shuyi Wang (CN), Sijie Xu (CN)

The Garden of Cytological Delights

The Garden of Cytological Delights reinterprets Bosch's *The Garden of Earthly Delights* within a cellular paradigm. Each cell manifests as a unique entity with its own morphology, essence and purpose. This vibrant garden, teeming with vitality and euphoria, constructs a marvelous microcosmic tableau. It offers an esoteric contemplation on “hope”, highlighting the source of our life—cellular evolution and the fascination of the cellular world.



© Xiwen Liu

Interactive Materials Lab, National University of Singapore (SG)

Material Materials

The Interactive Materials lab presents *Material Materials* at this year's festival. This exhibition dives deep into familiar physical objects and their potential for building future interactive artifacts—each questioning and expanding the notion of what is material. Overarching all the five interactive experiences, we challenge the conventional perspective and relationships between user, designer and object—dissolving the boundaries between these roles by exposing the materiality and mechanisms underlying their operations. With this exhibition, we hope to prompt visitors to take a second look at the things around them—not as objects with fixed meanings, but as materials

that possess untapped potential for new futures that everyone can participate in defining. In turn, we seek to critically question current modes of designing and producing interactive objects, and to provoke visitors to consider their role in shaping the interactive experiences that they are a part of every day.

Curators: Clement Zheng, Assistant Professor, Division of Industrial Design, National University of Singapore; Qian Ye: Artist, Designer, PhD student, Division of Industrial Design, National University of Singapore / Supported by Division of Industrial Design, CDE & CUTE Center, SSI, National University of Singapore / National University of Singapore Startup Fund and MOE Tier 1 AcRF

Bo Han (CN), Adam Choo (SG), Jared Lim (SG), Clement Zheng (SG)

Flow

Flow questions the inner workings of everyday devices, such as the camera, which it uses as an example. Four circuits each demonstrate a different way of manipulating electron flow to facilitate different transformations between interaction and image-rendering. Instead of programming logic through a computer processor, this installation uses direct analog circuits to control input and output.



© IML

Ye Qian (CN), Joshua Tan Jianhao (SG), Hannah Ang (SG), Clement Zheng (SG)

PaperTouch Wonder

PaperTouch Wonder explores the intersection between the physical paper and digital touch-screen devices through three interactive dioramas. Paper and touchscreens meet and merge in unfamiliar ways in each installation, distorting our perspective of common elements like touch interactions and digital screens for new hybrid interfaces.



© IML

Zhen Zhou Yong (SG), Clement Zheng (SG)

NECRO TROLL

Delve into the swamps of Antara Muka, where danger and riches await in equal measure. In its depths lurks the dreadful NECRO TROLL, hoarding spoils that every adventurer must challenge for a chance at unimaginable treasure. But how do you begin? Video games promise agency and possibilities beyond everyday life, but freedoms must be surrendered to play. By placing objectives upon the player bereft of context or reward, *NECRO TROLL* questions the roles between players, games and controllers.



© IML

Sheryl Teng (SG), Vina Setiawaty (ID), Yu Yan Goh (SG), Clement Zheng (SG)

row X row

We are surrounded by technical devices with hidden inner workings having the ability to produce various types of content—text, imagery, audio, even synthetic data. What distinguishes maker and machine? *row X row* explores the relationship between us and fabrication processes in the post-industrialization age through knitting. Exposing the functions within manual, punch-card knitting, inputs are "crowdsourced" from the viewers. The knitter, while executing the command, becomes part of the machine.



© IML

E Ian Siew (SG), Clement Zheng (SG), Yen Ching Chiu (TW)

Pneullaboration

Pneullaboration explores air as a shapeable material, with a focus on utilizing opposing pneumatic interfaces, inflation and vacuum. With a need for the audiences to participate through the three roles of inflator, vacuumer and morpher, it invites audiences to collaborate to realize the sculptural and shape-changing properties of "physicalized" air.



© IML

National Academy of Art Sofia (BG)

Mimicry, Metaphor, and Mistake

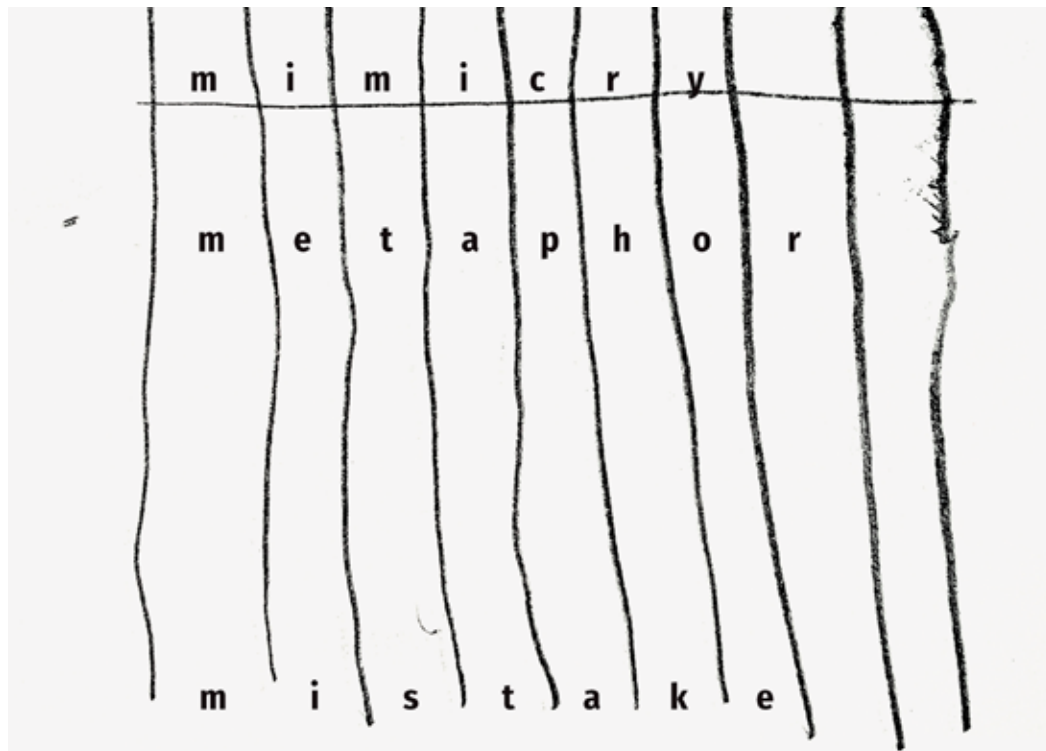
The concepts of *Mimicry*, *Metaphor*, and *Mistake* are applied to digital art, as they touch on themes of imitation, symbolism and imperfection. The exhibition is an invitation to consider how these elements shape our understanding of art and creativity in the digital age, with an emphasis on personal narrative.

The artworks shed light on questions about how humans perceive themselves, others and their environment. The artists explore the complexities of human interaction, looking at what it consists of and what it is governed by.

The artists, graduates of the National Academy of Art, Sofia—namely Yoana-Sofia Vangelova, Ralitza Georgieva and Tanya Nedelcheva—are showcasing their projects from the Master’s Program of

Digital Arts, under the mentorship of primary supervisor Prof. PhD Venelin Shurelov. These projects draw from scientific fields like quantum physics, genetics and neuroscience. Despite using different media such as digital sculpture, genetic analysis and kinetic installation, they all aim to raise awareness about our shared human experience, both in physical and metaphysical context.

They particularly focus on understanding identity, memory and human existence. Moreover, the exhibition touches on themes such as shared responsibility, agency and how technology shapes human connections. It encourages viewers to think critically about these topics in a contemporary context.

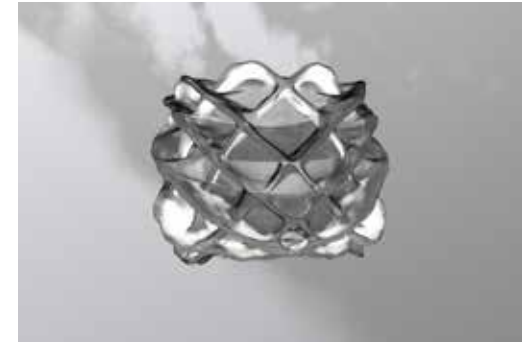


© Ralitza Georgieva

Yoana-Sofia Vangelova (BG)

Manifolds

Manifolds is a project that explores the interconnectedness of the universe, natural structures, the human body and mind. Inspired by mathematical spaces and quantum physics, the project delves into the idea of reappearing connections and the bond between all forces and matter. Through animated 3D sculptures, the project represents the complex structure of human bodies merging into multidimensional shapes, symbolizing the ever-changing patterns of interconnections.

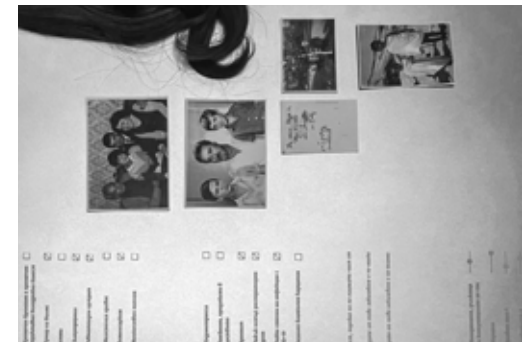


© Yoana-Sofia Vangelova

Ralitza Georgieva (BG)

You Cannot Build Your Own Character

Exploring the physiology and spirit of the body, the installation is constructed of the opposites—the predetermined and the idea of free will. Through elements of bodily carriers of DNA information and genetic analysis, the work examines the interaction between material substance and spiritual essence. By correlating the material and immaterial, an “inventory list” of the body’s abilities is created. The work aims to create a sense of shared responsibility.



© Ralitza Georgieva

Tanya Nedelcheva (BG)

Symphony of Nonfunction

What happens when an object moves beyond its initial purpose? The project comments on the enduring resonance of seemingly ordinary objects and their past, by placing them in a new context. *Symphony of Nonfunction* explores the residual significance of items after their original function has been lost. It seeks to bring back their “pulse” by using electronics and discovered artifacts to create a symphony of sounds.



© Tanya Nedelcheva

School of Cultural Technology, Xi'an Jiaotong Liverpool University (CN)

Interwoven Existence

Interwoven Existence invites visitors to immerse themselves in the interconnectedness of human cultures and non-human entities. Challenging former perceptions of nature as a passive resource, this exhibition brings to life nature's dynamic, self-generative and self-willing spirit. It showcases pieces from faculty and students at the School of Cultural Technology, Xi'an Jiaotong Liverpool University.

Upon entry, visitors drift into a sensory space covered with modular reed designs directly sourced from the Tai Lake in Suzhou, China. Enhanced by lighting, the reeds cast captivating shadows, creating an ethereal dance across the walls. Some of these reeds, equipped with sensors and motors, interact and respond to the audience's presence, enhancing the immersive experience. This is further underscored by a four-channel soundscape with performative field recordings at the lake, echoing the resilient pulse of nature.

Distributed in the space are four VR headsets, each showcasing a unique digital artwork. While diverse in content, these VR pieces harmoniously resonate with the exhibition's theme—the expressive exploration of multispecies narratives and the interplay between humanity and non-human entities. This exhibition draws inspiration from the aesthetic theories of Theodor Adorno, Walter Benjamin and the Shanshui painting tradition. By employing aesthetic theory and technology, it celebrates intertwined existence and promotes recognition of the voices of multispecies.

Exhibition by the School of Cultural Technology, Xi'an Jiaotong Liverpool University/ Curators: Juan Carlos Vasquez, Zhonghao Chen / Participating artists: Zhonghao Chen, Andrew O'Dowd, Juan Carlos Vasquez, Isadora Petrauskas, Giovanni Santini, Luciano Zubillaga, Álvaro Collar
This project is supported by the School of Cultural Technology of Xi'an Jiaotong Liverpool University

Zhonghao Chen (CN), Andrew O'Dowd (IE), Juan Carlos Vasquez (CO), Isadora Petrauskas (BR)

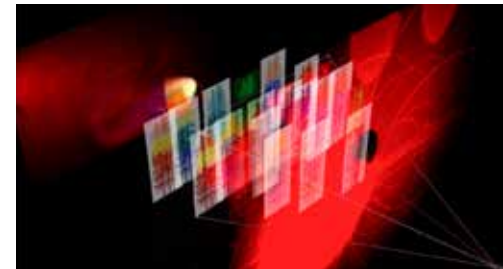
Interwoven Existence

Interwoven Existence is the piece that names the exhibition and frames the space for the display of four other pieces. It features a transformative sensory space covered entirely with reeds directly sourced from the Tai Lake in Suzhou, China. Some of these reeds, equipped with sensors and motors, interact and respond to the audience's presence. This is underscored by a four-channel soundscape with performative field recordings at the lake, echoing the resilient pulse of nature.

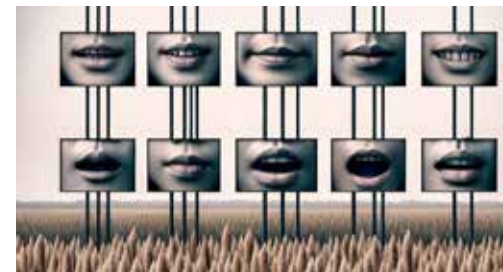


© Zhonghao Chen

Assistant: Mobina Vatandoost



Reunión Familiar 2 © Luciano Zubillaga



Tongue-Tied © Isadora Petrauskas, Zhonghao Chen

Luciano Zubillaga (AR/GB)

Reunión Familiar 2

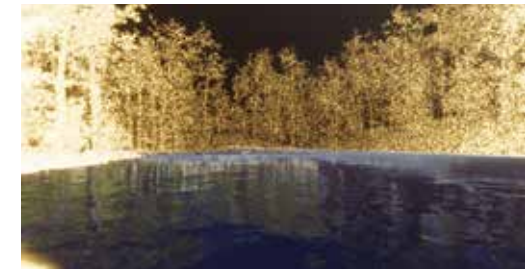
Reunion Familiar 2 (Family Reunion) is a new VR experimental project developing visual and sonic impressions about the production of energy on Earth. *Reunion Familiar* is part of a series of collaborative works between artists Elda Cerrato (mother) and Luciano Zubillaga (son), completed by Zubillaga when Cerrato passed away in Buenos Aires in February 2023 at the age of 92. A video installation version was presented at both the 14th Shanghai Biennale and the 35th Sao Paulo Biennale.

VR development: Feifei Cai, Xingyue Jin, Zhe Wang, Yuting Wu—under the direction of Giovanni Santini.

Isadora Petrauskas (BR), Zhonghao Chen (CN)

Tongue-Tied

By exploring how technology plays a crucial role in promoting contemporary imperialist languages, this video installation echoes the inquiries about modernization and objectification of nature proposed by "Interwoven Existence". While both projects urge us to reconsider our relationship with the world around us, *Tongue-Tied* expands the narrative of the natural tongue by interrogating the impact of technology on communication and cultural hegemony.



Lago © Giovanni Santini



漂流 © Alvaro Collar

Giovanni Santini (IT)

Lago

Lago (lake in Italian) is a VR experience situated on a lake. The water surface can be a mirror, but also a window (or a portal) into another dimension. The user travels through space and across spaces. A forest can transform into a particle cloud, while the lake reflects the original image. Similarly, the lake can reflect an abstract place, while the surrounding forest is real. The experience is about narrative of space transformations and the exploration of our perception of reality.

Álvaro Collar (ES)

漂流 (Drift)

Inspired by Debord's concept of *dérive*, the project proposes an abstract VR drift through a symbolic cityscape and its liminal spaces. Configured as a digital palimpsest, the piece deconstructs traditional film language, exploring abstraction, narrative recursiveness, low-resolution imagery and flux as alternative post-hyperrealistic modes of representation. The audience is invited to instinctively and emotionally decode and re-semantize this cluster of flawed images to complete the piece.

Department of New Media Art, Taipei National University of the Arts (TW)

Observer Pattern

In the *Observer Pattern* exhibition, the roles of machines in media arts are compared and examined based on behavioral design patterns. When artists are the subjects, machines are not only tools for artistic production or intermediaries in the transformation of artist concepts into works, but also play important roles in each stage. Starting with observation and with the provision of perspectives and data, we become more reliant on automated messages, further affecting the ways uncertainty is handled. Machines extend the sensory perceptions of humans and collaborate with them. They also become observers. With a calm perspective as the starting point, they reshape how humans and the world are observed. In this hybrid human-machine environment, we need to rethink how art reflects the meaning of observation and patterns of existence.

Against the backdrop of human-machine coupling, Taiwan is an island that has long disappeared from sight, but that has also been gazed upon by empires. At the same time, we examine its values, with emphases on individual will and technology culture, and the status of emerging, but not yet fully formed, complex hybrids. Through interactions between machines and the surrounding world, artists translate intuition, emotions and thoughts into creative production. We attempt to reveal how machines are becoming new types of observers and working with humans to shape a meaningful world.

Department Chair: Jia-Ming Day / Co-curators: Lien-Cheng Wang, Yen-Ju Lin / Artists: Daniel Chiang, Kun-Yu Lu, Pei-Ting Hsieh, Tzu-Yung Kuo, Zu-Hao Zheng / 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

Pei-Ting Hsieh (TW) Ghosts of Google

The images in the artwork are all captured by taking screenshots from Google Street View and then processed to remove backgrounds, allowing these portraits, erased by AI, to become the subjects of renewed contemplation.



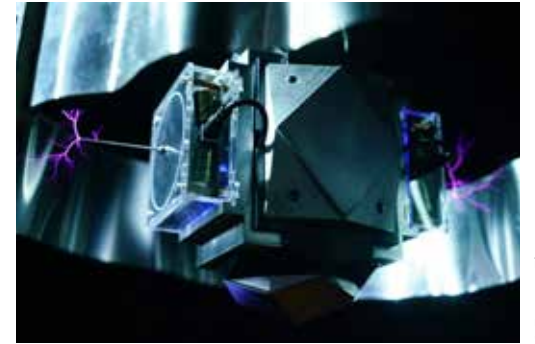
Kun-Yu Lu (TW) Looking at Between

This artwork utilizes 3D scanning technology to recreate real-life individuals within a virtual environment. Reflecting on the digital age, relationships between people seem increasingly to resemble virtual states within reality.



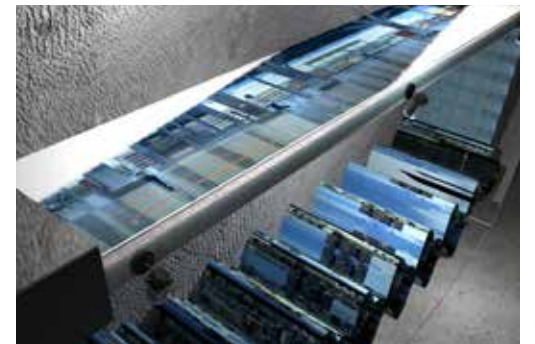
Zu-Hao Zheng (TW) Positive Electricity—Plan

Neuroscientist Marcus E. Raichle suggests that daydreaming acts as a stress response, regulating external stimuli. He posits that while daydreaming, brain circuits enter a closed state, generating “random noise” akin to a TV without signal or a sleeping computer. Contrasting this with personal experience, I have noticed unconscious daydreaming is common. Recording its frequency, I have sought to digitize and incorporate this data into my artwork, visually representing the brain's random noise.



Tzu-Yung Kuo (TW) Spectacle Extension

Can we trust what we see? How confident are we in discerning reality? Should we continuously seek the truth? How much of the flashing scenes remain in our memory? It is difficult for us to distinguish between reality and memory. Images are constantly cropped, cut, compressed and distorted, giving rise to unique and peculiar landscapes. Memories operate similarly, incomplete yet imbued with deeper meanings. Through the lens, we create intricately layered, enigmatic and beautiful images.



Daniel Chiang (TW) Tangivirtuality 2

Sensory experiences serve as our primary methods to acquire information. The knowledge and intuition derived from these experiences constitute the fundamental basis for human thought and cognition. In this artwork, virtual scientific images intertwine with real sensations of touch, inviting viewers to comprehend and create cognitive and perceptual conflicts, offering extraordinary perceptual experiences that challenge the pre-existing cognition of viewers.



© Pei-Ting Hsieh

© Kun-Yu Lu

© Zu-Hao Zheng

© Tzu-Yung Kuo

© Daniel Chiang

EKA—Estonian Academy of Arts (EE)

Godseed: The paradox of utopias

What if there were no mosquitoes? If you could remake the world, what would it look like? What if our personal values and preferences changed the world around us? Every utopian vision carries the seed of its own dystopia, and that is the paradox of both technology and playing god. It is human nature to make sense of the world by telling stories. From roleplay on the playground to social commentary on the theatre stage; from toy cities and dolls to constructing elaborate digital landscapes and societies. These creative acts help us navigate our lives.

In the interactive installation *Godseed*, visitors use a globe-like tangible interface to “seed” a new world in their image. Based on their choices, a short story unfolds via hand-drawn animations.

Visitors are encouraged to critically examine the results of their choices and try again. And again. *Godseed* invites us into a dialog over the dualities of human ambition and the omnipotent power of technology. By looking into the future through the lens of the creator, we are invited to contemplate our individual and collective roles in the stewardship of our world. Despite unpredictable configurations of the world’s parameters, each strange new world always carries a seed of hope: there is nothing that can compare to human resilience.

Artists: Carol Alice Tõniste (EE), Helena Väinmaa (EE), Ottavio Cambieri (IT), Rainer Pits (EE), Sander Põldsaar (EE), Valerie V Sarle (FI) / Mentors: Lilli-Krõõt Repnau, Tanel Kärp



© Helena Väinmaa, Sander Põldsaar

Metacreation Lab for Creative AI, School of Interactive Arts and Technology, Simon Fraser University—Vancouver

Autolume

The ethics of Big Data and large foundational generative models are often questionable. Besides the obvious vampirization of online data and artworks, they promote a generic, yet biased, aesthetic.

In response to large prompt-based models, the Metacreation Lab created *Autolume*, a no-code system enabling artists to train their own AI models with their selected works. *Autolume* allows non-coders to craft, mix and finetune their own generator, and manipulate in real-time their many parameters to produce both still and

animated outputs. The result is a selection of four artworks from collaborations practicing model crafting as a way of moving forward without falling prey to the generic AI aesthetic of pre-trained, large commercial models.

Longing + Forgetting: Matt Gingold, Philippe Pasquier, Thecla Schiphorst
Dreamscape: Erica Lapadat-Janzen, Philippe Pasquier
Autolume Mzton: Jonas Kraasch, Philippe Pasquier
Ensemble: Arshia Sobhan, Philippe Pasquier

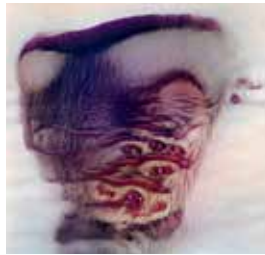
We acknowledge support from CCA, SSHRC, NSERC.



Still from *Dreamscape* © Lapadat-Janzen, Philippe Pasquier



Ensemble © Arshia Sobhan



Dreamscape © Erica Lapadat-Janzen



Longing + Forgetting © Matt Gingold



Autolume Mzton © Akbank Sanat Gallery, Gorsel Cozum

Arshia Sobhan (IR), Philippe Pasquier (CA/FR)
Ensemble

This collection melds the traditional art of “siyah-mashq” in Persian calligraphy with AI model crafting. Each piece features generatively evolving and fluid calligraphic forms, accompanied by a background sonic texture. This piece explores unique aesthetics, inaccessible through large generic models, using Autolume's real-time transformation of static elements into moving displays, showcasing the coming together of classical artistry and modern technological innovations.

Matt Gingold (AU), Thecla Schiphort (CA),
 Philippe Pasquier (CA)

Longing + Forgetting

Longing + Forgetting explores pathfinding algorithms as a metaphor for our personal and collective searches for solutions. Combining physical and algorithmic choreography, the work consists of a collection of artificial agents finding their way through the projection surface. How do we move forward, alone and together, and what traces do our bodies leave behind us?

Erica Lapadat-Janzen (CA),
 Philippe Pasquier (CA/FR)
Dreamscape

In response to AI-generated art using Big Data, the Metacreation Lab developed Autolume, a no-code system for artists to use their own works in training AI models. This tool allows non-experts to create both still and animated outputs. In collaboration with Vancouver-based visual artist Erica Lapadat-Janzen, the latent space that abstracts the aesthetics of their work using Autolume was explored. The results are carefully crafted with stills and video loops, two of which are presented here.

Jonas Kraasch (DE), Philippe Pasquier (CA/FR)
Autolume Mzton

Autolume Mzton explores the notion of birth using Autolume audio-reactive features. Driven by the piece Mzton, from the analog modular rhizome of the French band Robonom, the neural aesthetic of generative visuals unexpectedly evokes early experimental analog cinema. Themes of horizons, sunsets and the vibrancy of the audio-visual coupling evoke utopian new beginnings.

Media Art and Design, Bauhaus University Weimar (DE)

sense & sense-abilities

Can there be a correct way to perceive this world when every sentient being experiences it differently? In experience, everything is subjective. How can we exchange subjective impressions among ourselves? How does the act of interpreting and communicating these diverse experiences influence our perceptual capabilities, our priorities and the way we act based on our senses? The exhibition explores the means of perception and sensing, presenting intimate, collective or research-based artistic perspectives—seeking strategies for understanding human relations to shared sentience beyond words and language. Captured traces of thoughts, a self-sufficient instrument, an artist's body being shaped by the audience's gaze and two installations that invite to experience and manipulate auditory (self-) perception—the five artworks reflect on various facets of navigating a technologized world from a post-digital viewpoint.

The exhibiting artists are students from the Media Art & Design at Bauhaus University, Weimar. Their projects follow a media-reflective approach, focusing on sensing, sensors and sense-making, challenging conventional perceptions and striving to interweave different realities. *sense & sense-abilities* encourages a re-evaluation of our sensory world and the value we place on different experiences, inviting the audience to engage with the subjective nature of sensation and the complexities of exchanging these with each other.

Curated by Quadrature (Juliane Götz, Sebastian Neitsch), Mindaugas Gapševičius, Cosmo Schüppel, Amelia Eickhoff / Gestaltung Medialer Umgebungen (Media Environments) / Chair of Prof. Ursula Damm
 The department organized an internal, collective curation process to encourage students to participate democratically in choosing the participants.
 STIL—Stiftung Innovation in der Hochschullehre

Amelia Eickhoff (DE)

Unhearing
 Analog devices for sonic experiences

The human auditory system shapes our perception of sound. A large part of this system is the outer ear, the anatomical structure which influences the way we hear and interpret sounds. Recognizing the relationship between the structure of our ears and the auditory experience, this project aims to change and challenge human perception by introducing a wearable device to extend the outer ear and open up new dimensions of auditory exploration and question human hearing and perceptual possibilities.



© Amelia Eickhoff



Homeostat © Sam Ryu



The Brainless Dancer © Peechana Chayochoichana



Heart to Heart © Peechana Chayochoichana



We were walking on the beach © Peechana Chayochoichana

Emil Torp (DE)

Homeostat

A Tam Tam playing itself

A system whose altering parameters perpetually grapple with achieving stability while guarding against chaos. This ongoing struggle is sonically manifested in this performance and installation, inviting listeners to immerse themselves in that which is constant evolving through the self-playing Tam Tam, echoing the relentless pursuit of equilibrium, while exploring the distinction between moment and interval, emancipating itself from the artist's hand.

Chanitnanth Phadungnanonth (TH)

Heart to Heart

Heart to Heart is an interactive installation that transcends digital, verbal and physical barriers through the universal language of heartbeats. This installation allows participants to explore deep connections, fostering a journey of empathy and self-discovery. By engaging with the heart's intimate rhythms, it introduces a new communication form, encouraging reflection on personal and shared emotional states, beyond conventional interaction modalities.

Passion Asasu (TH)

The Brainless Dancer

Durational performance & installation

An interactive performance explores the dynamics of female bodies under patriarchy and capitalism. It highlights invisible social forces symbolized by elements of air and distance, representing shared breath and influential factors that transcend physical space. The artist's body, serving as both medium and protagonist, invites active participation, narrating the experience of navigating a woman's body in capitalist culture and reflecting on cultural hierarchies.

Sound Design: Cosmo Schüppel

Dahye Seo (KR)

We were walking on the beach

We were walking on the beach is a performative installation. It senses the inherent vitality of non-human entities such as molecules and spirits that humans cannot control. This work adopts the 49 funeral rituals of Mahayana Buddhism in its form. Dahye Seo burns incense on a cloth and contemplates the death that surrounds her. She then embroiders a thread in the shape of the ashes that have fallen in a unique pattern. This practice is repeated daily for 49 days.

Young Artist Space

Should the tide be turned?

The *Young Artist Space* is a dynamic open space and art hub for young artists and cultural practitioners at the Ars Electronica Festival 2024. This space invites them to reflect, share and discuss the diverse artistic impressions of the festival and it offers numerous possibilities for use.

Young artists and visitors can develop freely here: getting to know each other and networking, relaxing, experimenting and actively engaging in dialogue. There is no obligation, but rather a relaxed opportunity.

As a Pop-up Atelier, the *Young Artist Space* offers space for creative expression. The Open Gallery and Open Stage allow visitors to present their own works from various art genres—a real laboratory for testing the resonance of current works. In collaboration with the Ars Electronica Festival team and the European Capital of Culture Salzkammergut 2024, international artists

are invited to share their works, experiences, challenges, visions and contributions to shaping the future with the young artists. This exchange offers valuable insights and inspiration for everyone involved.

The exhibition at the open gallery changes daily and is accessible during POSTCITY opening hours. However, in the afternoons it also transforms into an open stage on which young artists have the possibility to share their works or excerpts from them for around 20 minutes at a time.

Stay curious and discover if and how the open stage is used. After the performances, which the audience attends with silent disco technology, everyone is invited to engage in dialogue with the young artists.

Otelo eGen | kooperativ wirtschaften



IT:U

INTERDISCIPLINARY
TRANSFORMATION
UNIVERSITY AUSTRIA

By dissolving
disciplinary boundaries,
experts, artists, scientists,
leading thinkers and innovators from
a wide range of disciplines are brought
together to discuss the contradictory realities
of today's world, lighting new beacons of hope in
the process. That is what IT:U's mission stands for.

— Stefanie Lindstaedt, IT:U Founding President

Stefanie Lindstaedt (DE) / IT:U Founding President

IT:U Addresses Societal Challenges with Interdisciplinary Innovations

Linked to the overall Ars Electronica Festival theme "HOPE—who will turn the tide", IT:U—Interdisciplinary Transformation University Austria addresses the relationship between societal challenges and innovative digital technologies—with a focus on medicine and healthcare in the different perspectives across the fields.

As a collaborative effort between IT:U—Interdisciplinary Transformation University Austria and Ars Electronica, the FOUNDING LAB has been created as a prototyping environment at IT:U. As a mission-driven learning approach, we address digital transformation challenges through interdisciplinary collaboration.

The Lab, which has already started in 2023 with a summer school, followed by a fall and spring term, now brings six standout students from the initial cohort to the Ars Electronica Exhibition 2024 to present their final projects.

The five projects of the six Founding Lab students, coming from the UK, Austria, India, Australia, Japan and Canada, address a wide range of social issues—from Virtual Reality experiences for disabled people, to health monitoring with machine learning and artistic innovation, re-experiencing dreams through cutting-edge VR, combining AI-generated images with historic

texts revealing surprising parallels and finally, questioning our social vision of care and how we wish to encode it in our technologies.

By dissolving disciplinary boundaries, experts, artists, scientists, leading thinkers and innovators from a wide range of disciplines are brought together to discuss the contradictory realities of today's world, lighting new beacons of hope in the process. That is what IT:U's mission stands for.

About IT:U

IT:U—Interdisciplinary Transformation University Austria is one of the first public universities in Europe dedicated to digital transformation. On the campus in Linz, Austria, IT:U offers the students a project-based and inclusive approach to technical education. Students from a wide range of disciplines learn digital skills they can use in their own fields to tackle global challenges. The rapid acceleration of climate change and recent pandemic outbreaks are only two major examples out of a wide range of intensive or disruptive changes. At IT:U—Interdisciplinary Transformation University Austria, students are empowered to be the interdisciplinary, computationally empowered transformers of tomorrow.

Julie-Michèle Morin (CA)

Reassembling Bolts of Care

Care is vital for fostering solidarity, yet it also serves as an essential resource for sustaining a capitalist society. These tensions between care as an exploited resource and the emergence of a new market for robotic care demand critical scrutiny. How do we nurture and care for technologies deployed in the care field?

Reassembling Bolts of Care blends pre-recorded video footage of robotic performances with live theatrical scenes. It incorporates narration and biographical elements that draw from my own experiences and relationship to care, health and technologies as a researcher and a citizen. This tiny performance integrates various robots, each designed (or not) to provide care for someone or something.

This robotic performance-lecture aims to challenge the definition of care embedded in robotic technologies, advocating for a reevaluation of our relationships and ethics towards these technologies.

Concept, Score and Performance: Julie-Michèle Morin and the robotic crew

Video edit: Letta Shtohryn

This work was initiated as part of the FOUNDING LAB program at IT:U and Ars Electronica in Linz, Austria (2023–2024). The FOUNDING LAB is realized as a Public Partnership between Ars Electronica GmbH and Co KG and the Institute of Digital Sciences (IT:U), Austria and financed through funds from the Austrian Federal Ministry of Education, Science and Research.



© Daniela Brill

Puneet Jain (IN), Yesica Duarte (AR)

Crip Sensorama

Re-imagining XR with (and for) People with Sensorimotor Disabilities

Crip Sensorama is an XR artwork that focuses on the following question: How can we re-imagine XR as an “assistive technology” to act as a platform of storytelling for (and with) people with disabilities and, in turn, how can the creation of accessible XR enable us to re-imagine our normative assumptions of disabilities?

Crip Sensorama is an interactive VR/AR experience where the audience navigates, interacts with and immerses themselves in the artistic practices of disabled artist Eric Desrosiers—accessible by adjusting to and using a sequence of mouth gestures mapped and parametrized on Eric’s facial muscles.

These gestures, developed by hacking existing face detection AI algorithms and modifying lip and face trackers, enable Eric to move and interact in XR using his mouth and tongue movements while presenting—how the hacked, re-imagined

and built assistive XR technologies can act as platforms of storytelling around disability-art with and by people with disabilities.

Artist collaboration and consultancy on disability perspectives: Eric Desrosiers and Christian Bayerlein
Mouth Interface and VR/AR Development: Puneet Jain
360° Video Filmmaking and Documentation: Yesica Duarte
3D Modelling and Design: Wolfgang Kienreich and Nelson Silva
Technical Consultant: Nelson Silva

I want to thank Percepto Collective for the 360° video content that was shot during the art-residency at Société des arts technologiques [SAT] in Montreal, Canada sponsored and supported by Conseil des arts de Montréal. This work was initiated as part of the FOUNDING LAB program at IT:U and Ars Electronica in Linz, Austria (2023-2024). The FOUNDING LAB is realized as a Public Partnership between Ars Electronica GmbH and Co KG and the Institute of Digital Sciences (IT:U), Austria and financed through funds from the Austrian Federal Ministry of Education, Science and Research.



© Tom Mesic



© Michaela Lamplmayr

Amanda Bennetts (AU), Johanna Einsiedler (AT)

Do Algorithms Care?

Do Algorithms Care? is a collaboration between artist Amanda Bennetts and data scientist Johanna Einsiedler. The project, realized in an interactive installation that resembles a pristine tech store, offers a critical perspective on the commercialization of personal bio data harvested by devices such as smartwatches and in health-care industries. Through the use of the duo's DIY smartwatches and interactive data interface, they delve into the predictive potential of personal data and machine learning for well-being, inviting viewers to reconsider their relationship with data control and privacy.

This project manifests an Open Source philosophy, publicly sharing all code, smartwatch designs and processes to foster tech democratization and

critique. It is accessible via algorithmic.care. Visitors encounter the smartwatch, sensor kits and interactive visual data from the study, sparking conversation about biometric data's ethical and political stakes.

This work was initiated as part of the FOUNDING LAB program at IT:U and Ars Electronica in Linz, Austria (2023-2024). The FOUNDING LAB is realized as a Public Partnership between Ars Electronica GmbH and Co KG and the Institute of Digital Sciences (IT:U), Austria and financed through funds from the Austrian Federal Ministry of Education, Science and Research. Amanda received support and funding from FutureNOW—an initiative of Sunshine Coast Council with support from Regional Arts Development Fund (RADF) a partnership with Queensland Government and Sunshine Coast Council.

Nathan Cornish (GB)

GPT 1400: The AI Apothecary

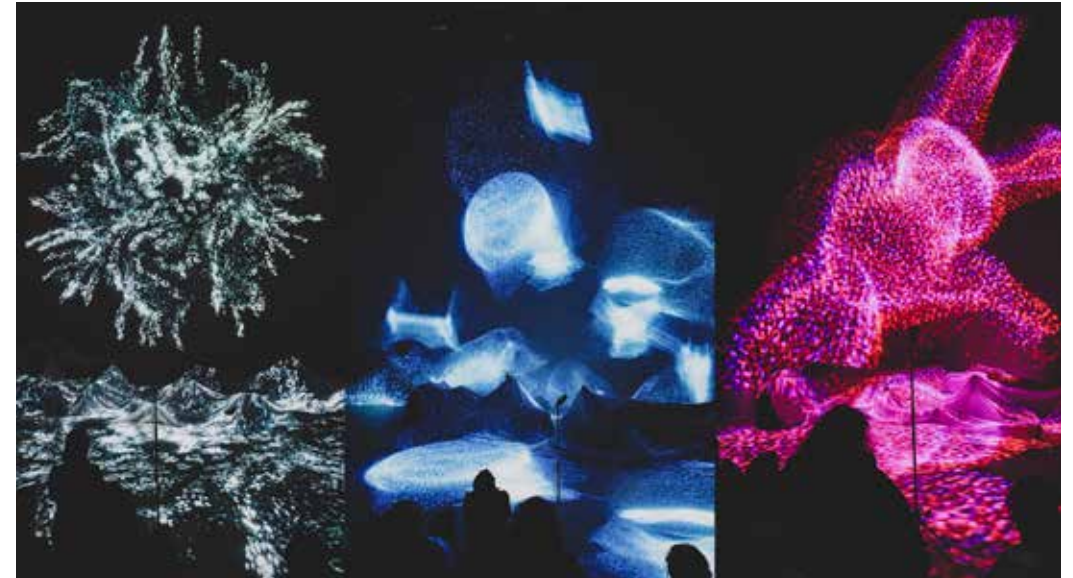
GPT 1400: The AI Apothecary is a speculative historical experience pulling Artificial Intelligence from the realm of possible futures back to that of possible histories. Highlighting the uncritical production of knowledge within both Large Language Models and Medieval Physicians' practices, visitors experience Artificial Intelligence as a backward, credulous and nonsensical technology. Selecting a medieval symptom or condition at the interface tablets sends a prompt to a local AI system which, consulting the same textual material as a medieval doctor would have had access to, provides a unique response and prescription. This is displayed along with an "aphorism" (or wise medical proverb) on a large screen surrounded by a recreated physician's study.

The study contains hybrid AI/medieval plant illustrations and sculptures, as well as a mannequin dressed as a plague doctor. Visitors leave with a printed prescription for a speculative historical remedy for medieval illnesses.



© Martin Hiestmair

This work was initiated as part of the FOUNDING LAB program at IT:U and Ars Electronica in Linz, Austria (2023–2024). The FOUNDING LAB is realized as a Public Partnership between Ars Electronica GmbH and Co KG and the Institute of Digital Sciences (IT:U), Austria and financed through funds from the Austrian Federal Ministry of Education, Science and Research.



© Martin Hiestmair

Pinyao Liu (CN), Keon Ju Lee (KR/CA)

ReVerie

What does the future of dreaming look like when advertisements from corporate and state actors enter our subconscious realm? The *ReVerie* AI system reflects on the concerning misuse of dream technology by inviting participants to relive their dream experiences and develop new understandings about their waking lives. In the interactive AI installation, audiences enter a ritual of whispering their dream objects. A generative diffusion AI model then manifests the dream objects in the shared immersive space in real time, inviting individuals to re-experience dreams and reclaim agency over their subconscious narratives.

In collaboration with dream scientists, the *ReVerie* system explores the transformative potential of the "Dream Reliving" method while making the hidden landscape of dreams visible. By advocating

for an empowering approach towards dreaming through human–AI collaboration, *ReVerie* endeavors to steer society away from a future where dreams are commodified and weaponized.

Concept and System Implementation: Pinyao Liu / Generative Music: Keon Ju Lee / Scientific Research: Pinyao Liu (IT:U), Alexandra Kitson (Simon Fraser University), Claudia Picard-Deland, Michelle Carr (Dream and Nightmare Lab, University of Montreal), Sijia Liu, Ray LC (City University Hong Kong), Chen Zhu-Tian (Harvard University)

This work was initiated as part of the FOUNDING LAB program at IT:U and Ars Electronica in Linz, Austria (2023–2024). The FOUNDING LAB is realized as a Public Partnership between Ars Electronica GmbH and Co KG and the Institute of Digital Sciences (IT:U), Austria and financed through funds from the Austrian Federal Ministry of Education, Science and Research.

ARS ELECTRONICA FEATURES

The Ars Electronica Features present a symbiotic blend of art and technology, meticulously curated in collaboration with partner institutions to showcase innovative programs and perspectives that inspire global change. Since their inception as the Ars Electronica Festival Gardens in 2020, the decentralized festival platform has evolved, adapting to the constraints imposed by the pandemic and transforming into a vital program of the festival. This year, the festival proudly invites a selection of partners to present their projects under the new title “Ars Electronica Features”.

Emerging from the necessity to navigate international travel restrictions, the Festival Gardens provided a decentralized platform from 2020 to 2022. This allowed partner institutions worldwide to host local programs while maintaining international connectivity. As travel and physical participation resumed, the festival saw a significant increase in physical attendance, with 29 partners joining in Linz last year. This evolution from Gardens to Features marks a pivotal moment in the festival’s approach to presenting partner projects.

The transition to Ars Electronica Features signifies a renewed focus on the core essence of the festival. This curated selection highlights projects that resonate with the festival’s theme, ensuring both quality and thematic coherence.

The 2024 festival aims to engage an array of international partner institutions, selected through an open call evaluated by a jury of Ars Electronica experts. This year’s theme, “HOPE—who will turn the tide,” played a crucial role in the selection process, emphasizing the artists’ creative potential as agents of change. The chosen projects embody various facets of hope, demonstrating the resilience and strength of an international network converging in Linz.

Notable partner institutions include BeFantastic, NewArt { foundation;}, Jiabao Li representing the University of Texas at Austin, Baltan Laboratories, V2_Lab for the Unstable Media, The Metaverse Alliance from Taiwan, Kapelica Gallery, the REX|LAB and the Yasuaki Kakehi Laboratory. These collaborations exemplify the festival’s commitment to presenting diverse, high-quality projects that explore the theme of hope from multiple perspectives.

The festival underscores the significance of diverse perspectives, with each partner contributing unique interpretations of “Hope”. This collaborative effort highlights the festival’s role as a platform for active exchange and inspiration, fostering new connections and innovative programs. Ars Electronica 2024 aspires to cultivate a global community that generates hope and drives change through creative collaboration and cutting-edge projects.

ARS ELECTRONICA features AUSTIN

Jiabao Li: Ecocentric Future Lab (US)

Of Sublime and the More-Than-Human

This exhibition explores co-creation with more-than-human entities, investigating how inter-species collaboration can reshape our understanding of agency, intelligence and creativity. Jiabao Li's practice involves three stages: connecting and embodying non-human species using all senses, speaking up for their needs and creating manifestos and developing new ways of co-creation and design with non-human systems. In the face of an escalating biodiversity crisis, it is imperative to transcend human-centric paradigms and embrace a multi-speciesist, eco-centric worldview.

Jiabao Li presents a series of works that blend scientific research, technology, activism and artistic expression. Audiences will encounter *Squid Map*, a reimagined underwater playground

that reflects on human borders through the eyes of a squid. *Squeeker: The Mouse Coach* is an interactive installation where mice become running coaches, emphasizing the impact of non-human agency on human health. And Mixed Reality experience *EchoVision* allows you to echolocate like a bat (find the project in the Deep Space 8K section). *Arctic Phantoms* presents a series of reflections on the sublime of the Arctic, climate change and the catastrophic consequences of our hubris in attempting to rectify our self-made climate crisis.

This exhibition is funded by PlanetTexas 2050, Fine Arts Creative Research Grant and Effie Marie Cain Regents Chair in Fine Arts Fellowship from The University of Texas at Austin.



Arctic Phantoms © Jiabao Li

The Ars Electronica features showcase a curated selection of projects that highlight the transformative power of art and technology, embodying the festival's theme of "HOPE" and demonstrating the strength of global creative collaboration.

—Christl Baur, Head of Ars Electronica Festival

Jiabao Li (CN), Alanah Knibb (GB)

Arctic Phantoms

This series was born from my Arctic Circle residency. I delivered a TED Talk devoid of human language, instead using the voices of Arctic animals affected by climate change. I performed a series of futile efforts—freezing glacier water, polishing an iceberg, sweeping a snowy mountain and draining the ocean with a cup. In “polar bear relocation”, “experts” devised absurd plans to move polar bears from the Arctic to the Antarctic, exposing our hubris and its consequences.



© Jiabao Li

Jiabao Li (CN)

Squeeker: The Mouse Coach

Squeeker transforms fitness with a mouse as your coach. This app notifies you to run when your mouse coach starts to run. Match its distance and both earn rewards: treats for the mouse, social media scrolling for you. *Squeeker* fosters healthy habits via a unique human-animal bond, redefining fitness and rethinking the use of lab mice.



© Jiabao Li

Jiabao Li (CN)

Squid Map

I worked with Marine Lab in Hawaii, where squids lived in plain white tanks. As enrichment, I collected white and black sand from Hawaii and shaped them into countries. The squid moved the sand, crossed borders without a visa and buried under the sand for camouflage. This reminded me of my immigrant experience between China and the US, in which cultures blended. We build borders that block animal migration. Over time, the squid reinterpreted human-made borders, creating a new perspective on our maps in the *Squid Map*.



© Jiabao Li

ARS ELECTRONICA features BUCHAREST

NEOART Association/Galateca Gallery (RO)

Changing Environments

Changing Environments is the curatorial and research theme of the exhibition. Through two interactive installations, it explores the impact we feel on an individual and community level caused by excessive use of technology, environmental destruction or unseen realities owing to the speed of scrolling. The selected artists are the winners of the NAC-Neo Art Connect Grants, 2nd Edition '24, part of Romania's first art and science Annual: Sebastian Comănescu with the project *Thigmonastic Specimen 001*, and Marina Oprea with *Ourcelium*. These two artistic explorations of significant contemporary societal issues represent ongoing research themes for the artists over several years, with the installations premiering on the neartconnect.ro platform.

Changing Environments creates a space for debate from the socio-cultural perspective of creators and artists who integrate, use or collaborate

with various scientific fields and new technologies. It addresses the impact felt on an individual, socio-economic and cultural level due to major changes in contemporary society, caused by the development of technology and new AI presence in most aspects of life, as well as climate and environmental changes, thus creating new perspectives and hope.

Ourcelium (Marina Oprea): Video installation, polymer clay, epoxy resin, silicone

Thigmonastic Specimen 001 (Sebastian Comănescu): A speculative mechanical symbiote which is fused with a decomposing log.

Artists: Marina Oprea, Sebastian Comănescu / Curators: Andreea Sandu, Anca Boeriu / Photo: Razvan Mihalachi
The project is part of Neo Art Connect Annual, organized by Galateca and NeoArt Association / Co-financed by BRD—Groupe Societe Generale and RCI—Romanian Cultural Institute / Co-financed by RCI—Romanian Cultural Institute and BRD—Groupe Societe Generale

Marina Oprea (RO)

Ourcelium

Video installation, clay, resin. In the current era, in which human influence is seemingly dominant, an essential reality is often overshadowed by anthropic concerns: the true dominant species of the biosphere is the fungal kingdom. While humanity remains locked within the confines of its individualistic pursuits and ignores the subtle mechanisms that govern ecological order, mycelium remains an emanation of silent tenacity, adaptable to the most inhospitable manifestations of human excess.



© Galateca / Razvan Mihalachi

Sebastian Comănescu (RO)

Thigmonastic Specimen 001

Kinetic Sculpture. A speculative mechanical symbiote which is fused with a decomposing log. The hybrid casts a critical perspective upon the natural/artificial dichotomy which allows us the comfort of a passive attitude towards the environment. The creature dwells in a future where nature has degraded to a point in which it needs a man-made prosthesis in order to exist. Whenever sensing presence, the specimen rattles in order to scare away anything that might pose a threat to the microbial flora.



© Razvan Mihalachi / Galateca

ARS ELECTRONICA features EINDHOVEN

Baltan Laboratories (NL)

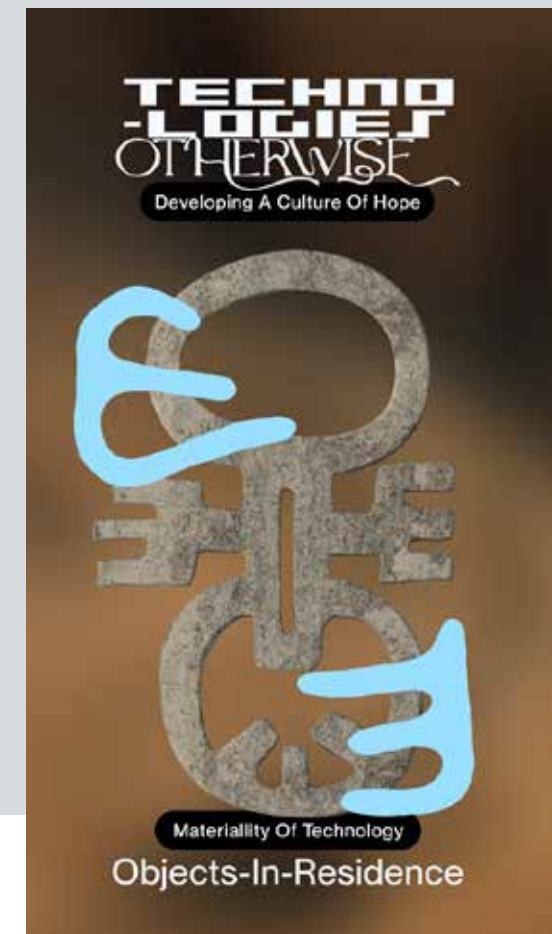
Technologies Otherwise

In 2024, Baltan will practice a hopeful approach towards technology. Many technologies started with hope—for example, the early phase of the web or the beginning of the blockchain movement. Nonetheless, because of the continuous colonization of technology by corporate capital, both have led to an amplification of centralized power and profit-driven innovation. This colonization created a great sense of disillusionment. How can we cope with it?

Let us restart and do technology otherwise: open it up, unscrew it, dissect its materials and rethink the narratives behind it. Let us reclaim our imaginative power and develop new stories that could inspire this process. And with these stories in mind, let us think about how developing more diverse technologies could challenge our current one. Different technologies by different voices, for different human and non-human users, with different materials and production models, for different temporalities and localities.

The exhibition at Ars Electronica will focus on presenting the Objects-in-Residence trajectory of Baltan Laboratories' 2024 program. An object is the intersection of economic, material, political and social interactions. Starting from specific technological objects (the smartphone, the battery and third-party cookies), we invited three artists/designers to spend one year with those objects, take them apart, materialize/visualize how they work, analyze how they are produced and assembled, what materials are chosen and where they come from.

Baltan Laboratories curated and produced the exhibition *Technologies Otherwise*. The exhibition features first outcomes of the year-long artist-in-residency program Objects-in-Residence, a part of a year program for 2024—Technologies Otherwise. Three artists in residence—Marie Dvorzak, Azahara Cerezo and Thomas Thwaites—developed new projects about different technologies. Technologies Otherwise is supported by Creative Industries Fund NL and Stichting Cultuur Eindhoven.

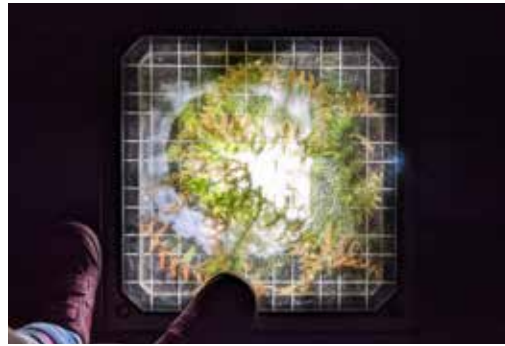


© Graphic design by Gabriela Baka

Thomas Thwaites (GB)

Alignment Problem

What can we do in the face of the ever-worsening climate crisis? This project titled *Alignment Problem* presents two apps that attempt to have an effect. The first app limits screentime on your phone based on the carbon emissions associated with its usage. It links your digital wellness to ecological limits, but it is a fig leaf: a few grams of carbon saved is not substantial. The second app takes a different tack: it collects pledges of money toward buying a company responsible for 1% of global emissions and running it into the ground.



© Thomas Thwaites

Marie Dvorzak (AT)

Decline All

This work examines the 2025 phasing-out of third-party cookies, touching on themes of trans-materiality, surveillance capitalism and remembrance culture. Three distinct plates are featured made from electronics, glass, plastic and copper, representing the internet's core components, with lights and a Raspberry Pi. The back showcases text on web-based tracking, illustrating the past, present and future of tracking technology.



© Marie Dvorzak

Azahara Cerezo (ES)

Sediments of Power

Sediments of Power is a research-based work that examines lithium batteries in electric vehicles to address the ambivalences of the twin transition, its material dependencies and the effects on our fast, portable lifestyles. The project is presented as an installation that oscillates between analysis of global supply chains, on-site work in spectral lithium mines in southern Europe and the proposal to rethink acceleration and scale in our relationship with digital technologies.



© Azahara Cerezo

ARS ELECTRONICA features ENSCHEDE

Tetem (NL)

The Ripple effect

Sjoerd van Acker and Annika Kappner invite the audience to explore the essence of actions, relationships and decisions for a better tomorrow. Interactive technologies can help us explore realms where decisions and actions have a clear effect in front of us. From tracing a path for future visitors to becoming a crucial mineral from earth, each decision you make produces an echo that will affect the future. Beyond our present identities, we are energy that triggers ripples on

this spacetime reality; our small actions create craters and hills for the future.

Hope begins with actions, and actions begin with knowing that whatever we do will be worthwhile and influential. Through *The Ripple effect*, the audience will be able to come to terms with this: each action will have a reaction, and we can make the difference.

Artists: Sjoerd van Acker, Annika Kappner
Production: Tetem



© Job Lugtigheid



© Christina Bakuchava

Sjoerd van Acker (NL)

Lingering Echoes

The VR installation is a four-dimensional hypercube that connects participants with the future and the past. A choreography is created from the movements of each visitor's hand, composing an ever-evolving piece. This makes each experience of *Lingering Echoes* unique; a personal snapshot in the present, complemented by the dying echoes of others and a fusion with a possible future. You are now in charge of following what is set in front of you, or you can create a new path and gift the next visitor a new experience.

Annika Kappner (DE)

LIQUID DREAMS

Experience a journey through a speculative history of the relationship between human and mineral intelligence. The aim is to add experiential perspectives to the contemporary relationship between humans, nature and technology. The installation uses sensory scenographies combining landscape, installation, performance, guided meditations, scents and sound to create glitches in perception. It aims to decolonize and emancipate ways of feeling and sensing, enabling connection and care for the self and the other.

ARS ELECTRONICA features INNSBRUCK

Robotic Experimentation Lab (REX|LAB) at the Universität Innsbruck, Department of Experimental Architecture (Exp.Arch.), Hochbau, Studio Colletti (AT)

HOPE: Hybrid, Organic, Postplastic Environments

A holistic, ethical and sustainable approach to home design and living environments

Departing from the rigid geometries of Neoplasticism—an austere, geometrical, abstract style labelled by Mondrian one century ago, which focused on strict, geometric forms and primary colors—Postplasticism embraces an organic and expressive style, characterized by intricate decorations, flowing forms and a rich, varied and sustainable material palette. It provides hope for architecture by avoiding single-use plastic, upgrading recycled polymers, bioplastics, industrial byproducts and using biophilic materials through 1:1 3D additive manufacturing processes. *HOPE: Hybrid, Organic, Postplastic Environments* showcases an experimental, sustainable and ecological approach to designing and manufacturing bespoke modular micro-living-working environments. Flexible, multi-functional furniture and storage solutions with integrated smart technologies are folded, stacked or nested in a 3D-printed landscape that fits inside the bounding box of a

shipping container.

The exhibiton was designed and fabricated by REX|LAB, a collective of researchers committed to advancing sustainable, innovative, robotic additive manufacturing. Each project attempts to push the boundaries of architectural design and fabrication through the integration of advanced robotics and cutting-edge material technologies. This approach allows for the realisation of intricate geometries and bespoke designs while affording opportunities for the incorporation of multi-material gradients and inherent color properties.

REX|LAB at ExpArch Innsbruck is a collective of researchers committed to advancing sustainable, innovative, robotic additive manufacturing. Current team members: Marjan Colletti (IT/AT/GB), Kilian Bauer (DE/AT), Catalina Tripolt (AT), Daria Smakhtina (RU/AT), Peter Massin (DE/AT), Andreas Körner (AT/GB), Georg Grasser (AT), Simon Hildebrand (DE/AT), Theresa Biesalski (DE/AT), Amy Ehinger (DE/AT), Christopher Walch (AT), Anna D'Eredità (IT/AT)



ARS ELECTRONICA features LINZ

Stadtwerkstatt (AT)

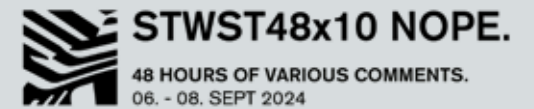
STWST48x10 NOPE.

48 hours of various comments.

With *STWST48x10 NOPE*, Stadtwerkstatt is holding the 10th edition of its annual 48-hour non-stop showcase extravaganza STWST48 in September 2024:

With NOPE, STWST is responding to ramped up optimism. In the midst of multiple crises, totalitarianism and toxic hallucinations, hope itself becomes to hope. Or even a category of struggle—but for whom or against what?

STWST moves between Not Real and Not Really with the shadowiness of a succinct NOPE and focusses on its core themes: New contexts, unmediated art, critical production, increasing the contradictions, imagination as material, intentional reorganization of means. More than ever, STWST is refusing to work through topics and is focussing on principles and various comments. We show the house as a continuum of criticism and glamorous



anti-spectacle. The house loses nothing and forgets nothing. In 2024, *STWST48x10 NOPE* once again means forty-eight hours of genre-free art and critical production in the Anti White Cube of the building. With allies and accomplices STWST shows uncleaned art contexts, exhibition pieces, performances, brings text transformation and mixes everything with two nights of music and sound. Throughout the building: NOPEtimism of the will. Walk through a palace of pessimism or through a future of solved problems. Decide for yourself what will happen! Sounds like a disaster? YOPE, you are right.

Start: FRI, 6.9., 18:00

End: SUN, 8.9., 18:00

FULL LINE UP: stwst48x10.stwst.at

Stadtwerkstatt / STWST (AT), Tanja Brandmayr (AT)

Bloodproof of Life, Part Video Proof

In September 2023, STWST organized the format *Bloodproof of Life*—as a collective art action with real lifeblood. An appeal was made: Stadtwerkstatt gives you back your lifeblood—come and get it! 4 ml of blood was taken from volunteers. This was followed by several checks of the participants and their lifeblood, by survey, seal, blockchain, hash and video proof. The authenticity of blood, participants, hash, chain, video and overall participation in the collective lifeblood project was confirmed in a reciprocal multiple proof. Finally, the participants received their ampoule of lifeblood back as a transformed, certified blood-to-art object suitable for the art market.

During its realization at STWST, the format led to constant queuing. Topics between “lifeblood as a resource”, i.e., the internal operating systems

of engagement, and the currently discussed extraction of resources and the best parts of people, their DATA, were critically reflected—as well as the technological and social regimes that make this possible. At STWST48x10, the video proof plus parts of the multiple checks are shown, plus an installative setting and activation of the open question of where our lives live.



Shu Lea Cheang, Franz Xaver and Guests / 10x10x10 of Media Art (with an attitude)
 Claudia Reiche and Helene von Oldenburg / Re Capitulating THE MARS PATENT
STWST48x10 Media and Mars Archives

STWST48x10 presents two media archive projects: *10x10x10 of Media Art (with an attitude)* brings up 10 significant artworks/events from STWST's archive and invites 10 artists/spaces/collectives to correspond by bringing 10 works from their own archive or that of the larger media arts field. The works are presented on the STWST website and projected on a screen accompanied by a dinner performance. Franz Xaver chooses 10 works/projects from STWST, Shu Lea Cheang invited: Raqs Media Collective, Disruption Network Lab, Matthew Fuller, Auriea Harvey, Galerija Kapelica, VNS Matrix, Constanza Piña, Quimera Rosa, Winnie Soon, Mike Stubbs.

The other project, *Re Capitulating THE MARS PATENT*, will be presented as an exhibition piece: What began in 1999 as a virtual exhibition space for art and theory on Mars (or was it in the World Wide Web and the imagination?) is being revisited 25 years later by the artist couple Claudia Reiche and Helene von Oldenburg. It is about recapitulating an early cyberfeminist and media-theoretical project.



© © STWST, Mars Patent

Johanna Bruckner (AT), Susanna Flock (AT), S()fia Braga (IT), Tina Kult (DE)
TecTales @STWST48x10

TecTales is a multidimensional screening event and presents significant positions in contemporary video art, and creates a dedicated and communal space where moving images can be experienced in their full length. For STWSTx48 NOPE, *TecTales* transforms into a 48-hour, non-stop cinema program and is delighted to present a selection of four short films. These are: *Hardware* by Johanna Bruckner, *I don't exist yet* and *Building A.I. out of Clay* by Susanna Flock and *Forehead Vulva Channeling Research* by S()fia Braga. The works delve into speculative, queer and gentle narratives that investigate the

intersection between humans and technology. They offer diverse perspectives on non-human perception and agency, reflecting on the complexities of consciousness and existence.

TecTales is curated by Tina Kult and presented at STWST48x10 in cooperation with the exhibition space *discotec* in Vienna.



© Johanna Bruckner, Film still *Metabolic Hardware*

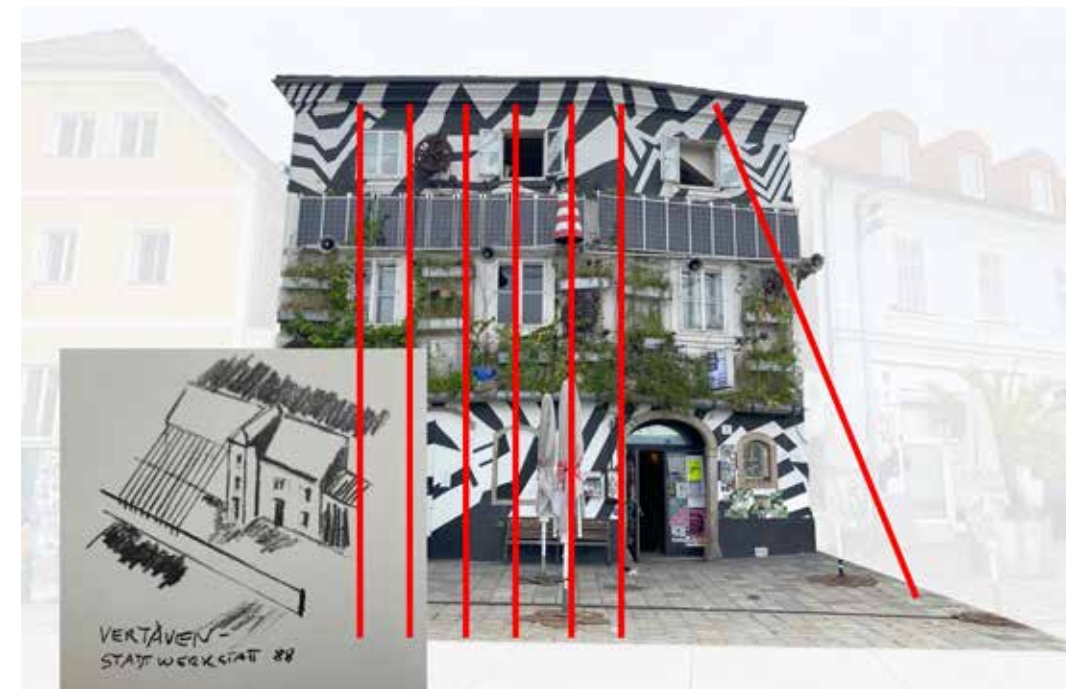
Stadtwerkstatt (AT) & various artists
The STWST as a Ship
 48 hours of various comments

The STWST as a place of imagination and resistance—we imagine the building as a ship, mooring it to the square. A razzle-dazzle disorientation pattern on the building extends the façade as an artistic display. Parts of the wrecked ship Eleonore lie in front of the STWST on the square—as an explosion installation. A point of light crawls through the house as a creature seeking its manifestation—as a creeping light it pervades parts of the house and proclaims on text panels: the ship and the non-ship, a NOT ON PLANET EARTH and a revolt of imagination.

With this abstraction, the STWST focuses on its theory and research tracks. Stadtwerkstatt

asserts nothing less than a transformational Gesamtkunstwerk that awakens as an entity and develops consciousness. As an idea of itself and equipped with its own consciousness, this Gesamtkunstwerk constantly creates new ideas of itself in order to change its form and remain unfinished. Today a ship, tomorrow a planet of sleep. Even the idea of such a Gesamtkunstwerk may be crazy in view of technological developments and an imminent major paradigm shift: absoluteness, imagination and contradiction are still the relevant materials with which we should work.

NOPE factor: The whole is the art. Gesamtkunstwerk not finished.



© STWST

ARS ELECTRONICA features LINZ

DH5 (AT)

choi

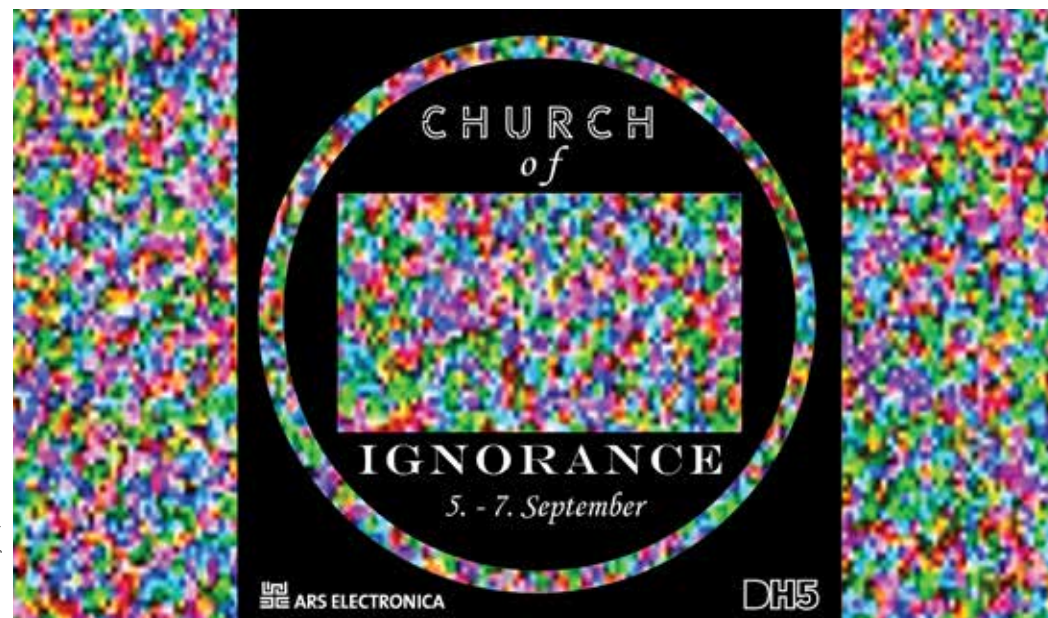
Church of Ignorance

“Who turns the tide?” The Church of Ignorance (*choi*) analyzes the culture of thought that prompts such a question and the expectations it raises. What do we do with logic and what does logic do with us? How do we deal with ambivalence? The ingrained paradigm of the vector called progress, namely “knowing how to go on”, creates a feeling of powerlessness when it collides with a wall of major crises. *choi* faces this powerlessness, establishes an awareness of the ambivalence not perceived in the divisive light of logic and invites everyone to commit publicly to non-knowledge and not-knowing-how-to-go-on.

At the first Pole Sitting in Linz, high above Herrenstraße, you can confess your ignorance. In the artistic evening programme, the bands Fuckhead, Enesi M, Quatsch mit SoSa and Gruppensex celebrate ecstatic concerts, while the Pataphysical Orchestra astounds with skilful not-knowing. Mass, confession and other healing

rituals are performed. Bruixes Lab holds a workshop on unlearning taboos and Miriam Stoney deals with the imperatives of self-help and self-care. In the School of Ignorance, during daylight, we explore the topics of non-knowledge, ambivalence and decidability on a scientific, philosophical and theoretical level. The connection between logic and familiar categories of stratified, hierarchical societies, such as justice, the public sphere, prosperity, hope and happiness are questions that we address.

Raphaela Edelbauer, Simon Nagy, Dominika Meindl, Kat Suryna, Thomas Preindl, Walter Stadler, Enesi M, Fuckhead, Gruppensex, Quatsch mit SoSa, Miriam Stoney, Bruixes Lab, Sonja Riegler, Lydia Haider, Moritz Danner, Anna Weberberger, Fabian Navarro, Thomas Kranabetter, Diana Pankova, Miha Godec, Kaname Muroya, Walter Schalter, Anna Freudenthaler, Uwe Hochhauser, Rene Monet, Forum Stadtpark, Linsey McGoey, City of Linz, Land OÖ, BMKÖES



ARS ELECTRONICA features LJUBLJANA

Kapelica Gallery / Kersnikova Institute (SI)

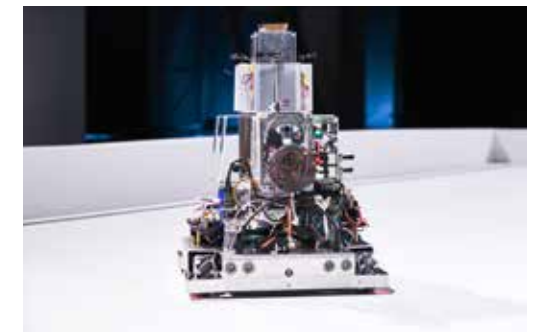
Kersnikova Institute is an investigative art production platform in the merging field of art, science and technology. Along with Kapelica Gallery, it has built an infrastructure of wet and mechatronic laboratories. The three decades of working with artists on living systems, biotechnologies, AI and more are also reflected in peer-to-peer, DIY and open-source educational programs.

Kersnikova collaborates with experts, institutes and the economic sector by integrating them into the creative process. At this year's Ars Electronica Festival, the Kapelica Gallery / Kersnikova Institute will present the group Where Dogs Run, consisting of Natalia Grekhova, Alexey Korzukhin and Olga Inozemtseva, with their project *Kerosene Chronicles. Fungus*.

Where Dogs Run (RU/SL): Natalia Grekhova, Olga Inozemtseva, Alexey Korzukhin

Kerosene Chronicles. Fungus

Kerosene fungus is a technophile organism living in fuel tanks. It uses the consequences of the Anthropocene to its evolutionary advantage. During the course of its metabolism, the fungus changes the smell of the fuel in which it has settled. This became the starting point for modeling chemical communication between bio- and cyber-organisms. Kerosene robots use smell to find each other and build relationships with each other based on data about the well-being of the kerosene fungus inside them (PH-meters, gas analysis, kerosene level). In the event of two robots with matching strategies meeting (e.g., one is prepared to give out of altruism, or submit; another, to take kerosine), one robot can join with another to take its kerosine. Possibility of strategy alignment or disalignment complicates communication in the group, makes it unpredictable, thus



allowing to see the fungus-machine's action on the field as a sort of social interaction.

The project was implemented on the basis of Zavod Kersnikova, in collaboration with AFF Projects and CultTech Association / Scientific Consultant: Anastasia Krivushina, PhD in bioscience / Programming: Sergey Mashkov / Technical Support: Gleb Andreev

Marko Damiš (SI), Jurij Krpan (SI)

C-Lab

Interactive collaborative platform

The *C-Lab* facilitates a creative process involving an interdisciplinary group of creatives. The innovative process acts like a catalyst, employing art thinking, design thinking and machine-related thinking. The collaborative platform enables participants to visualize their spoken, uploaded contributions with semantic networks. These can be additionally manipulated by connecting the nodes and provoking a chain of unexpected interconnections between concepts.



ARS ELECTRONICA features REUS

.NewArt { foundation;} (ES)

Vestibular_1

What happens when our aesthetic perception is altered with conflicting sensory information? How do we perceive objects of human expression, such as visual and auditory forms, when our sensory signals carry discrepant information? *VESTIBULAR_1* is an immersive audio-visual installation that induces illusory sensations of self-motion in complete darkness by temporarily disrupting vestibular functioning. Albert Barqué-Duran and Marc Marzenit present a piece based on innovative research investigating the role of vestibular signals in the perception and representation of the body and the external world and how it affects aesthetic preferences. The audience will be perceptually challenged via powerful patterns and configurations of light and sound stimuli that persist in their retinas and auditory systems while in total obscurity. Under normal circumstances, the brain optimally combines all these sensory signals to produce a

coherent representation of the organism in the external environment. However, *VESTIBULAR_1* shows us how our perception of art drastically changes when facing altered and conflicting sensory information. This project was produced in the middle of the pandemic thanks to an outstanding international collaboration between artistic and research institutions; a case-example that not only fostered avant-garde creative expressions but also highlighted the resilience and unity of humanity in overcoming unprecedented challenges together.

Artists: Albert Barqué-Duran PhD, Marc Marzeni / Co-Producer: .NewArt { foundation;} / Technology Partner: Protopixel, SilentSystems / Technology Suppliers: Sfëar—Eurecat / In collaboration with: Prof. Elisa Ferrè (Vestibular Neuroscience Laboratory—Birkbeck University of London (UK) / Acknowledgements: LaAgencia, AULART / Presented by: .NewArt (foundation;) & Institut Ramon Llull



ARS ELECTRONICA features ROTTERDAM

V2_ Lab for the Unstable Media (NL)

Summer Sessions at Ars Electronica Festival 2024

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



Summer Sessions are short-term residencies for young and 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 for 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 by

one of the international partners in the network. While the pop-up exhibition showcases the kind of results that this pressure cooker residency format produces, 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 serve as a meeting point to discuss how to strategically further develop international opportunities for emerging and young professionals among past, present and future partners of the network.

Kexin Hao (CN)

Forceful Catering

Forceful Catering is a choreographic and musical performance inspired by the East/Southeast Asian tradition of preparing sticky rice cakes (mochi). The rice-pounding utensils become experimental percussion instruments, producing bass beats to the electronic music. The pounding movements develop alongside the increasing viscosity of the rice.



© Helena Roig

Daniel Simu (NL)

Acrobotics

The Acrobot is a groundbreaking circus performance that introduces a custom-built robotic acrobat flyer, redefining our understanding of human and machine collaboration through an exciting mix of juggling, acrobatics and storytelling.

A circus artist is forced to turn into an engineer when he meets his new acrobatic partner: a robot. Together they explore what happens when a robot physically relies on a human partner to execute its moves.



© Jona Harnischmacher

Juil van der Laan (NL)

IMU

IMU is an essay film installation which turns the viewer into one of its main characters through deepfake technology. It is a personal confrontation with this form of technology and a meditative intervention on what the self and your self-image really are. Featuring philosopher Mogobe Ramose.



© Juil van der Laan

ARS ELECTRONICA features SINGAPORE

BeFantastic (SG, IN)

Temporal Shifts: Along the Red Dot

Temporal Shifts: Along the Red Dot brings together four pioneering artists and collaboratives from Singapore: Ong Kian Peng, Debbie Ding, Urich Lau and Avventura with Maya Dance Theatre. Together, they present critical investigations and speculative imaginations that address the island in its past, present and future. The works closely respond to the festival's motto, utilizing immersive technology to address urgent societal concerns, such as our relationship to land and natural resources. These artists construct digital environments built on personal archives, historical research and cultural traditions, reflecting upon Singapore's unique relationship to its environment and histories.

Ding's *New Village* is an interactive artwork and game set in 1950s Malaya, exploring notions of cultural identity and personal effects of architecture.

Lau's *VJ Conference: Super-Structure* delves into the meaning-making of cultural landmarks and national history. In *Moving Stillness*, Avventura and Maya Dance Theatre draw upon traditional dance forms to dive into our waterways filled with disposed plastic, while Ong's *Accidental Utopia* introduces a twist to the nation's plan for a new artificial island, bringing us into a post-Anthropocene future. Their works will be presented as narrative short films, 3D animation, interactive games, VR experiences and more, representing a diverse range of mediums and technological possibilities.

Artists: Debbie Ding, Ong Kian Peng, Urich Lau and Avventura with Maya Dance Theatre / Curator: Clara Peh / Creative Director: Kamy Ramachandran / Producers: Christine Chong & Imran Manaff / Supported by National Arts Council, Singapore.



© BeFantastic

Ong Kian Peng (SG)

Accidental Utopia

Accidental Utopia is a media installation that speculates on the future of the post-Anthropocene from a Singaporean perspective. Set on the proposed man-made “Long Island” in Singapore, designed to mitigate predicted sea-level rise, the work imagines a utopia meant for humans but unexpectedly transformed by higher-than-expected sea-levels. Using VR and a narrative short film, Ong envisions a future in which nature and the marine ecosystem thrive, and humans learn to coexist with the sea.

Debbie Ding (SG)

New Village

New Village is an interactive artwork and game exploring 1950s Malaya. Can you “unforget” a place that you have never visited? Not a return to one’s motherland, but a voyage to new dimensions? Ding reimagines the village buildings as dislocated Cold War remnants and emotional-architectural receptacles, where tiny altar houses within the rural homes become magical portals to parallel villages, which preserve cultural identities whilst also suggesting the possibility of alternative futures.

Urich Lau (SG)

VJ Conference: Super-Structure

Digitization and archiving are acts of preservation of our collective consciousness, of heritage and history. This immersive Virtual Reality work titled *VJ Conference: Super-Structure* is an investigation of the history of Singapore through its colonial buildings that held various branches of government and now house national museums and galleries. Depicted as a functionless new “museum” in the metaverse, these gazetted institutions subvert original functions within the artwork by means of reconstructed fragments that form new imaginings.

Maya Dance Theatre & Avventura (SG)

Moving Stillness

Moving Stillness provides viewers with a first-person experience of being engulfed in a sea of plastic debris. Exploring the Asian traditional dance practice focused on structure, rigor, rhythmic cycles and intricate gestural language, this VR experience delicately negotiates the state of stillness through the moving body. Tackling the pressing theme of ocean plastic, this dance-theater production invites audiences to immerse themselves in a stereoscopic 180-degree VR landscape.

ARS ELECTRONICA features TAIPEI/FORMOSA

Metaverse Alliance (TW)

Resonance of Hope

Exploring Love, Technology and Peace in Turbulent Times

Resonance of Hope: Exploring Love, Technology, and Peace in Turbulent Times delves into the intersections of these themes. Art and technology address global challenges, foster change and promote reconciliation.

Featured works include:

Imagine—find more information on this project in the Deep Space 8K section.

Future Morphoid: A Cozy Afternoon in Taipei—An immersive installation with a wall projection, kinetic elements and interactive showcases. It captures the vibrant contrasts of Taiwanese life, featuring Taiwanese food as cultural treasures and offering a fresh perspective on daily life and culture.

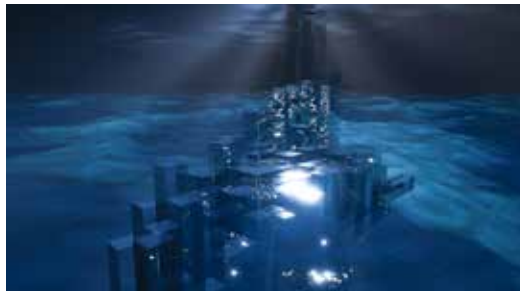
Heartbreak Funeral Service—The *Heartbreak Funeral Service* integrates LineBot and AI chatbot technologies to guide individuals through a healing process akin to the Bardo phase post death. Featuring introspection, venting and farewell

stages, elements like the “Revenge Shrine” and “Charity Shrine” encourage positive actions and emotional recovery.

Resonance of Hope invites critical discourse and communal introspection within cultural, socio-political and scientific contexts toward empathy, understanding and global harmony.

Artists: Hsin-Chien Huang, Wen-Chieh Chang, Billy Yi-Chun Chang, TECHARTGROUP INC, FEASTOGETHER CORPORATION, Mei-Chen Guo, Szu-Chi Chen, Chi-An Chen, Kun-Yi Hsiao / Curator: Hsin-Chien Huang / Producer: Hsiao-Yue Tsao / Technical Director: Wei-Chieh Chiu / Programming: Jiun-Yan You / Project Manager: Yi-Ning Lo / Project Assistant: Sz-Chi Chen
Partners: Ministry of Culture, Department of Cultural Affairs Taipei City Government, Virtual and Physical Media Integration Association of Taiwan, Metaverse Alliance, Oready Innovation LAB, TECHARTGROUP INC, NVIDIA, GIGABYTE, National Taiwan Normal University, National Taipei University of Technology, National Chiang Kai-shek Memorial Hall, Cultural Affairs Bureau Tainan City Government, Chunghwa Telecom

Accidental Utopia © Ong Kian Peng



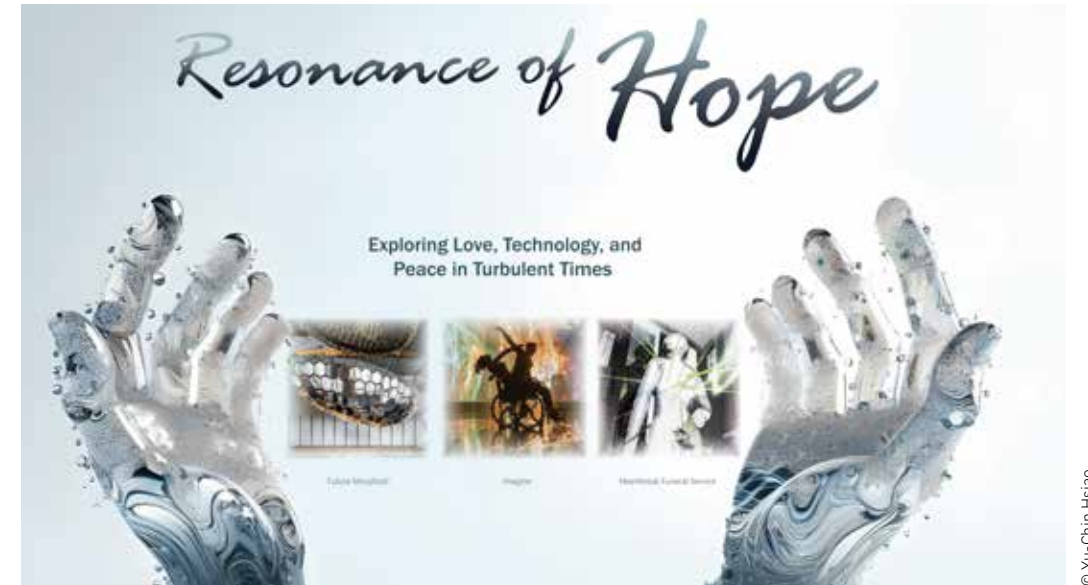
New Village © Debbie Ding



VJ Conference: Super-Structure © Urich Lau



Moving Stillness © Cyrti Ng for Avventura



© Yu-Chin Hsiao

Mei-Chen Guo (TW), Szu-Chi Chen (TW), Chi-An Chen (TW), Kun-Yi Hsiao (TW)

Heartbreak Funeral Service

The deeply invested love, filled with genuine emotions, is abruptly severed by death. The negative energy that comes instantaneously often suffocates. *Heartbreak Funeral Service* comprises a 49-day ritual that is crafted to aid those recovering from a breakup, following the tradition from Eastern funeral rites—7 days * 7 weeks = 49 days, thus a continuation of its characteristic duration. The bereaved are accompanied by an AI assistant to help them overcome their pain.



© guomeichen

TECHARTGROUP INC (TW), FEASTOGETHER CORPORATION (TW)

Future Morphoid

Through this installation, our aim is for visitors to have a glimpse of the different facets of everyday life in Taiwan. It can be intense and dangerous from the outside, but at the same time relaxing and joyful from the inside. With the display of Taiwanese food as a museum treasure, our aim is to give people a new perspective on Taiwanese everyday life and culture—which could even act as a cultural bridge.



© TECHARTGROUP INC

ARS ELECTRONICA features TOKYO

Civic Creative Base Tokyo [CCBT] (JP)

A platform for *civic creativity* from Tokyo

CCBT is a platform for “civic creativity” from Tokyo where citizens identify various social issues and engage in co-creation/development projects to overcome such challenges. Emphasis is placed on civic creativity, aiming to co-create a better society along with residents in Tokyo by combining creativity and technology.

CCBT will hold the *Electromagnetic Street Bon Dance Festival*, featuring ELECTRONICOS FANTASTICOS!, a collaboration of artists, which was selected for the 2023 CCBT artist fellowship initiative Art Incubation Program for its theme of “Platforms that are socially engaging or participatory for members of the public, such as hackathons and workshops”.

With labs in five cities in Japan and an online presence, ELECTRONICOS FANTASTICOS! is known for its participatory art projects, and

created and presented a new performance, the *Electromagnetic Matsuri Parade*, featuring a newly made Generator Festival Float powered by renewable energy, and the Electromagnetic Festival Music Troupe playing musical instruments modified from old household appliances. At CCBT, open studios and workshops were held so various people can collaborate in order to build new kinds of festival floats, instruments and music. The result is a contemporary, collaborative space where many different fields merge, from music to art, engineering, science and design. *Electromagnetic Street Bon Dance Festival* is the special version of this project!

Organized by Tokyo Metropolitan Government, Arts Council Tokyo (Tokyo Metropolitan Foundation for History and Culture)
Supported by: EcoFlow Europe s.r.o.

ELECTRONICOS FANTASTICOS! (JP)

Electromagnetic Street Bon Dance Festival

Led by artist Ei Wada, this project brings together various collaborators to reinvent unused electrical appliances into new electromagnetic musical instruments. Through the ingenuity of the participants, the original functions of electrical appliances are reconfigured for musical purposes, creating new fantasies day by day. *Electromagnetic Street Bon Dance Festival* will honor the tradition of ancient Japanese festivals of fire, water, wind and earth and will be dedicated to electricity, essential in the modern age. Join us in a frenzy of playing and dancing around a solar-powered, off-grid stage. “Let's Bon Dance in the electromagnetic wilderness—Now, let's make some noise!”



© Mao Yamamoto

ARS ELECTRONICA features TOKYO

Yasuaki Kakehi Lab,
The University of Tokyo (JP)

Well-tangled

Harmony Amidst Chaos

The theme of this exhibition, *Well-tangled*, explores the process of skillfully combining diverse elements (entanglements) to create a state of harmony amidst chaotic relations. This theme transcends a human-centric perspective, listening to the inner voices of matter and unpredictable elements, and seeks to discover a balanced state where different beings coexist. Here, the meaning of “Well” is a very important question: What state does it refer to? Instead of aiming for a single ultimate state, this theme aims to gain new insights and perspectives through promoting interactions between humans and technology, merging the realms of the natural and the digital and facilitating interactions between material and immaterial elements. This exhibition features various media and materials such

as water, plants, microorganisms and threads. These works blur the boundaries between the digital and physical worlds, giving concrete shape to the concept of *Well-tangled* and providing the audience with unexpected experiences and profound insights. Through these prototypes, art pieces and discussions, we aim to foster a vibrant space for new technologies, design and media arts discussions and ideas.

Exhibition Director: Yasuaki Kakehi

Artists: *Signs of Water—Mirror*: Kuan-Ju Wu, Ekaterina Kormilitsyna, Yasuaki Kakehi; *Braided Crawlies*: Yumi Nishihara, Yasuaki Kakehi; *Efficiency of Mutualism*:

Dorita Takido

Signs of Water—Mirror: supported by JSPS KAKENHI (Grant Number 24H00708) / *Braided Crawlies*: supported by ZOZO NEXT, Inc. / *Braided Crawlies*: supported by JSPS KAKENHI (Grant Number 20H05960)



© Yasuaki Kakehi Lab, The University of Tokyo

Yumi Nishihara (JP), Yasuaki Kakehi (JP)

Braided Crawlies

Braided Crawlies is a kinetic installation in which a colony of braids curve, bend, compress and stretch. For each kumihimo (Japanese traditional braid), a strand that controls the change of shape is interwoven in different patterns, enabling each variant to form unique shapes when the strand is pulled. This hybrid craftwork sets out to obtain expressions of materiality to defeat mechanical control and to create value by integrating practicality into the beauty of traditional crafts.



© Yumi Nishihara

Dorita Takido (JP)

Efficiency of Mutualism

This work combines various power generation mechanisms: fuel cells that utilize microorganisms coexisting with plants, algae fuel cells using photosynthesis and fuel cells employing water electrolysis. Plant growth is enhanced by electrical stimulation, as the weak electricity generated by each fuel cell is returned to the plants. This study offers an opportunity to reconsider the ideal form of circulation and the existing relationship between human-used electricity and nature.



© Ziyuan Jiang

Kuan-Ju Wu (TW/USA), Ekaterina Kormilitsyna (AT), Yasuaki Kakehi (JP)

Signs of Water—Mirror

Signs of Water—Mirror explores water as a medium to reflect environmental meaning. An array of water plates, each with a mechanism to move floating objects, starts empty but gradually fills with serendipitously found artifacts from the venue. Sensor data triggers object movements, prompting viewers to notice hidden patterns and their correlation with the immediate environment. This dynamic interplay entangles water, objects, data and reflections, questioning the creation and nature of meaning.



© Kuan-Ju Wu

ARS ELECTRONICA features UTRECHT

IMPAKT/Werktank (NL)

CODE 2024

CODE 2024: Reclaiming Digital Agency tackles urgent digital challenges head-on, from the Right to Be Forgotten, Deep Nudes and the opacity of machine learning to personal identity and public perception. *CODE 2024* looks at technology with a critical but hopeful approach. Instead of coming up with new platforms to replace existing ones, *CODE* seeks to work together with politicians and policymakers to change substantially the way Big Tech companies operate and force them to adhere to stricter and democratically-decided legislation. By presenting artistic interventions made by artists, non-artists, policymakers and researchers, this exhibition asks: How can governments better protect our digital rights, and how can we convey the urgency of the need to act? What steps can we, as concerned citizens, users, researchers and artists, take to support this critical process?

CODE brings together participants based in Germany, Belgium and the Netherlands.

This exhibition is the result of a co-creation process in which the artists collaborated for over six months. It showcases a mix of digital art installations, interactive media and immersive experiences. Featuring works by Dorijn Boogaard, Cyan D'Anjou, Colas Fizman, Bjørn Erik Haugen, Mona Hedayati, Hsiang-Yun Huang, Lotte Louise de Jong, Amber Macintyre, Wouter Maas, Aleksandra Naydenova, Claudia Oliveira, Kurina Sohn, Marcel Top, Sander Veenhof, Wessel de Weijer and Gema Fernández Blanco Martín.

IMPAKT: Arjon Dunnewind (Curator), Philine Kreuzer (Coordinator & Producer), Bram Koning (Producer) / Werktank: Kurt d'Haeseleer (Curator), Anouk Focquier (Advisor) / NØ SCHOOL: Dasha Iliina (Mentor), Benjamin Gaulon (Mentor) / External Mentors: Ahnjili Zhuparris, Régine Debatty

CODE 2024 is funded by Stichting Doen, Stimuleringsfonds Creatieve Industrie, the Gemeente Utrecht and the Flemish Authorities.



© Rita Eperjesi



© meta:morphosis

© Espresso Exposé

© Dual Narratives

© toyboi

Aleksandra Naydenova (BG), Amber Macintyre (GB), Cyan D'Anjou (US/NL), Dorijn Boogaard (NL), Kurina Sohn (KR)

meta:morphosis

Inspired by the Right to be Forgotten legislation, *meta:morphosis* features a workshop and an interactive installation where participants can explore their digital pasts and learn to reshape online narratives. Audience members will add their own experiences with data by writing on dissolvable soap paper and then putting it into a fountain (like a coin to make a wish). This act allows that piece of information to “be forgotten” or cleansed by way of a ritual.

Mona Hedayati (CA), Wouter Maas (NL), Sander Veenhof (NL)

Espresso Exposé

Espresso Exposé is an interactive artwork that shines a light on how AI is increasingly reconfiguring our daily lives. Through interactions with a “coffee recommender” agent, with some unexpected twists, the audience is confronted with the contrast between direct front-end results and opaque back-end processes of machine learning operations. This in turn prompts them to think more deeply about their choice of delegating decision-making to AI.

Christian Schwarz (AT), Colas Fizman (BE), Marcel Top (BE), Bjørn Erik Haugen (NO)

Dual Narratives

Dual Narratives explores the dichotomy between personal identity and public perception through an immersive and interactive media experience. The installation directly engages participants, prompting reflection on the nature of digital identity and the impact of social media storytelling.

Hsiang-Yun Huang (TW), Claudia Oliveira (PT), Lotte Louise de Jong (NL), Gema FB Martín (ES)

ToyBoi

ToyBoi reflects on the patriarchal infrastructure of Deep Nude technology. Specifically, it refers to AI tools that are often used to generate non-consensual nude images of women. While these tools effectively strip women, they often fail to undress men realistically, resulting in images of men with deformed genitalia. We present these failed images on items like lighters and calendars, which traditionally have portrayed naked women, to generate dialog on the male gaze and gender-based violence.

CREATE YOUR WORLD

“create your world” means
taking care of your individual
self to become empowered to envision
a collective future for and with all of us.

– Hans Christian Merten, Head of create your world

create your world 2024

the page turners

A festival to try out and dive in

Will we turn the tide? Is it really just two sides? Or, more likely, a multiple choice scenario that we as a society must navigate together? Turning the tide in the right direction is not a binary process, it requires many different points of view and aspects to be considered. Of course, we all need to change something—but who can or should take the lead in making decisions? Our society has so many challenges to overcome. Concerning democracy and individual needs, we should think about how we can contribute individually. Strengthening our own mental health and arranging our own environment positively so that we feel good and strong is perhaps the optimal precondition. Defining hope is also a very individual process. Our personal hopes must be integrated into the global, collective hope to turn the tide together. It sounds complex and unsolvable. Maybe it is. But there is still ... hope! ... that we

can manage to find ourselves on a path of change again—and then move in the same direction. This might be a first step. Turning a page can bring a new chapter in a complex story. Let us see what this new chapter holds for our future. This year's create your world festival will again be a place to share ideas and discuss individual definitions of hope. There will be a special focus on mental health, especially for young people. Delving into the many different processes of various Open Labs gives visitors the chance to access art, technology and society in a new way. "create your world" is more important than ever, for we must first take care of ourselves to be able to help others and join together in a collective that can turn the tide. By simultaneously focusing on individual and collective development, we believe we can successfully maneuver through the challenges of the present and the future.

When we start dreaming, we create a new world for ourselves. But then it is up to us to create this world. And this “then” is now—because the two days when you cannot do anything are yesterday and tomorrow.

— Jakob Gruber, Golden Nica winner Prix Ars Electronica 2024, u19—create your world

u19—create your world Exhibition

Presenting the u19—create your world winning projects at the Ars Electronica Festival 2024

The u19 Exhibition presents the 23 winning projects of the u19—create your world category of the 2024 Prix Ars Electronica. Since 1998, this competition has invited young creatives and critical thinkers to present their ideas and projects for tomorrow's world in the fields of art, technology and society. The means of expression is left to the artists. The result is a wide variety of analog and digital projects submitted by youngsters up to the age of 19 from all over Austria, boldly expressing their points of view and creating inspiring visions. A panel of five jurors from various backgrounds will evaluate all entries for creativity, expressiveness and innovation and select the 23 winning projects. Other submitters will also be invited to participate in create your world projects, workshops and Open Labs.

The Award Ceremony u19—create your world will bring together all of this year's winners and present the winning projects. The young artists will receive their certificates and prizes and offer a brief insight into the ideas behind their projects.



Fluten der Freiheit, Goldene Nica 2024 © Jakob Gruber



Last, Young Professionals Auszeichnung 2024 © Anna Bubenicek, Flora Kirnbauer



betterTogether, u12 Hauptpreis 2024 © Antonia Hofstadler, Moritz Fink, Marc Umile



to the friends I'll never meet, Young Professionals Auszeichnung 2024 © Selma Yassin



Na2r_3lumen, u10 Hauptpreis 2024 © Nea Geršak

create your world (AT), c3 (HU), mb21 (DE), Only Tomorrow Association (RO), InSync Youth and Family Services (IE)

PodcastLab

Youth Exchange Project 2024

The 14th Youth Exchange Project will bring young people from five different countries to Linz for a cultural and artistic exchange during the Ars Electronica Festival. By bringing together creative people between the ages of 16 and 23 with a wide range of talents, a multifaceted project will be created over the course of the festival. The overall goal is to exchange creative and artistic ideas and this year the international group will work together in an open lab to produce podcasts: From brainstorming and conception to production and recording to post-production with editing, music selection and sound design. Interested visitors are invited to participate. The results will be available at the festival and online. The choice of topics is entirely up to the young participants: From ideas for shaping our society and future, to social and political agendas, to artistic debates inspired by the festival—anything that sparks the interest of young creatives is possible.



© Tom Mesic

ORF radio FM4 supports the PodcastLab with valuable know-how and technical equipment.

Presented in the context of the *Critical ChangeLab* project. *Critical ChangeLab* is funded by the European Union under Grant Agreement No. 101094217.

Emma Gruber (AT), Mary Mayrhofer (AT), Linda Michelitsch (AT), Konstantin Redl (AT)

Frischer Wind

Critical Change Conference

Young people face great uncertainty. In our state of permanent crisis, people discuss, argue and some resign themselves to the situation. In the twilight of democracy, however, the debate about change is conspicuously silent. Yet this is what must take place now. Do we need change? Is change possible? And if so, how? Organized and moderated by winners of the Prix Ars Electronica's u19—create your world category, who are also producing the podcast series 'Frischer Wind' ('Fresh Air'), the conference will open with interviews with experts in which the status quo is critiqued and examined. On this basis, the audience will then discuss with other experts, artists, intellectuals, politicians and young people the possibility of changing the world. Ideally, the conference will end with new perspectives on alternatives and possible paths towards changing and reshaping the world.



© Mary Mayrhofer

Presented in the context of the *Critical ChangeLab* project. *Critical ChangeLab* is funded by the European Union under Grant Agreement No. 101094217.



© Fabian Hurmaus

Johannes Ambrosch (AT), Marlene Noggler (AT), Daniel Otto (AT), Helwin Prohaska (AT), Florian Rudinger (AT), Andreas Stojanovic (AT)

Powerplayground

Energy education for energy system transformation

Energy is the foundation of modern society. Dependence on fossil fuels is one of the greatest challenges of our time and the transformation of the energy system is the way and the hope to change this foundation in time.

The *Powerplayground* focuses on the transformation of the energy system as the most important lever for effective climate protection. It provides an understanding of energy, energy supply and the dimensions of the energy transition. The *Powerplayground* shows how and where you can actively participate in this transformation—personally or professionally. So we don't just have to hope that things will get better, we can actively contribute to them. Hope becomes responsibility, and responsibility becomes self-efficacy. A central element of the exhibition at the Ars Electronica Festival is the Virtual Reality content developed on the subject of energy and energy supply. With these interactive and sometimes playful approaches, access to these complex topics is made easier. Another highlight is the pedal generator, an open hardware learning platform developed for energy education and STEM didactics.

Project initiator: Helwin Prohaska / Cooperations: Klima & Energiefonds, Verein Progressdination



© Thomas Schwarz ("Domas")

spaceEU, Ars Electronica (AT), ESERO Austria (AT)

Step into Space

Touring Exhibition

The exhibition, titled *Step into Space*, is divided into the following modules:

Module 1: What We Have Made from Space—How has space exploration affected life on Earth?

This module highlights the impact of space exploration on everyday life on Earth. It features a number of everyday objects that were originally developed for space travel.

Module 2: Through the Lens of Space—How does space exploration allow us to observe our own planet?

We use satellite images to see how our cities are growing, our glaciers are melting, our forests are disappearing and much more.

Module 3: Austria in Space—What is Austria's contribution to space?

This module introduces the many companies and research institutions in Austria that are dedicated to space. In addition, it shows what is on offer for education and schools.

The exhibition was developed by Ars Electronica in close collaboration with Science Gallery Dublin and Leiden University.

ESERO Austria has updated the travelling exhibition and is now sending it from school to school across Austria. The *spaceEU* project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation under grant agreement No. 821832.

Emil Steixner (AT), Jan Knickmann (AT/DE)

SoundSpaces.

SoundSpaces. is a platform for audiovisual media realized with the help of resonance loudspeakers. Immersive, spatial and fundamentally different: this is what the 7.2.2 sound system is all about. The seven resonance loudspeakers, mounted in a circle in front of, behind and to the side of the audience, form the basic structure of the installation. Two tweeters at the front left and right provide better localization in the stereo range. 18" subwoofers provide the bass. With its 10 channels, the sound system's spatiality can only be surpassed by high-end movie theater sound systems. The fact that the loudspeakers are

actually panels opens up new possibilities for media presentation, because, for the first time, the surface on which the sound is projected is also the surface from which the sound actually emanates. Three projectors are used to project different but perfectly coordinated images or video material onto each of the three front panels. The project includes not only the installation itself, but also the collaboration with artists to process the content of their art.

Design, Electronics, Video Engineer: Emil Steixner
Sound Engineer, Consultant: Jan Knickmann



© Emil Steixner

Sifan Pan (CN), Sveta Shuvaeva, Melanie Steinhuber (AT), Marharyta Varabel (BY), Michael Wittmann (DE)
(Realization of the course at the University of Arts Linz)

Yes-No?

What decisions are you making?

The project by the Department of Media Design at the University of Arts Linz combines “old” and “new” technologies. It draws parallels between the development of digital media, such as AI and algorithms, and the traditional art of weaving. Using the shafts of the loom, visitors' opinions are translated into individual patterns that represent the “fabric of the future”: If the earliest human civilisations were also created on looms, and today we sit in front of our computers, what will we weave with the help of new technologies? Hopes or nightmares for the future?

The installation documents the moods and opinions of visitors to the Ars Electronica Festival in real time. It questions how our data is being permanently collected and stored as a “digital footprint”. Instead of cookies or paper archives, a binary loom system is used.



© Sifan Pan

A project of the Department of Media Design at the Institute for Art and Education at the University of Arts Linz (Univ.-Prof. Dr. Alexis Dworsky). Implementation of the course: Michael Wittmann (MA)

Felix Winkler (AT), Innovationshauptplatz (AT)

Innovationshauptplatz—Laboratory of Optimism

Tinkering with technology and media to create a vision of a better way of living together!

In *Laboratory of Optimism*, the Innovationshauptplatz promotes self-efficacy and optimism through creative technology projects. Participants build brush-head robots, program Arduino helpers and design LED strip installations with optimistic messages. The project aims to show how technology can be used creatively and positively, boost children's and young people's confidence in their own abilities and encourage them to reflect on the positive aspects of modern technology. In this way, confidence in the use of media and technology is created.



© Sandra Schimk

A project of the Innovationshauptplatz of the City of Linz, former project of the Open Commons Linz. Many thanks to Magdalena Reiter, without whom this project could never take place.



© Tinkertank

Ryan Jenkins (US), Thomas Kühn (DE), Johannes May (DE)

Tinkertank—Forge of Hope

The fabulous, incredible, interactive, Do-It-Together chain reaction machine

True to the motto “From deconstruction to construction”, the creative laboratory tinkertank takes festival visitors on an artistic and technological journey of discovery. Interactive modules will be built from electronic waste, old toys and everyday objects as part of a chain reaction machine. No prior knowledge is required to participate. Each participant can contribute their unique skills, share ideas with others and work together on the big picture. From simple levers and slides to complex mechanisms, the sky is the limit. A wide range of materials and possibilities

are available: You can experiment, tinker, design and program using art, technology, crafts and all sorts of craft materials. If necessary, you can learn the skills you need from the experts on site. The big moment comes on the last day: the chain reaction machine is set in motion. We shall forge an interactive art installation that shows what can be created when everyone works together. And what a big impact a small impulse can have!

Tinkertank / Interactive Media Foundation gGmbH
Tinkertank is a permanent initiative of the Interactive Media Foundation gGmbH.

Sophie Gartner (AT)

oceaNebula

The sound in a movie usually reacts to the image. The basic idea of “visual music” is to develop experimental music and then create a visual design. Exactly the opposite of “normal.” The artist created the music using only water sounds. Only after completing the music did she decide to create an almost nebulous figure of water bubbles with the rhythm. With the help of the 3D program Blender, she finally brought her vision to life.

Created as part of the education at the HBLVA Ortweinschule / Film and MultimediaArt.



© Sophie Gartner

Sophie Gartner (AT), Julian Czermak (AT), Enzo Gutsch (AT), Johannes Hörzer (AT), Neo Klinger (AT), Lisa Rauch (AT), Tilman Riegler (AT), Delia Sandholzer (AT), Judith Veis (AT), Sarah Windisch (AT)

offSpring

In a post-apocalyptic underground city, a hopeful alchemist named Caleb is torn between his obsessive pursuit of saving nature and his loving, but manipulative mother, leading to Caleb's frustration boiling over and destroying everything he has left. *offSpring* is a 3D animated short, made with Blender.

directed and written by:
Sophie Gartner

3D-characterdesign and animation:
Sarah Windisch / concept art assets:
Judith Veis / Texturing and Shading:
Neo Klinger / editing and compositing:
Johannes Hörzer / 3D asset artists:
Julian Czermak, Lisa Rauch, Tilman Riegler, Delia Sandholzer



© Sophie Gartner

Thomas Nayer (AT)

do-gether

It is simply better together!

do-gether is a network that brings together those who need help and those who offer it in an uncomplicated way. The goal is to offer fast assistance in the digital age, because, according to project initiator Thomas Nayer: "It is simply better together!"

Take, for example, a single mother who has reached her limits and finds relief through this app, or a young wheelchair user who wants nothing more than to socialize, or a manager who doesn't always have time to walk her dog. The *do-gether* app was created for all these cases and many more. The result is a community that looks out for and supports each other. Specifically, *do-gether* is an app that allows users to easily upload tasks that other users can then complete and receive a monetary reward. The payment



© Isabella Jöch

received through *do-gether* can also be donated directly to reputable charities and organizations. *do-gether* is an application that relies on personal contact. Therefore, security is a fundamental value that has always been taken into account when developing the software.

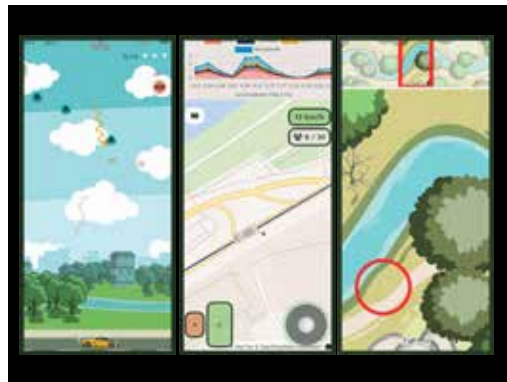
Thomas Nayer (Founder and managing director)
AhoiKapptn! (Technical implementation partner)

Andrea Aschauer (AT), Jeremiah Diephuis (US/AT), Ingrid Graz (AT), Katharina Gruber (AT), Isabel Guschl (AT), Paul Huemer (AT), Raffael Maxian (AT), Oliver Schrot (AT), Stefan Strasser (AT)

ECOPOLIS

Establishing Climate-related Opinion-voicing and Political Participation via Online Learning and Interactive Scenarios

The *ECOPOLIS* project explores how communication between political representatives and the target group of 14 to 16-year-olds can be promoted through an online platform that combines both playful learning scenarios and opinion expression functionality. The platform provides interactive content that can be easily used in the classroom and promotes a better understanding of the scientific aspects of climate change, as well as providing information on current and future climate policies. In addition, integrated quizzes and questionnaires can be used to gather general information about the target audience, such as their knowledge of political processes, climate-related science and general opinions. Thus, *ECOPOLIS* is a potential tool for political representatives for both information and survey purposes.



© ECOPOLIS

Project coordination: Jeremiah Diephuis / Climate Policy: Katharina Gruber, Oliver Schrot / Educational Content: Ingrid Graz, Isabel Guschl, Raffael Maxian, Stefan Strasser / Platform & Game Development: Andrea Aschauer, Paul Huemer / This project is funded by the Climate and Energy Fund and is part of the 14th Call of the Austrian Climate Research Program.

Zita Gaier (AT), Johannes Ihl (AT), Kasper Langeder (AT), Lewin Strobl (AT)

S.O.S.—Sliders Of Society Interactive Art Installation

How do you imagine the future? *S.O.S.—Sliders Of Society* invites you to take a playful look at the complex interrelationships of our world. The interactive 1m x 2.6m wall installation consists of oversized sliders representing various social issues, from the environment to equal opportunity. Moving one slider affects several others. This emphasizes the multiple interactions between different areas. In addition, each slider produces its own sound—louder or quieter depending on its position—combining the visual and auditory experience. Visitors are encouraged to reflect on their own values and principles as they build their world of the future. The data was developed in close collaboration with scientists from the *Club of Rome-Austrian Chapter*.



© Team Sliders Of Society

Art installation by Johannes Ihl, Kasper Langeder, Lewin Strobl and Zita Gaier
Content and data processing in cooperation with: *Club of Rome-Austrian Chapter*
Special thanks to Andreas Ihl, Max Ihl, Dr. Martin Hoffmann, DI (FH) Philipp Mold, Nathalie Spittler Ph.D., Manuel Steinböck BEd, Felix Strobl, Mag. Georg Wagner and Thomas Wolf BEd
In collaboration with *Club of Rome-Austrian Chapter*, Spirit Design and Basis.Kultur.Wien

CoderDojo (AT), Dynatrace (AT)

AI Wonderland with Dynatrace & CoderDojo

Discover your strengths

In the Artificial Intelligence Lab, visitors can expect various tasks and simple explanations of Artificial Intelligence with hands-on activities where they can create and try things out. A program that will spark curiosity and amazement in young and old! Join in, learn and be creative: For anyone with an appetite for technology and

innovation. Discover the fascinating possibilities of AI and modern technology in a fun way. Here you can become a technology explorer and experience how much fun and possibilities there are in the world of Artificial Intelligence!

This project is the result of a collaboration between Dynatrace, CoderDojo and Ars Electronica.



© Dynatrace

EVENTS, CONCERTS, PERFORMANCES

I still vividly
remember that I got
goosebumps all over by the
overwhelming sensitivity and
power from these eight cellists when
I premiered Philip Glass' film music for
The Hours and *Dracula* with them. After we played
together, we smiled softly at each other... in silence.

— Maki Namekawa, Ars Electronica Concerts Pianist

Ars Electronica Opening

This year, the opening day of Ars Electronica coincides with the 200th anniversary of Austrian composer Anton Bruckner's birthday on September 4th. This coincidence, along with the long-standing creative collaboration with the Bruckner Orchestra Linz and its artistic director Norbert Trawöger—who has curated a year-long program dedicated to Bruckner's anniversary—makes it fitting to celebrate the festival's opening event in partnership with the OÖ KulturEXPO Anton Bruckner 2024 and the Bruckner Orchester Linz. The newly renovated St. Mary's Cathedral, the construction of which is closely linked to Bruckner's life and work, will once again be the site of extraordinary festival encounters. As a special guest, the European Capital of Culture Bad Ischl Salzkammergut 2024 connects to Ars Electronica through Bill Fontana's sound and video installation. *Silent Echoes: Dachstein*,

featuring live sounds from the bells of Notre-Dame in Paris and the melting Dachstein glacier, resonates in St. Mary's Cathedral throughout the festival week, starting at midnight on September 4th to mark both the festival's opening and Bruckner's birthday.

Throughout the day, activities branch out with Bruckner-themed events across the region, while Ars Electronica presents diverse programs at ten venues around the city, culminating in a grand finale. This ranges from Ei Wada's collective electronic street music to a version of Bruckner's prelude closely entangled with quantum physics—or *BruQner*—on the two organs of St. Mary's Cathedral, from an extraordinary string quartet version of Bruckner's Seventh Symphony by musicians of the Bruckner Orchestra Linz to a high-decibel Bruckner interpretation with nine electric guitars, electric bass and drums.

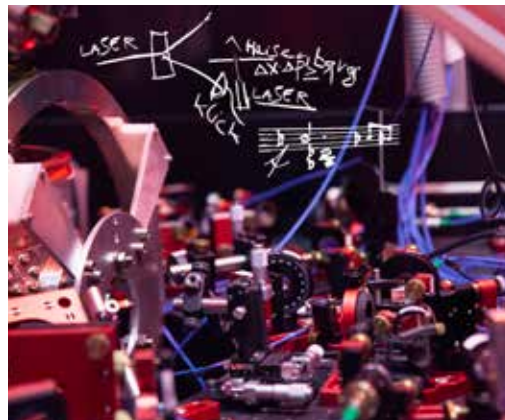
Clemens Wenger (AT), Enar de Dios Rodríguez (ES), Martin Ringbauer (AT), Johannes Kofler (AT), Richard Küng (AT), Alexander Ploier (AT), Benjamin Orthner (AT/GH), Philipp Haslinger (AT)

BruQner—The Sound of Entanglement

Anton Bruckner's work is an integral part of music history and is recognized far beyond the country's borders. Austria is also internationally renowned for its contributions to quantum physics—not least thanks to the 2022 Nobel Prize in Physics. In *BruQner*, these two worlds meet. Using a musical interpretation of a so-called 'Bell Test', striking passages from Bruckner's work are made audible in a new way. A sensual symbiosis of music, visuals and modern research is created.

BruQner is one of the first attempts in the world to work musically with quantum mechanics. Entangled photon pairs from lasers will take on the role of a conductor and show the incredible findings of the second quantum revolution in a performance. *BruQner* is completely committed to the festival motto of 'Tradition, Innovation and Avant-Garde'. Marvel with us and hear the future potential in Bruckner's music!

A project from OÖ KulturEXPO Anton Bruckner 2024 in cooperation with Ars Electronica with the kind support of LIT-JKU, VCQ, the University of Innsbruck, TU Wien, SFB—beyondC and the Cultural Affairs Department of the City of Vienna.



© Illustration Martin Ringbauer, Philipp Haslinger

Bill Fontana (US)

Silent Echoes: Dachstein

A Sound Installation between the Notre-Dame Cathedral and the Dachstein Ice Caves

A project of the European Capital of Culture Bad Ischl Salzkammergut 2024

In 2019, Notre-Dame, the "soul of Paris" and a symbol of European culture, burns down. The bells are spared, but fall silent for years. They quietly "listen" to the hustle and bustle of the city and the sounds of the construction site—until they ring out again in 2024 to mark the reopening of the cathedral. US sound artist Bill Fontana makes the bells audible using vibration sensors, transmitting the sounds into the ice caves of the Dachstein mountains and mirroring them with the sounds of the melting glacier to create an unusual duet. An impressive artistic statement on climate change and the fragility of culture. This site-specific duet forms the basis for a "sound bridge" that will be transmitted to exhibition venues in Europe and beyond. The world premiere of *Silent Echoes: Dachstein* takes place on September 3rd in the Dachstein Ice Caves in Obertraun. As part of the Ars Electronica Festival, the sound installation will be broadcast to St. Mary's Cathedral in Linz.

A project of the European Capital of Culture Bad Ischl Salzkammergut 2024 in cooperation with: IRCAM, OÖ KulturEXPO Anton Bruckner 2024, Ars Electronica Festival, Goiserer Musiktage, Kunstradio Ö1, MuseumsQuartier Vienna, Kunsthau Graz. Thanks to: OÖ Seilbahnholding GmbH, Planai-Hochwurzen Bahnen GmbH. With the support of: Institut français d'Autriche and Office of the Upper Austrian Provincial Government—Department of Environmental Protection. Presented in the context of the *More-than-Planet* project. *More-than-Planet* is co-funded by the Creative Europe Programme of the European Union.



© Luca Bagnoli

ELECTRONICOS FANTASTICOS! (JP)

Electromagnetic Street Bon Dance Festival

ELECTRONICOS FANTASTICOS! returns to Ars Electronica.

The *Electromagnetic Street Bon Dance Festival* is held on a solar-powered, off-grid stage, featuring music from old electrical appliances and dancing. The festival is dedicated to electrical energy, indispensable in the modern age and the blessings of nature, and reflects 'conviviality' as advocated by Ivan Ilyich. Devices are used in a different way from their original purpose.

Supported by: EcoFlow Europe s.r.o.



© Mao Yamamoto

Chamber Musicians of the Bruckner Orchester Linz

Bruckner Sinfonie Nr. 7, Arrangement for Ensemble

Musicians from the Bruckner Orchester Linz will perform the two inner movements of Bruckner's Seventh Symphony in the arrangement for ensemble (Schönberg version): 2nd movement: Adagio, very solemn and very slow; 3rd movement: Scherzo, very fast.

Bruckner's expansive Seventh Symphony in pocket format? Schönberg's students Hanns Eisler, Erwin Stein and Karl Rankl made it possible. They arranged the symphony for barely a dozen musicians. Expect this version to offer a fascinating and transparent view of this masterpiece, which will unfold expansively in St. Mary's Cathedral.



© Tom Mesic

NoFive (AT)

Bruckner x Pop x No Wave

How do Upper Austrian composer Anton Bruckner and American rock duo The White Stripes fit together? The NoFive project aims to explore this intriguing question. Notably, there is a striking similarity between a recurring theme from Bruckner's Fifth Symphony and the White Stripes' iconic *Seven Nation Army* riff.

Initiated by Andre Zogholy, the project brings together a diverse team of six female guitarists, three male guitarists, a bassist, a drummer and a conductor. Together, they delve into this riff and segments from Bruckner's Fifth Symphony, navigating the tension between high culture and pop culture, their respective avant-gardes and their mutual transgressions.



© Sombrero Design

A project from OÖ KulturEXPO Anton Bruckner 2024 in cooperation with Ars Electronica with the kind support of LIT-JKU, VCQ, the University of Innsbruck, TU Wien, SFB—beyondC and the Cultural Affairs Department of the City of Vienna.

Big Concert Night

Cello Octet Amsterdam and Visual Artist Nick Verstand: *COCON*

Eight musicians and eight robots stand on stage, the human protagonists "embraced" by giant mechanical arms, forming a "robotic cocoon." In the second part of the evening, the Cello Octet Amsterdam will perform together with pianist Maki Namekawa. *COCON* is an audiovisual live performance featuring Cello Octet Amsterdam performing new compositions by composers Caterina Barbieri, Jesse Broekman, Kara-Lis Coverdale, Sarah Davachi and Qasim Naqvi and an arrangement by Abul Mogard & KMRU. The scenography is created by Nick Verstand and consists of eight robotic arms embracing the musi-

cians on stage. The mechanical cocoon slowly unfolds and ripples along with the music. Lights attached to the ends of the robotic arms illuminate both the musicians and the space, creating three-dimensional shapes in the air. The cocoon symbolizes Mother Earth's embrace as a source for humanity, but at the same time represents our human addition to and destruction of that same source. This contrast is enhanced by the classical cellos that oppose the futuristic robotics. The latter behave as an autonomous entity on stage and interact with the musicians to create a tension arc of light, sound and kinetics.

Maki Namekawa and Cello Octet Amsterdam: *Motion Pictures*, Music from *The Hours* & *Dracula* (arranged for Piano and Cello Octet by Michael Riesman), Visuals by Cori O'LAN

For the second part of the concert, the eight cellists are joined by pianist Maki Namekawa to perform two works by Philip Glass under the title *Motion Pictures*. Michael Riesman has made a special arrangement of Philip Glass' film scores for *The Hours* (2002) and the 1999 newly

released film classic *Dracula* for the Cello Octet and Maki Namekawa.

The *Big Concert Night* is presented with the kind support of the Performing Arts Fund NL and in the context of the *ACuTe* project. *ACuTe* is co-funded by the Creative Europe Programme of the European Union.



© Alex Heuwick

Ars Electronica Nightline

In 2024, Ars Electronica Nightline focuses on innovative club music from Switzerland.

Internationally acclaimed musician and artist **Aïsha Devi** released her latest studio album *Death is Home* in 2023 on the British label Houndstooth. Her most personal work to date is an adventurous journey through hyperpop and club music: exaggerated synths meet driving rhythms and ethereal vocals.



Aïsha Devi © Cristian Andersson

Musician and rapper **Nathalie Froehlich** impresses with incredible stage presence: her distinctive mix of rap, techno and reggaeton promises an energetic set in the POSTCITY train hall, where she navigates a storm of beats with sharp-tongued lyrics.



Nathalie Froehlich © Marius Mattioni

Zurich musician **Belia Winnewisser** released her latest album *The Essence Of* in July on the Frankfurt label SPA. Together with German visual artist **Subrihanna**, she offers her audience an ethereal experience in her live sets, where towering harmonies erupt into grand pop moments, only to be swept away by club beats the next moment.



Belia Winnewisser x Subrihanna ©
Stephie Braun

Noria Lilt from Fribourg is restless: in addition to her work as a DJ, producer and sound artist, she is involved in the SMEM (Swiss Museum and Centre for Electronic Music Instruments) and is part of TRNSTN RADIO. She has taken her debut EP *The Insiders of the In-Between* to the Montreux Jazz Festival and the Bad Bonn Kilbi, undisputedly Switzerland's best music festival.

DJ NVST is one of the rising stars on the international club scene. In the last two years alone, she has played her signature mix of breakbeats, industrial, techno and acid at Berghain and Tresor in Berlin, Garage Noord in Amsterdam, the Positive Education Festival, Dekmantel Selectors and Primavera Sound. Additionally, she runs the label Big Science together with Warzou and is a resident on RinseFM and LYLRadio.



Performance at Ars Electronica Nightline © vog.photo

The evening opens with Congolese-Austrian music producer, singer and multi-instrumentalist **Kimyan Law**. His sound structures traverse genres of fractal drum'n'bass, hip hop, rap, ambient and sound design. Making use of percussion and string instruments and a variety of everyday objects and sounds, the audiovisual implementation will be especially exciting.



© Kimyan Law

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



© Ars Electronica/Magdalena Slick-Leitner

Pianographique—The Intertwining Land

Bedřich Smetana, *Ma Vlast*—for Piano for four Hands

Piano: Maki Namekawa and
Dennis Russell Davies
Visuals: Cori O'Lan
Selected texts by Adalbert Stifter

Bedřich Smetana and Adalbert Stifter both dedicated their masterpieces to the description of a landscape that geographically, historically and culturally equally inhabits the Czech Republic, Austria and Germany. This landscape stretches from the Danube to the Vltava, representing a common historical habitat as well as a vital cross-border ecosystem in the center of Europe. At a time when we are increasingly confronted with fear and rejection of the other, the foreign, our wish is to activate the great unifying power

of art, music and literature. The 200th anniversary of Bedřich Smetana's birthday and his great work represent a wonderful opportunity to do so. Especially in the piano version, many passages of Smetana's famous cycle *Ma Vlast* acquire a nostalgic, fragile character, with the self-assured national pride of the 19th century giving way to uncertainty about where we actually stand, how we want to define ourselves as societies and individuals in the current time. The visualizations for *Ma vlast* are both an attempt to capture the special atmosphere emanating from the four-handed piano version and to provide a visual, aesthetic accompaniment. They also offer an artistic exploration of the use of generative Artificial Intelligence.

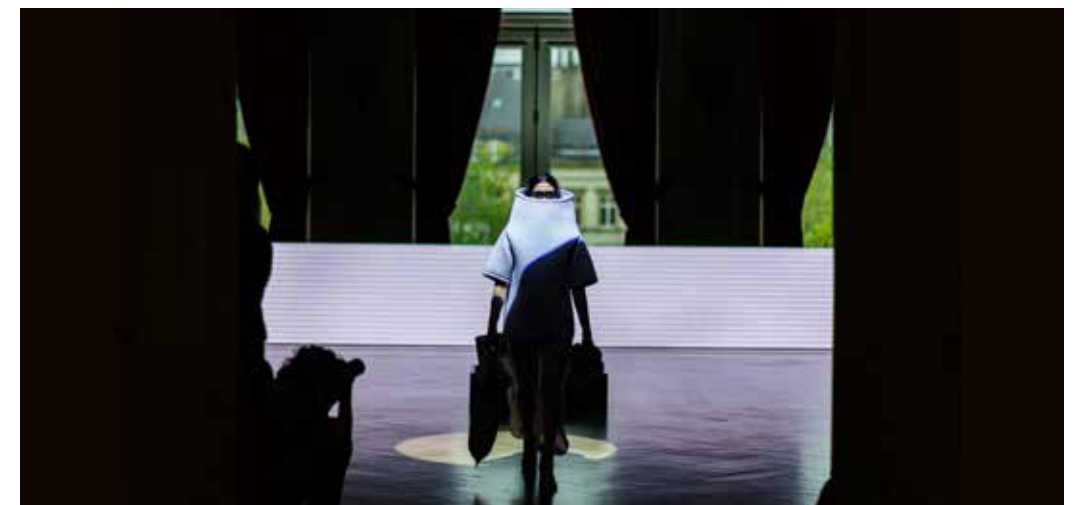
POLISONUM (IT) SUPERIMPOSITION

SUPERIMPOSITION explores the concept of ear-worms—those sonic agents that coercively graft themselves onto the brain until they become parasites and provoke mechanisms of cognitive control. Already known at the end of the 19th century, the phenomena were later defined as *brainworms* by Oliver Sacks. Sound worms are linked to mass culture such as pop music, advertisements, video games and TV theme songs. They also inhabit airports, bars, shops, gyms and shopping centers, and are characterized by sequences of redundant melodies that are difficult to escape. Recognizing these mechanisms is complex, due to a weak, if not absent, general education in listening. Based on this research, *SUPERIMPOSITION* launched a data analysis of more than 10,000 music tracks featured in the popular international charts from 2000 to 2022. This analysis—which is based on the quantity and repetitiveness of the music—has been automated with a specially developed software. Algorithms and data analysis techniques were used to select the most characteristic lyrics. Their mathematically generated superimposition composes the work.

SUPERIMPOSITION—a composition in which no melody is recognizable. The work is conceived as a performative act, a fashion show that recalls

ancient rituals in which the performers and the audience become a single body on stage. The garments made of sound-absorbing fabrics, which look like sculptural dresses, have been presented in a fashion show-like choreography. The textile materials, identified with the technical-scientific support of the Politecnico di Torino, are capable of refracting and absorbing sound pressure. These armored suits are designed as empirical protections for the ear and the body. The fashion design of the garments has been developed with the MARIOS brand through shared experimentation and a creative contamination that intends to look from the avant-garde supremacist models to the oriental tradition. The scenic and sound dramaturgy of the performance, which was presented in the Great Hall of the historic Cercle Cit in Luxembourg at the end of April, has also been interpreted in the video work realized through its multi-point direction.

Polisonum: Filippo Lilli, Donato Loforese / Curated by: Francesca Ceccherini, Anastasia Chaguidouline. *SUPERIMPOSITION* is supported by the Directorate-General for Contemporary Creativity of the Italian Ministry of Culture under the Italian Council program (2023) and IIC—Istituto Italiano Di Cultura A Vienna.



© Cercle Cité, Mike Zenari

Encounter—Glass and Smetana in Concert

Brno Philharmonic, Conductor: Dennis Russell Davies, Piano: Maki Namekawa

Mishima—Concerto for Piano and Orchestra by Philip Glass

Arranged by Michael Riesman from the Original Motion Picture Soundtrack for *Mishima* by Philip Glass

Ma Vlast, Bedřich Smetana

Second part: *From Bohemia's Woods and Fields, Tábor, Blaník*

Guest performance by Brno Philharmonic with their principal conductor Dennis Russell Davies, who has long been closely associated with Ars Electronica. Twenty years ago, in 2004, under his musical direction, the now-legendary 3D live visualization of a concert performance of Richard Wagner's *Rheingold* took place. This was realized by the Ars Electronica Futurelab using 25 projectors and a screen that encompassed the entire audience area. That same year, Dennis Russell Davies initiated the ongoing and successful collaboration with the Bruckner Orchestra Linz in

the form of the Big Concert Night of Ars Electronica Festival. This established a central program line for the festival, bridging traditional concert music with experimental and digital sounds and music. On the occasion of Dennis Russell Davies' 80th birthday, Ars Electronica presents one of his recent productions: Philip Glass' *Mishima*, which was premiered at the Piano Festival Ruhr with the MDR Symphony Orchestra conducted by Davies.

The concert is based on the soundtrack of the movie *Mishima*, composed by Philip Glass in 1985. Michael Riesman has arranged a version for solo piano with orchestra for Maki Namekawa. The concert at Ars Electronica Festival will feature the Austrian premiere of *Mishima*, complemented by three rarely performed pieces from the second part of Bedřich Smetana's *Ma Vlast* (*From Bohemia's Woods and Fields, Tábor, Blaník*)—a unique opportunity for direct comparison with Smetana's own version for piano for four hands. This will be performed by Dennis Russell Davies and Maki Namekawa the day before.



© Tom Mestic

Fabio Machiavelli (IT)

Machines Inside Me

During the performance, the audience will witness the real-time use of three partially automated electromechanical instruments. While the human performers activate the various sound-producing components that make up the different self-built instruments, the automated parts assist the human activity, extending their performance possibilities and the interaction solutions between the various components. The starting point for the project's development was the creation of instruments capable of producing and manipulating

ing sound in functional and effective ways according to the aesthetic and sonic goals of the piece (and not vice versa). The automated components create a structure of fundamental sounds, which are orchestrated and manipulated in ever-changing ways by the human performers. These result in a shifting structure based on the arrangement and evolution of various orchestration solutions.

Fabio Machiavelli—Composition, Coding, Instrument Design and Development, Instrument Building
Alessandro Machiavelli—Instrument Building



© Alessandro Machiavelli

Anton Bruckner Private University

Resonating Hope: Audible Manifestations

SONIC SATURDAY / Artists' meeting @ ABPU

Since 2016, Anton Bruckner Private University has been hosting the *Sonic Saturday* as part of the Ars Electronica Festival. This year, we will organize an artists' meeting during the festival to allow for an informal, hands-on exchange of ideas between artistic researchers working on the projects concerned.

Symposium Theme

In keeping with the festival theme of "HOPE—who will turn the tide", the Ars Electronica digital music focus at Anton Bruckner Private University embarks on a journey into the realm of sonic exploration and inspiration. While music might be seen as a conduit for emotion rather

than truth, its capacity to evoke hope and resilience seems boundless.

The myriad sounds of sonic art reveal a playground of possibility and transformation. As we navigate the intricate interplay of sound and emotion, we contemplate the profound impact of audible manifestations on collective consciousness and experience, where music can catalyze action. Listening to the full scope of "Resonating Hope: Audible Manifestations", we address questions about how music resonates in groups, how it offers reasons to be hopeful and what this hope might be based on. Through the dynamic sonic textures of electroacoustic art, we steer through the subtleties of human emotion and aspiration.

WORKSHOPS

Yunyu Ong (AU)

The Makings of Empire: The Echo Chamber Escape Room



Participants explore the workings of echo chambers through an apocalyptic drinking song titled *Empires*. They partake in an immersive experience that delves into the manufacturing of identities and perceptions. Together, participants work to break out of an event that survives on echo chambers.

Created with Dall-E3

Boris Shershenkov (RU)

Lighthub



© Boris Shershenkov

The *Lighthub* project explores the essence of electric lights, which differs fundamentally from natural light sources. The designs of technogenic light streams are based on human visual inertia. They carry a significant amount of information

hidden from the eye but located within the temporal limits of our auditory perception.

By means of special converters, participants in this walk will have the opportunity to investigate synesthetically the city's light environment, which is generated by various electrical sources such as advertisements, car headlights and street lighting systems. They can also create a light and sound map of the area.

As part of the workshop, participants will become co-authors of light-sound walk routes and performers of a cartographic piece from the *Lighthub* cycle. The performers of the piece, simultaneously moving along pre-agreed routes, record the modulations of the city light streams. During the recording, each route unfolds in the form of a unique sound piece.

LECTURE-PERFORMANCES

Kevin Blackistone (US)

Hostile Architectures in Computer-Human Performance

Within the world of architecture, there is a term known as "hostile" architecture. This refers to design meant to prevent individuals from utilizing a space outside of intended uses. Often this manifests as forms of physical elements that prevent uses such as comfortable rest for the homeless or community activations such as skating through various blocking elements. This adversarial approach is used to train machine learning algorithms by providing a negative to prove the quality of a positive. Just as the communities around these hostile architectural designs find ways to move in and around them, so do these algorithms find their way to a relative/desired truth. Software itself is also frequently defined as a form of architecture. This work seeks to explore ways in which an adversarial and directly

hostile software/hardware design approach can be used in the shaping of performance to force or direct the performer into new patterns by preventing those common to that individual.



© Kevin Blackistone

Berk Yagli (CY)

Zen of Aggression: Composing the Transformational Hybrid

The lecture-performance will focus on musical hybridity and critical methods developed for the hybridization of electroacoustic and metal music (part of the presenter's PhD research). These methods are formed to build a blueprint for hybrid composers (not only specific to metal and electroacoustic but for other genres as well that combines spectromorphological-focused music with harmony and rhythm-based music since this type of hybridity entails a unique set of challenges and complexities).

Hybridity in music is a well-established and vibrant contemporary scholarly topic. Even though the current literature provides many useful terms and strategies regarding different types of hybrids, methods for building hybrids are rarely found. The talk will specifically focus on the piece *Zen of Aggression* and discuss the fruitful and problematic methods when composing a

transformational hybrid (where both genres affect each other at the deepest level in which the resulting blend does not sound like each of the genre, hence transformed) of electroacoustic music and metal. Different excerpts from the piece will be played when discussing the techniques and methodologies.

The talk shall also briefly cover different types of hybridity (transformational hybrid, eclecticism, polystylism, and so on), genre and its notions (their problems, significance and contemporary uses) and the notion of fluidity when approaching hybridity in music to set the context. As technology rapidly grows and postmodern conditions predominate with ever more blurry borders, hybridity has been a significant musical power to embrace this situation and to reflect upon what is considered music and art in the 21st century (and challenge notions of high art and low art).



© Berk Yagli



© Taikoz

Yuniyu Ong (AU), Taikoz (Ryuji Hamada) (AU)

Digital Wind Chime Making: Exploring How the Power of One (Performer) Can Be Legion in the World of Rain Gods

Curiosity does not always kill the cat, sometimes it creates a god. Welcome to the world of *When the rain god sings, storm lions are born*. In this piece, Multimedia Composer/Sound Designer/UTS-Dolby Spatial Audio researcher Yuniyu leads you into a supernatural world of cats, thunder and new gods.

The old rain god has gone fishing, you see, so she leaves her drums for the next unsuspecting human to play, for this is how new gods are made. In this world, drums play tunes and cats must first be appeased and fed so they can grow up and make thunder for the new gods. It is all very hard work. Commissioned by Australian performing group Taikoz and brought to life by the

awe-inspiring talents of Ryuji Hamada (Taikoz), the electronic taiko drums transcend traditional playing techniques through interactive music structures mostly found in games.

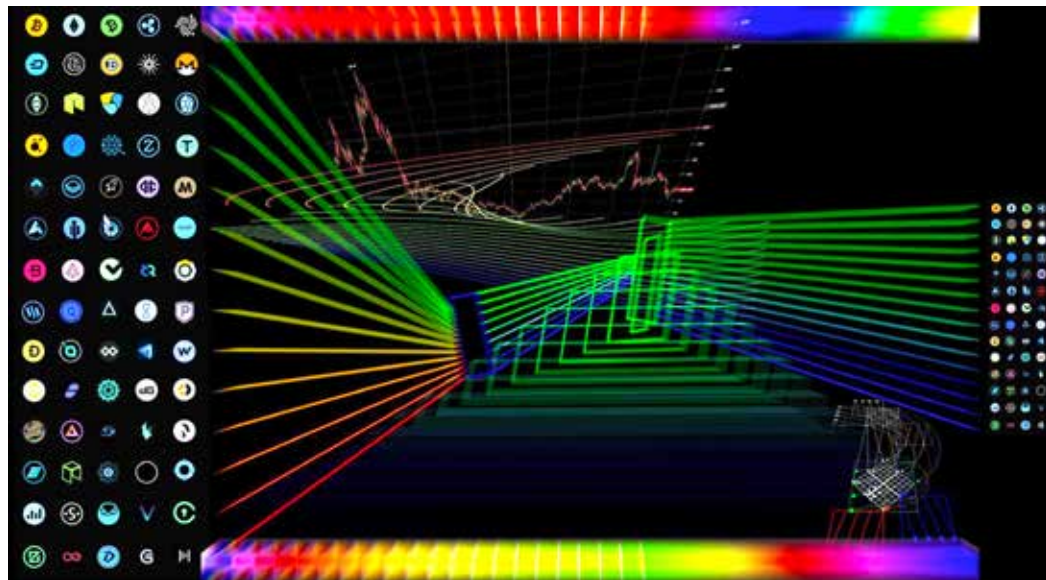
This is a performance of a single electronic taiko mapped against orchestral layers with the goal of turning a single performer into a performer/conductor. It is also an exploration of musical composition and instrument-making, where traditional playing techniques of taiko drumming are considered and mapped onto their electronic counterparts, pushing the limits of what taiko playing can be. A cautionary tale for the accidental gods amongst us.

Jānis Garančs (LV)

Ludic Sono-Visualisations of Ephemeral Value Changes in XR

The project tries to establish a gradual journey between the extremes of design strategies: intended usability/function and sublime “dysfunction” as an aesthetic experience. For the installation, the data acquisition modules feed from several sources of financial data (stock- and crypto-currency exchanges, aggregators, etc.) over their public Internet APIs. The installation accumulates historic and real-time trading data in the local data cache and uses provided calculations of trading trends and indexes—further calculations on the time-series data. Various time zoom scales reveal the phases of past, historic trends, that emphasize the position of current trade execution as a spatially expressive metaphor. Visualization and sonification modules utilize several specialized financial TA (Technical Analysis) programming libraries to calculate dynamically sections in the audio-visual score for the real-time 3D graphics and sonification

engine. The sonic landscape consists of layers of live mixed generative sound-objects and pre-recorded various “mood themes” pre-rendered by various DAW and AI tools. Various sound properties, such as pitch, timbre and rhythmic elements are juxtaposed in linear- and non-linear grids; ephemeral relationships are revealed and emphasized by spatially organized audiovisual cues (perspective, varying color and tone contrasts, sharpness/blur manipulation), audio-panning and timbral modulation, allowing the viewer to distinguish easily between changing context without having to rely on visually “scanning” the chart. In the scenes, the intention is to induce an experience of progressing complexity or visitor triggered mode-shifts that are eventually challenging to the audio-visual sensorium: the experience of the conflation within multiple reference systems plays with the visitor’s perception effort of “sense-making”.



© Jānis Garančs

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 *Resonating Hope: Audible Manifestations*. The program shows a variety of styles of multichannel music from around the world.



Sonic Lab, ABPU, © Bogi Nagy, bophotoadventures

João Pedro Oliveira (PT)

N'vi'ah

N'vi'ah is an Old Testament word meaning prophetess. A prophetess conveys one or more divine messages often in the form of inspired songs. And many times, her words are cryptic, requiring interpretation or even translation. This work uses isolated phonemes as musical material. Intelligible words are not articulated, leaving

the listener to imagine what their contents and meanings could be. *N'vi'ah* was commissioned by the Ibermúsicas Project and composed at the Human Interaction Laboratory—Diego Portales University in Santiago de Chile. It is dedicated to Federico Schumacher.

Lidia Zielinska (PO)

The Eighth Island (Ósma wyspa)

The immediate inspiration was the work of Joseph Conrad, a Polish-English writer who straddled the 19th and 20th centuries.

Joseph Conrad's complete works in Polish may be downloaded from the Internet. Electronic Conrad for the people, who fly to exotic destinations. Conrad: timeless and old-fashioned. He was a great writer, period. Thousands and thousands of pages on moral dilemmas and choices, multiple suggestive depictions of the anxious beauty of the oceans. Yet also a shocking lack of proportion, at least for me as a reader. When Conrad's ships approach the coast, a terrible lack of political correctness, and a total absence of curiosity about the world. Eurocentric criteria and judgments. The twilight of "drawing room anthropology". I have switched off the potentiometers of Conrad's ships and crew and tried to hear what Conrad himself deemed uninteresting. Although it must have been audible then, it is lost today. Traces of what I heard are included in my nine-minute nocturne *The Eighth Island*. Aside from the inspiration of Conrad, my piece is in fact an impression of the cultures that are disappearing in front of our eyes owing to our neglect, lack of interest, ignorance, the hypocritical pose of political correctness we adopt and climate change.

Michael J. Schumacher (US)

Noema

An algorithmically generated piece in which the computer chooses samples from a library of 3001 sounds and loops them for a certain period of time. In this way, sounds are replaced with new ones as the piece progresses.

Peter Trabitzsch (AT)

Meergeister

Meergeister is a surrealistic portrait of electronic and acoustic sounds that visualizes the visions and hopes of a half-human, half-water creature. It lives between two worlds, yet feels it belongs to neither. Inwardly torn, the creature searches for answers in the depths of its dream-like underwater world.

Martina Claussen (DE)

Verstimmt_B

This acousmatic composition takes the listener on an auditory journey through diverse soundscapes, ranging from gentle harmonies to distorted, fragile sounds. The versatility of the voice and its various sonic qualities are explored, beckoning the audience to immerse themselves in a world unfolding around them.

Moldir Slyamova (KZ)

Auaa (kaz. Luft)

The *Auaa* or *Scarecrow* is an acousmatic piece written for the *Scarecrow* dance performance of Sofia Zeifert. This piece delves into personal traumas and the isolating experience of being abroad, portraying the raw confrontation with one's inner fears and thoughts. It is about making connections with your inner voice and yourself, resisting the fears and starting new chapters of life.

SOUND INSTALLATIONS

Sam Erpelding (LU)

Zur toten Pappel

Zur toten Pappel is an eco-acoustic artwork about the soundscapes of the Danube floodplains. From spring to winter, it tells of the daily and seasonal patterns of the floodplain forests, wild meadows and shorelines. Three-dimensional sound reproduction and ecological sound art aim to raise ecological awareness and draw attention to sonic health and anthropogenic impacts on these unique and fragile acoustic environments. Aesthetic forms of expression of the wind, complex sound spectra of non-human organisms in relation to human presence, are conveyed with the help of surround sound and sonic-visual art. Besides the obvious acoustic environment, you can also hear very subtle sound-traces of life in dead wood, or of subterranean and underwater organisms, as well as the social calls of birds, amphibians, insects and mammals.

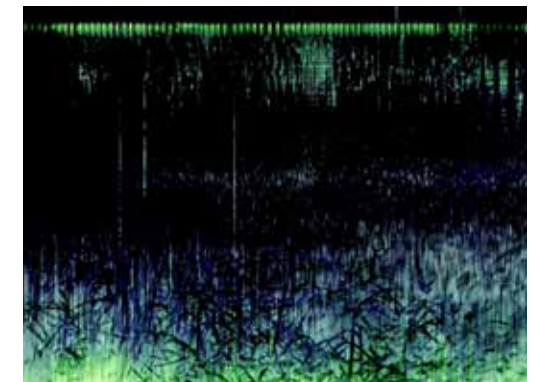
Florian Goeschke (AT)

Spatial Entanglements— A Relational Musical Instrument

Spatial Entanglements combines a periphonic loudspeaker dome and several tangible interfaces that invite an audience to interact playfully with immersive audio. The interfaces, sound processing software and speaker system together form a relational musical instrument that invites participants to temporarily form a spatial audio ensemble.

The installation consists of a spherical 12-channel Ambisonics dome in the shape of an icosahedron and three tangible interfaces that allow sound generation and spatial distribution by a single gesture. The lightweight mobile loudspeaker dome is based on the structural principle of tensegrity and consists of aluminum struts that support

12 speakers. The tangible interfaces are based on the same structural principle, allowing them to be bent or squeezed accordingly. Deformations of the respective interfaces manipulated by the audience performers will be mapped to sound processing and spatialization parameters. Furthermore, a motion sensor attached to an esp32 placed in the center of the respective interfaces transmits gyroscope and accelerometer data to a host computer via OSC and WiFi. The incoming data is analyzed using Machine Learning (Wekinator) and mapped to sound processing and spatialization (Ircam's Spat) parameters in MAX/msp.



Zur toten Pappel © Sam Erpelding



Spatial Entanglements—A Relational Musical Instrument © Florian Goeschke

LISTENING ROOM

During the symposium the ABPU's Produktions-Studio will become the space for the *Listening Room*. This studio with its 20.2 speaker array will allow visitors to perceive multichannel music in a relaxed way. Visitors can enter, exit and move freely through the space, gaining access to 29 selected fixed-media pieces from the call for contributions.



© Enrique Mendoza Mejía

Program with selected multichannel works:

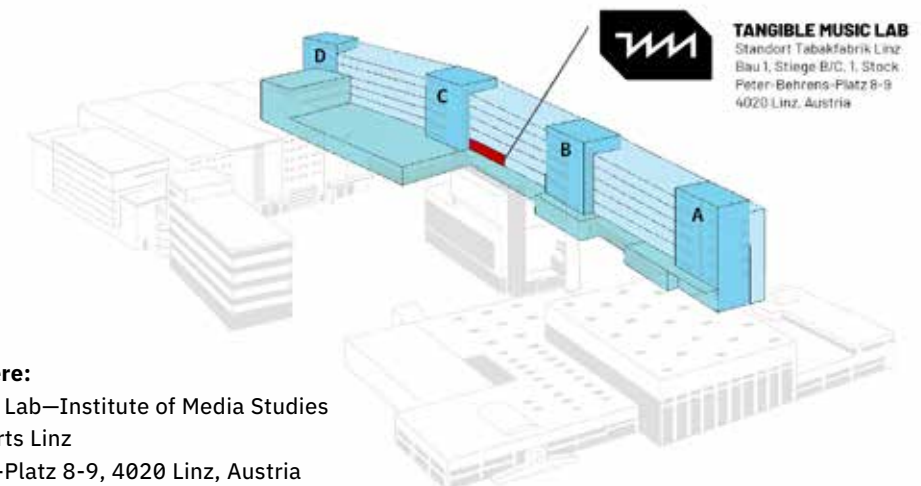
- Michele Abondano (CO) / *Destrucción del imaginario* / 2017 / 9:03
- Alan Ahued Naime (MX) / *Pieza de Cámara* / 2024 / 8:48
- Kevin Blackistone (US) / *Hyperspectral* / 2023 / 10:00
- Juan Campoverde (EC/US) / *ofrendas ii* / 2024 / 14:52
- Jean-Marc Duchenne (FR) / *Canticum resonabilis* / 2022 / 6:07
- Sam Erpelding (LU) / *Zur alten Buche—Summer* / 2022 / 20:00
- Marc Favre (FR) / *Elixir de la résonance* / 2020 / 11:00
- Nicola Cappalletti (IT/FR) & Nicola Fumo Frattegiani (IT) / *Daimoku* / 2023 / 8:32
- Leonhard Gaigg (AT) / *Conflicts* / 2024 / 10:42
- César Juárez-Joyner (MX) / *Atlakualistli, la ofrenda al cerro para el agua* / 2024 / 10:42
- Daniel Koronkevich (RU) / *Contrast* / 2024 / 5:12
- Gintas Kraptavičius (LT) / *Crunchy* / 2023 / 12:06
- Zoe (Yi-Cheng) Lin (TW) / *Glacier* / 2023 / 10:00
- David Q. Nguyen (US) / *Whale Song Stranding* / 2021 / 11:00
- José Navarro Noriega (MX) / *SESEHEKAME-TONAEHEKAME Vientos fríos Vientos cálidos* / 2024 / 8:05
- Masafumi Oda (JP) / *turbulence of time* / 2024 / 6:22
- Tatiana Panyaeva (RU) / *In the Junk L* / 2024 / 6:00
- Silvia Rosani (IT) / *Come a forgiare un volo* / 2024 / 9:00
- Timothy Roy (US) / *Brompton & Braeswood* / 2023 / 11:10
- Julian Rubisch (AT) / *Arecibo* / 2024 / 9:37
- Mohsen Shanehchi (IR) / *I am burning but you don't know about it* / 2024 / 5:00
- Valentin Sismann (FR) / *Résurrecson* / 2023 / 10:56
- Ozan Tezvaran (TR), Umay Yilmaz Kutay (CY), Erol Kutay (CY) / *Officially, I have never been there* / 2024 / 15:00
- Fulya Uçanok (TR) / *Invisible Congruences* / 2022 / 6:20
- Juan Carlos Vasquez (CO) / *The Eternalist Paradox* / 2024 / 9:40
- Benjamin Wesch (DE) / *Evolving Gravity* / 2024 / 5:17
- Wei Yang (CN) / *couloirs...* / 2024 / 13:15
- Berk Yagli (CY) / *The Cycle of Life and Decay* / 2023 / 08:00
- Dong Zhou (CN) / *Soft Contamination* / 2024 / 9:48

Brunch at the Tangible Music Lab, Tabakfabrik Linz

<https://tamlab.kunstuni-linz.at/>

September 7th, 2024, 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 7th from 10 am until 1 pm at the Tangible Music Lab location in 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

ARS ELECTRONICA ANIMATION FESTIVAL

Many of the works at the Ars Electronica Animation Festival deal with current challenges, pose critical questions and sketch out dystopian and utopian scenarios. In many cases, realities are presented and staged unembellished without concrete solutions; but even if confrontation with the facts gives us little reason for hope, it is usually the emotional staging that provides the impetus for action.

— Juergen Hagler, Ars Electronica Animation Festival Director

ARS ELECTRONICA ANIMATION FESTIVAL 2024

A collaboration between Ars Electronica and the University of Applied Sciences Upper Austria Hagenberg Campus, co-curated by Juergen Hagler and Daniela Duca De Tey

The 2024 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 from the submissions to the Prix Ars Electronica 2024, which shifted its focus last year from *Computer Animation* to the landscape of *New Animation Art*. It is therefore now welcoming artists whose work reaches beyond the cutting-edge intersection of animation, art and technology, delving into visual expression through bold experimentation. Several exciting programs such as *Prix Ars Electronica Best-Of*, *AI & Human*, *H-O-P-E* and *Austrian Panorama* will demonstrate clearly the breadth and diversity of the medium, not only in terms of storytelling techniques, conceptual explorations and technological innovation, but also commitment to social change and new political visions. Many creators of animation utilize specific technological tools—applications like Stable Diffusion, Midjourney,

DALL-E, Sora, Runway, or ChatGPT—in a self-reflexive manner to offer critical commentary on the socio-technical nature of these systems themselves. From the 900 submissions, around 40 projects have been selected to be shown at *Ars Electronica Animation Festival*, featuring a broad spectrum of techniques: AI-generated images, cinematic deepfakes, documentary storytelling, scientific and data visualizations, real-time graphics or CGI powered by game engines. The selection is complemented by three outstanding guest programs compiled by SIGGRAPH, ISEA and Runway AI Film Festival respectively. For the first time, *Ars Electronica Animation Festival* will take place in medSPACE, a new venue for teaching anatomy, offering an immersive 4k screening experience with a projection surface of 14 by 7 meters. Located on the medical campus of Johannes Kepler University Linz, the space has been developed and implemented by the Ars Electronica Futurelab.

PRIX ARS ELECTRONICA BEST-OF

Prix Ars Electronica Best-Of is a compilation of outstanding animations chosen by the jury from the works submitted to the *New Animation Art* category of Prix Ars Electronica 2024. The selection begins with the Golden Nica winner, *Smoke and Mirrors* by Beatie Wolfe. This work comprises a blend of music video and science visualization, emphasizing the magnitude of the climate crisis by presenting not only scientific facts about global warming but also the dangerous ideological positions denying it. Rising methane levels are illustrated alongside historical advertising slogans employed by oil companies to downplay awareness of the climate emergency. In addition to the Golden Nica winner, the compilation includes two awards of distinction and five honorary mentions, encompassing a wide array of critical social-political themes and challenges of our times. These themes include data surveillance, the invisible human labor that goes into training AI systems,

the erosion of image credibility and the commodification of transnational education.

Smoke and Mirrors, Beatie Wolfe (GB)
Stained, Jeremy Kamal (US)
I'm Feeling Lucky, Timothy Thomasson (CA)
Unknown Label, Nicolas Gourault (FR)
Thank you for your Souvenir, UK!, Oushi Lin (CN)
*F*ckai?* (Famous), Jordan Clarke (CA)
Random Acts of Flyness: Season 2, Episode 4 / Fourth Dimension: Spacetime/bodyspirit, Kordae Henry (US)
DUCK, Rachel Maclean (GB)



Thank you for your souvenir, UK! © Oushi Lin

This year's Prix Ars Electronica award-winning works visualize the simultaneous creative actions of artists and inspire us to imagine a dynamic, living Earth.

— Emiko Ogawa, Co-Curator & Head of Prix Ars Electronica

H-O-P-E

Hope is a powerful, yet often too ambiguous concept. In a world beset by rampant climate change and societal disruptions, coupled with uncertainty about our ability to influence the future, hope remains crucial. However, relying solely on hope can seem naive and delusional. While hope alone cannot shape a project for future improvement, it can serve us as the underlying emotion that translates into various actions and tendencies shaping the future. Therefore, we

suggest using hope not as a tool in itself, but as a springboard for other useful concepts encapsulated in its letters: *H-O-P-E*.

H for HEALING

in vivo · in vitro · in silico, Kennedy+swan (DE)
 二〇二〇, Max Hattler (DE/HK)

O for OTHERNESS

Bye Bear, Jan Bitzer (DE)
Soft Creatures, BORA (FR)

P for PARADOX

UNKNOWN QUANTUM OBJECTS, Alessandro Bavari (IT)
Tacit Call, Paul Valentin (DE)

E for ENTANGLEMENT

Entangled Atlas, Inferstudio (AU)



Bye Bear © Jan Bitzer

AI & HUMAN

The *AI & Human* program is an annual celebration of the intersection between Artificial Intelligence and animation art, showcasing recent innovations in the field. This year a remarkable one-third of the submissions to *Prix Ars Electronica New Animation Art* were projects created using AI tools or centered around AI as a theme—the highest number to date. These submissions highlight diverse and evolving ways of creative AI, whether in storytelling, visual concept and design or image production. Beyond functioning as a mere tool, AI is increasingly becoming a subject of artistic exploration, serving as a theme and focal point. This year's program therefore includes works exploring the societal, ethical and identity implications of AI. *EMI* merges AI, CGI and real footage to create a frenetic advertisement tutorial

about a virtual female influencer, humorously addressing the growing commodification of the online body. *The Oasis I Deserve* is an animated documentary about dating AI chatbots. *All My Noise* immerses viewers in a bizarre, tech-saturated world of synthetic entertainment, depicting a landscape marked by both poverty and excess, all generated through AI-driven image design. Golden Nica Winner *Washed Out: "The hardest part"* is the first generative video made with OpenAI's SORA text-to-video model, proving AI's potential to become a complementary tool to traditional filmmaking. Last but not least, *AI Day* is an AI-generated digital tapestry paying tribute to women in powerful roles of creativity and Glenn Marshall's *Lady to Fox* tells the story of a mysterious metamorphosis.



All My Noise © Tomás García

EMI, Ethel Lilienfeld (FR)

The Oasis I Deserve, Ines Sieulle (FR)

All my Noise, Tomás García (AR)

Washed Out: "The hardest part", Paul Trillo (US)

AI Day, Ida Kvetny (DK)

Lady to Fox, Glenn Marshall (GB)

DATA AND SCIENCE VISUALIZATIONS

Through animation, scientific concepts become more than just data—they become stories that resonate and inspire. Animation can turn complex scientific concepts into visually comprehensible narratives, making them accessible to a broad audience. From exploring the Milky Way's center and the dynamics of stars orbiting a supermassive black hole to depicting DNA replication or the planet's warming trends throughout time, the selected animations break down intricate scientific phenomena into coherent segments. Such graphical representations of data often unveil 'hidden' insights about our world, in other words, they make us aware of phenomena that develop either too slowly (climate change) or too fast (DNA replication) to be noticeable through direct experience or observation technology. Some of the selected animations have a more factual, informative approach, focusing on making complex scientific concepts such as black holes, "G-object" dusty stars or the AMOC (Atlantic Meridional Overturning Circulation) tangible and engaging for everyone. Other works in the selection integrate scientific data with more emotional narratives. Examples include reflecting on resilience in the aftermath of environmen-

tal disasters such as the Marshall Fire in Colorado, or exploring the complexities of corporate influence in managing climate data.

A Journey to the Center of the Milky Way: Stellar Orbits around Its Central Black Hole, NCSA Advanced Visualization Lab (US)

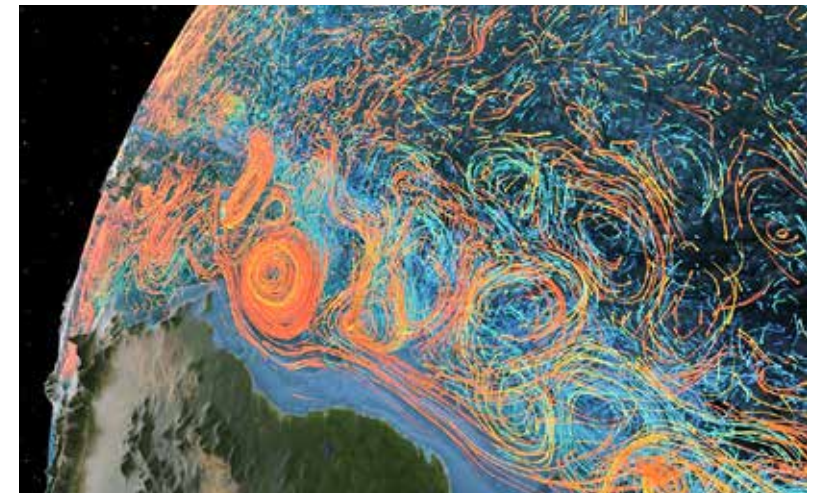
DNA Replication of the lagging strand, Peter Mindek (SK), Tobias Klein (DE), Alfredo De Biasio (IT)

Following the upper and lower limbs of the Atlantic Meridional Overturning Circulation, Felicia Brisc (DE), Nuno Serra (PT)

NASA Climate Spiral, Mark SubbaRao (US)

Resaerate, Jullian Young (US)

Smoke and Mirrors, Beatie Wolfe (GB)



Following the upper and lower limbs of the Atlantic Meridional Overturning Circulation
© Felicia Brisc, Nuno Serra

I hope that *Smoke and Mirrors* helps to illuminate a Truth that has been purposely obscured from view, one that has played and continues to play a major role in the critical climate emergency that we all face.

— Beatie Wolfe, *Prix Ars Electronica* winner 2024, *New Animation Art*

AUSTRIAN PANORAMA

Austrian Panorama showcases a mix of experimental and humorous animations by Austrian artists or artists who live and work in Austria. A fascinating interplay of dance, music and neural style transfer unfolds in *LUCID*. Another AI-generated work, *echoes of grief*, takes one down the rabbit hole of memory in a phantasmagoric journey inside the unconscious, while *Equisite Corpus*

dives literally inside the human body with the help of X-ray imagery. On a comedic note, in *Annoyance*, a pesky fly brings chaos into a hipster's life thwarting his attempts to bite into a veggie wrap. The selection ends on a darker note with two dystopian narratives, *Abyss* and *The Electric Kiss*, one with a futuristic and apocalyptic stance, the other compiled from the remnants of cinema's past.



LUCID, Celine Pham (AT)

echoes of grief, Verena Repar (SI/AT)

Equisite Corpus,
Kevin Blackistone (US/AT)

Annoyance, Sascha Vernik (AT)

The Electric Kiss,
Rainer Kollberger (AT)

Abyss, Sophie Gartner &
Neo Klinger (AT)

LUCID © Celine Pham

YOUNG ANIMATIONS

A collaboration between Ars Electronica and OeAD, curated by Sirikit Amann (AT)

Like every year, the works of talented filmmakers up to the age of 19 are 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 2024 in the *u19—create your world* category.



Important Part of my Life

Last
Normal Day in Jurassic World
Herzesschwestern
Na2r_3lumen

War—Escape—Penance

Zemlyanka
Fluten der Freiheit
Everlasting End

Inside—Outside

Constructed Identity
OceaNebula
Nur ein Traum

Last © Anna Bubenicek, Flora Kirnbauer

SIGGRAPH

GUEST PROGRAM I

SIGGRAPH will be present at Ars Electronica Festival this year with its prestigious annual showcase *Electronic Theatre*, covering 17 outstanding animations from this year's edition.

After Grandpa, Juliette Michel, Swann Valenza, Florian Gomes Freitas, Axel Sence, Victoria Leviaux

Atmospheric Carbon Dioxide Tagged by Source, AJ Christensen, Greg Shirah, Helen-Nicole Kostis, Anansa B. Keaton-Ashanti, Mark Subbarao, Brenda Lopez-Silva, Lesley Ott

Cuisine Exchange, Yves Geleyn,
Michael Thurmeier

Cycle, Amelie Devauchelle, Eva Degli-Innocenti, Loreline Clément, Lucie Amherdt, Clemence Fischbach

Dandelion, Ling Zhao, Zhengwu Gu

Doptelet Mechanism of Action, Jack Nelson, Nick Klein, Andrew Swift, Pete Matthews, Emily Drapal

Goodbye my World, Quentin Devred, Estelle Bonnardel, Maxime Foltzer, Astrid Novais, Florian Maurice, Baptiste Duchamps

LUKI & the Lights Creator, Toby Cochran



Still from Art of Weightlessness © Moshe Mahler

Origami, Kei Kanamori

Patterns, Alex Glawion

Remembrance, Isaac Gazmararian

Spark: Milky Way Evolution, Ryan Wyatt,
Mike Schmitt

The Art of Weightlessness, Moshe Mahler

The Sun is Bad, Rachel Mow, Ivan Chui, Laura Correal, Quinn Marsh, Liren Sun, Chenrui Lan, Elle Yeung, Hazel Wong, Henry Ni, Rielle Yap Ong, Samson Flanagan

The War Within Announce Cinematic | World of Warcraft, Anna Morgan

Wing It, Rik Schutte, Fiona Cohen,
Francesco Siddi, Vivien Lulkowski

Wondermom, Clémence Provost, Lisa Tardieu,
Maud Grainger, Mariam Ulmasova, Manon Benet

RUNWAY AI FILM FESTIVAL

GUEST PROGRAM II

Runway AI Film Festival was established in 2022 and welcomes artists embracing new and emerging AI techniques for filmmaking. The selection presented at Ars Electronica shows the last edition's festival finalists and offers a glimpse into a new creative era, showing that

there is no uniform and one-dimensional style in AI-driven filmmaking. The organization behind the festival is Runway, an applied AI research company founded in 2018 that builds Artificial Intelligence systems and tools for human imagination.

Animitas, Emeric Leprince (FR)

The dawn of creation, Carlo De Togni & Elena Sparacino (IT)

Dear Mom, Johans Saldana Guadalupe (PE/US) & Katie Luo (US)

$e^{i*\pi} + 1 = 0$, Junie Lau (CN)

Get Me Out, Daniel Antebi (MX/US)

LAPSE, YZA Voku (ES)

Pounamu, Samuel Schrag (US)

Separation, Rufus Dye-Montefiore, Luke Dye-Montefiore, Alice Boyd (UK)



Runway AI Film Festival © Flora Kimbauer

A Tree Once Grew Here, John Semerad & Dara Semerad (US)

Where Do Grandmas Go When They Get Lost?, Léo Cannone (FR)

ISEA GUEST PROGRAM III

Curated by Rewa Wright

The *Constellations ISEA 2024* animation program reveals a mix of Indigenous and Western animation concepts, styles and methods. New artistic approaches in expanded animation come to the fore through works by Nirma Madhoo, A. Bill Miller and Gregory Bennett, deploying motion and reality capture technology. Illuminating a new aesthetic in contemporary First Nations' thought, works by Liliana Conlisk-Gallegos, UnCalculated Studio, Pasha Clothier, Tiare Ribeaux and Qianqian Ye and Desna Whaanga-Schollum explore traditional knowledge systems with current software tools, part of a growing movement to expand Indigenous Futures in animation.

Patrick Lichty and Clinton Watkins offer experimental explorations, with Lichty investigating the intersection of animation and architecture and Watkins exploring the interplay between animation and sound.

9318, Nirma Madhoo (AU)

Alone 02, A. Bill Miller (US)

Metroplex, Gregory Bennett (Aotearoa/NZ)

Kai-Hai: 塑 Plastia, Tiare Ribeaux & Qianqian Ye (US)

The Coyolxauhqui Imperative, Liliana Conlisk Gallegos (US/MK), Juan Carlos Portillo (US), Cory Scott McCormick (US)

BioRhythms 2, UnCalculated Studio / Rewa Wright & Simon Howden (Aotearoa/NZ)

Te Hihili o te Ahi (the Energy of Fire), Pasha Clothier (Aotearoa/NZ)

SentientPlace, Desna Whaanga-Schollum (Aotearoa/NZ)

Force Fields (edit), Clinton Watkins (Aotearoa/NZ)

untitled movements, A. Bill Miller (US)

Latent 5, Patrick Lichty (US)



9318 © Nirma Madhoo

Expanded Animation Conference
© Animation Festival 2024

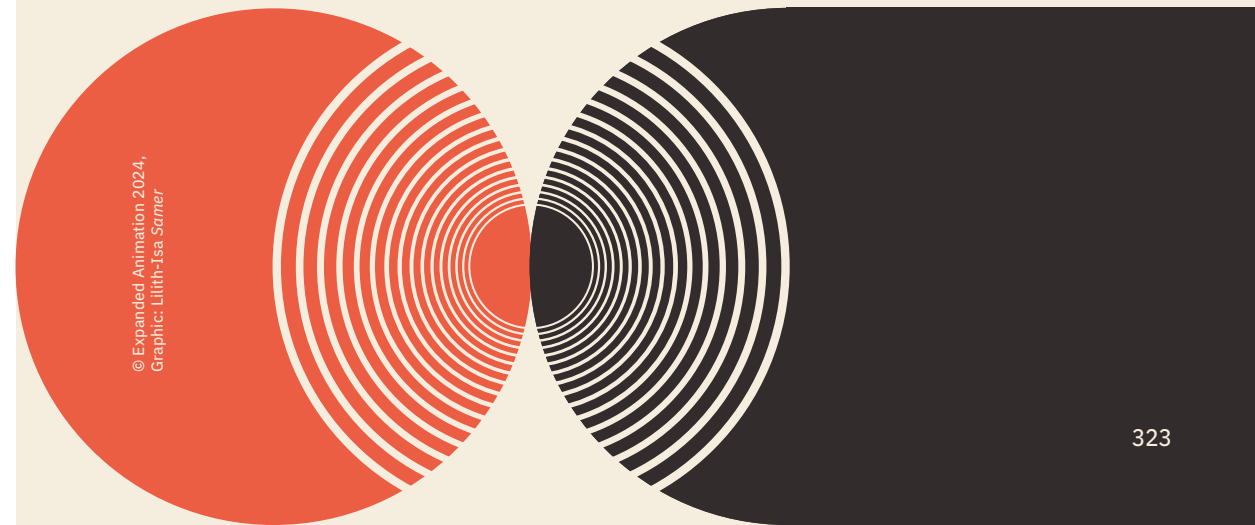


EXPANDED ANIMATION 2024 CONFERENCE ON ANIMATION AND INTERACTIVE ART

Animation, in its simplest form, is media in motion. In a similar capacity, the *Expanded Animation Symposium* is also in motion, continuously evolving since its inception in 2013; each frame effectively represents a current snapshot of the unlimited landscape of animation in the context of media arts. The symposium that began as a one-day side event of Ars Electronica has meanwhile developed into a three-day attraction within the *Ars Electronica Animation Festival*. In the pursuit of a comprehensive metaphor for organizing and critically examining paradigms for the creation, display and perception of animation, a series of four symposia entitled *Synaesthetic Syntax* were included under the *Expanded Animation* umbrella from 2020–2023. In the previous eleven editions, a total of 240 artists, curators, cultural workers and researchers shared their ideas, findings and artworks. Experts from various fields were invited to present their perspectives on specific topics such as *Interfaces in Motion* (2018), *Tectonic Shift* (2021) or *The Art of Performance* (2023), with the aim of bringing the world of art, technology and science together.

With the 12th edition, the event will morph into its next frame as a media arts conference. *Expanded 2024—Conference on Animation and Interactive Art* focuses on academic art papers in the field of expanded animation and interactive art that explore and experiment with audio-visual expression at the intersection of art and technology. The call for papers addressed submissions in two categories: Art Research Paper, a full paper with a focus on theory and context; and Art Paper, a short paper based on an artwork, case study or work in progress. 36 papers were submitted for the Art Research Paper Track, of which 12 were accepted for publication. This represents an acceptance rate of 33%. For the Art Paper track, we received 38 submissions, of which 15 were accepted for publication. This represents an acceptance rate of 39%. All selected papers will be included in a proceedings document published at Ars Electronica Archive and *Expanded Animation*.

Three other panels complement the comprehensive program in addition to the conference presentations.



The *ASIFA AUSTRIA Forum* features animation filmmaker Irina Rubina, the indie game studio *Slow Bros* and Paul Clarke from the collective *uninvited guests*.

Rachel Maclean and Nicolas Gourault, both honored with an Honorary Mention in the Prix Ars Electronica category *New Animation Art*, will offer insights into their current work. Paul Trillo, winner of a Golden Nica in the category *AI in Art*, a category first announced in 2024, will present his current AI-generated films. In the panel *Art & Industry*, Jan Pinkava will talk about the future of interactive storytelling, and Bonnie Mitchell will speak about the *Time Tunnel—50 years SIGGRAPH HISTORY*.

As in the eleven previous editions, all lectures will be live streamed, recorded and made available in the Ars Electronica and *Expanded Animation* archives. The proceedings will complement the already comprehensive documentation of activities from the conference. From the beginning, the

organizers of *Expanded Animation* have followed an open approach, never requiring an entrance fee for either active or passive participation. The extensive materials and documentation (i.e. video and photo documentation, publications) from the event are also freely accessible; the anthology *Expanded Animation—Mapping an Unlimited Landscape* is an open access publication, and the recorded lectures are freely available on the expandedanimation.com website. In contrast to many other conferences, the speakers do not have to pay a conference fee but even receive an Ars Electronica Festivalpass for their participation. In the spirit that research should not be elitist, *Expanded Animation* is a prime example of an inclusive, open and comprehensive research format for all interested parties. The proceedings of the *EXPANDED 2024—Conference on Animation and Interactive Art* are available at the *Expanded Animation* website.

EXPANDED PLAY

EXHIBITION OF PLAYFUL MEDIA

The medium of games has been a frequent object of exploration in our previous *Expanded Animation* Symposia, with artists and developers sharing their perspectives on animation concepts, interaction paradigms and the role of play in their works. However, such works deserve to be experienced first hand in order to be appreciated in their intended context. This year marks the inception of a new format—*Expanded Play*—a cooperative exhibition that explores various perspectives of Mixed Reality and spatial interaction within the realm of playful media, showcasing a range of student works from the Digital Media Department at the University of Applied Sciences Upper

Austria and the Department of Visual Computing at Masaryk University. The exhibition is located at the Salzamt in Linz, a platform for artists and cultural creators from various fields. During *Expanded Play*, a selection of diverse exhibits will be showcased, each opening different realms of experience: from a VR reading corner that allows visitors to engage with books in a novel way, to performative installations where the player's body and other physical objects serve as the controller.

This innovative use of space and technology will offer an immersive journey through the evolving landscape of interactive art and play.



I see you © Lisa Bayr, Gerald Gruber, Florian Horak, Elisa Hackl

General Chair: Juergen Hagler^{1,3}

TPCs Art Research Track: Victoria Szabo², Philipp Wintersberger^{3,4}

TPCs Art Track: Varvara Guljajeva⁵, Bonnie Mitchell⁶

Panel Chairs: Reinhold Bidner⁷, Michael Lankes³, Alexander Wilhelm³

Inclusion Chair: Kathrin Probst³

Publication Chair: Martin Kocur³

Web, Social Media: Nils Gallist³, Wolfgang Hochleitner³, Victoria Wolfersberger³

Exhibition: Jeremiah Diephuis³, Simone Kriglstein³

Event Production Chairs: Patrick Proier³, Christoph Schaufler³

Trailer, Visual Art: Lilith-Isa Samer³

¹ Ars Electronica, AT

² Duke University, US

³ University of Applied Sciences Upper Austria, AT

⁴ Interdisciplinary Transformation University, AT

⁵ The Hong Kong University of Science and Technology, CN

⁶ Bowling Green State University, US

⁷ gold extra, AT

⁸ Masaryk University, CZ

DEEP SPACE 8K

Our world's cultural heritage is under threat. Looting, urbanization, mass tourism, armed conflict and climate change are damaging and destroying irreplaceable sites where cultures emerged, languages developed and civilizations thrived. These endangered heritage sites embody humanity's cultural diversity, making it essential to document and preserve them now.

— Yves Ubelmann, Founder and President of Iconem

Digital Cultural Heritage Focus

At this year's festival, Deep Space 8K is dedicating special attention to Digital Cultural Heritage, presenting digitized art and cultural treasures in Deep Space 8K. Partners like Iconem from Paris,

the Museo Nacional Thyssen-Bornemisza from Madrid, the Kaiserschild Foundation and others have contributed high-quality contents for our audiences to enjoy.

Ars Electronica (AT), Iconem (FR), Histoverly (FR)

Notre-Dame Immersive

To celebrate the reopening of Notre-Dame de Paris after the devastating fire of 2019, the world-famous cathedral is coming to the Ars Electronica Center in Linz. In collaboration with French startups Iconem and Histoverly, the Ars Electronica Futurelab is presenting Notre-Dame in Deep Space 8K as an immersive experience. Visitors can explore a vast three-dimensional model of the cathedral, discovering its architectural and artistic features from entirely new perspectives. Notre-Dame de Paris has witnessed monumental historical events, including Napoleon Bonaparte's coronation as emperor, and stands as a symbol of human creativity, immortalized in Victor Hugo's renowned novel. On April 15th, 2019, the cathedral was

nearly destroyed by a devastating fire, but was saved by the efforts of over 600 firefighters. The world responded with overwhelming generosity, donating nearly one billion Euros for its reconstruction. Since then, almost 1,000 workers have been dedicated to restoring the cathedral to its former glory. With *Notre-Dame Immersive* in Deep Space 8K, the extensive restoration work is brought to light in a new and engaging way, showcasing the role of new technologies in preserving and communicating humanity's cultural heritage.

Notre-Dame Immersive is supported by the Austrian Foreign Ministry and the Institut Français d'Autriche, as part of the strategy for the international dissemination of cultural and creative industries.



© Ars Electronica / Raphael Schaumburg-Lippe

Kaiserschild Foundation (AT)

Kaiserschild Art Defined

Pieter Claesz Still Lives

With the *Kaiserschild Art Defined* project, the Kaiserschild Foundation makes fine art accessible to the public by means of high-quality digital reproductions. At the center of the current production is Dutch master Pieter Claesz, who had a decisive influence on still life painting and occupies an important place in the art collection of the Kaiserschild Foundation. Selected works from Claesz's oeuvre have been digitized in high resolution to provide in-depth insight into painting technique, structure and material. In addition, the project provides insight into the historical contexts and influences to which Pieter Claesz was exposed as well as the impact of his work. In this project, the

Kaiserschild Foundation is cooperating with Alte Galerie in Schloss Eggenberg, part of Universalmuseum Joanneum, Kunsthistorisches Museum Wien and Kunst Museum Winterthur.



Stillleben mit Glaspokal, 1642
© Universalmuseum Joanneum / N. Lackner

Susana Pérez (ES), Alejandra Martos (ES)

Carpaccio's Knight

Restoration and Technical Study

The project focuses on the restoration and conservation process employed for the painting (and frame) *Young Knight in a Landscape* (c. 1505) by Venetian artist Vittore Carpaccio. It also explains the technical studies and laboratory analysis carried out to learn about the artist's painting process and the materials that he used to create this magnificent painting. The project reveals how the historical investigation and present information obtained has led us to a meticulously controlled restoration work. Through the technical images (X-Ray, infrared and ultraviolet) and the high resolution images, as well as the gigapixel image of the painting, the audience will be able to see and understand what lies beneath the

paint layers and how conservators use them to establish a work protocol for the well-being of the painting. Conserving a work of art for the preservation of our cultural heritage.

This presentation was realized with the support of the Spanish Embassy Vienna.



Young Knight in a Landscape, 1505 © Museo Nacional Thyssen-Bornemisza / Hélène Desplechin

Luca Ponzio (IT), Francesco Gavioli (IT)

Haltadefinizione's Journey

Transforming Cultural Heritage with Gigapixel Images

The presentation highlights Haltadefinizione's pioneering work in preserving and enhancing cultural heritage through gigapixel photography. Since 2005, the company has led innovative digitization projects, including the world's first gigapixel image of an artwork and extraordinary projects like *The Last Supper*, the Scrovegni Chapel and masterpieces by Botticelli, Caravaggio and Leonardo. Haltadefinizione also creates physical replicas of artworks by combining gigapixel and 3D scanning, which are used for educational and exhibition purposes. Finally, the presentation introduces new ways to explore gigapixel

images through immersive headsets. Visitors will have the chance to explore astonishingly magnified details in gigapixel, made possible by sophisticated hardware and software specifically designed for cultural heritage.

The presentation emphasizes the importance of preserving cultural heritage with digital technologies, thus democratizing access to art.

Luca Ponzio, CEO of Haltadefinizione, Francesco Gavioli, Digital Humanities Specialist at Haltadefinizione. All images shown: © Haltadefinizione® Image Bank. Haltadefinizione S.r.l. is a Benefit Corporation directed and managed by Franco Cosimo Panini Editore S.p.A.



© Haltadefinizione



Chameleon, 2024, video still © Universal Everything

Universal Everything (GB)

Chameleon

A project for the Fondazione Giorgio Cini

A site-specific project for the island of San Giorgio Maggiore (Venice) has been carried out by the famous international collective Universal Everything. The hallmark of their work is the “walking figure”: a digital creature that transforms itself by changing matter, color and texture, and which for this occasion crosses the spaces of the island on a visionary walk in very high definition, showcasing the monumental architecture, the art collections—including the paintings, tapestries and the *Wedding at Cana*—the libraries and the woodlands along with the Vatican Chapels. The digital work, visible online and titled *Chameleon*,

is presented in the ancient Longhena Library and at Deep Space 8K in Linz in collaboration with Ars Electronica and STARTS, a European Commission project.

The project is promoted by ARCHiVe—Analysis and Recording of Cultural Heritage in Venice—the Fondazione Giorgio Cini's centre of research on technology in the digital preservation of cultural heritage and archives.

Universal Everything and Fondazione Giorgio Cini Onlus. Curated by Chiara Casarin and Ennio Bianco. Thanks to STARTS, Ars Electronica and T6 Ecosystems.

WHAT IS REMAINING

WHAT IS REMAINING is at the same time the title of and a question concerning a multidisciplinary cooperation between TANZ LINZ and the department of Time-Based and Interactive Media Arts at the University of Arts Linz.

Over several months, the media artists developed a three-part dance evening together with the dancers, which is now presented at the Ars Electronica Center: in the Deep Space 8K, contemporary dance and interactive digital art merge into a collective distillation on a visual and auditory level.

The dancers' bodies are continued in the forms of expression of the media artists—and vice versa. Matteo Cogliandro, Yu-Teng Huang, Hinako Taira

and Pedro Tayette—all four also active dancers of the 16-member company—choreograph three pieces both different and multi-layered in close cooperation with the media artists Carlotta Borcharding, Ariathney Coyne, Holunder Heiß, Lynn Mayya, Noayama, Alex Villard and Emilia Vogt.

Joachim Smetschka, head of the Time-Based and Interactive Media Arts department, who developed the concept of this cooperation project together with dance director Roma Janus: “For 90 minutes, we present a multi-layered panorama of the choreographic languages within the company, which are expanded by the vocabulary of media arts.”

Matteo Cogliandro (IT), Pedro Tayette (BR), Elena Sofia Bisci (IT), Mischa Hall (AU), Yu-Teng Huang (TW), Katharina Illnar (AT), Pavel Povrazník (CZ), Lorenzo Ruta (IT), Nicole Stroh (DE), Hinako Taira (JP), Fleur Wijsman (NL), Alex Villard (MX), Noayama / Affine Records (DE)

It was

The piece *It was* is about the flow of one's own individual and collective identity. The title includes a hint of change and movement, a transformation that resembles a metamorphosis. Something was, something is and begins, but both are always mutually dependent.

In exchange with the two choreographers, the media artist Alex Villard and the musician Noayama develop the image and sound layers for this piece. Very different ways of working meet and so *It was* becomes a unique symbiosis, albeit not always harmonious, of contemporary dance, visionary media and sound art.



© Philip Brunnader

The LABO TRACES project was created to offer dancers a platform for movement research, production processes, a dialog and immersive activities with the audiences. LABO TRACES goes beyond the theater repertoire and the theater stage. This project enables us to explore new spaces, art disciplines and working methods. This results in valuable collaborations such as *WHAT IS REMAINING*.

— Roma Janus, Artistic Director of Tanz Linz, Landestheater Linz

Yu-Teng Huang (TW), Elena Sofia Bisci (IT), Matteo Cogliandro (IT), Katharina Illnar (AT), Pavel Povrazník (CZ), Nicole Stroh (DE), Pedro Tayette (BR), S. Arthur Sicilia (US), Elisa Lodolini (IT), Ilia Dergousoff (US), Angelica Mattiazzi (IT), Ariathney Coyne (GR/US), Lynn Mayya (SY), Emilia Vogt (DE)

UniversEye

The choreographer Yu-Teng Huang and media artists Ariathney Coyne, Lynn Mayya and Emilia Vogt have jointly developed the performance *UniversEye* through the fusion of digital images, sound and the movements of the dancers. Starting points are relationships, touches and interactions. The large-format projections are characterized by abstract and cinematic structures of the four elements of fire, water, earth and air, which also serve as sources of inspiration for the choreographer. Combined with abstracted live videos, they create a special closeness between the audience and dancers. *UniversEye* is about love and self-love, about group identity and individuality, about arriving and healing.



© Philip Brunnader

Hinako Taira (JP), Mischa Hall (AU), Lorenzo Ruta (IT), Fleur Wijsman (NL), Carlotta Borcharding (DE), Holunder Heiß (AT)

無何有一—mukayu

Mukayu more or less translates to “everything is nothing”, a concept of “richness in the void” inspired by Zen philosophy. In the audiovisual dance performance, choreographer Hinako Taira and media artists Carlotta Borcharding and Holunder Heiß, together with three dancers of the company, dynamically shape the stage space through movements influenced by minimalist light plays. The predominantly monochrome scenario is characterized by light and shadow, complemented by empty and rich sounds. Together with the dancers, this creates a cautious dialog between elements of movement, sound and space, bringing the audience closer to the idea of “richness in the void”.



© Philip Brunnader

Deep Space 8K Highlights 2024

Gasometer Oberhausen (DE), Ars Electronica Solutions (AT)

Deep Sea Diving into the Deep Blue

We know more about the far side of the moon than we do about our own oceans. *Deep Sea* aims to change that a little. Since March 15th, 2024, Europe's tallest exhibition hall, the Gasometer Oberhausen, has been taking visitors on a journey down to the fascinating depths of the world's oceans with its new permanent exhibition. The highlight of the exhibition is *The Wave*: a projection over 1,000 square meters in size, on which lifelike animations from the mysterious world of the sea are brought to life. With this artistic creation, Ars Electronica Solutions is attempting to give viewers an entirely new perspective. *The Wave* takes us below the surface of the ocean, reveals the underlying beauty and hidden magic of the underwater world, allowing us to get up close and personal

with life-size sea creatures such as humpback whales. At this year's festival, *Deep Sea* will bring the most important aspects of the two-year exhibition to the Ars Electronica Deep Space 8K. Nils Sparwasser, advising curator of the exhibition *Planet Ocean* at Gasometer Oberhausen, will delve into the world of the oceans with unique photographs and images from the exhibition, revealing the mysteries as well as the problems and challenges associated with the ocean. In addition, Ars Electronica Solutions will show visitors the beauty and fascination of the oceans with a 3D Deep Space 8K adaptation of its artistic creation *The Wave*.

Gasometer Oberhausen, Nils Sparwasser, Ars Electronica Solutions



Die Welle © SIGMA © Scott Portelli

Ars Electronica Solutions (AT)

Deep Space Community

Growing: Immersive, Global, Multilingual, Diverse

Deep Space by Ars Electronica is an innovative platform that uses cutting-edge technology to offer immersive and interactive experiences. This exciting session is showcasing the growing *Deep Space Community*, featuring immersive experiences from diverse locations across Europe, Asia and the Americas. Discover innovative projects that highlight groundbreaking collaborations in 3D art, interactive storytelling and scientific visualization. Explore how each continent, with its unique cultural attitudes, uses state-of-the-art 8K projection, laser tracking and versatile media formats to create unforgettable encounters. Witness the

sharing of rich content across locations and the transformative power of these spaces in fostering a truly global, multilingual community.



Deep Space Future, Uniview © JZE

Dan Tell (US)

Calling for Help: Can ET Save Us?

Although humanity has always pondered the existence of intelligences in our universe other than ourselves, the scientific search for other beings and civilizations is a relatively young pursuit. Only in the last century have astronomers seriously studied the sky in the hope that not only evidence of life on other planets will reveal itself, but that proof for other technological civilizations could be teased out of our observations. In parallel, we have sent our own signals and messages into deep space, broadcasting our existence to anyone else searching for life, sharing both haphazard and intentionally curated visions of the cultures of Earth. Explore the story we tell about ourselves on the cosmic

stage, while asking what we hope to learn from the search for other civilizations—would it give us the hope the challenges our planet faces today are solvable? Can this search shift our own perspective on the role of humanity on our planet and our responsibility toward it?



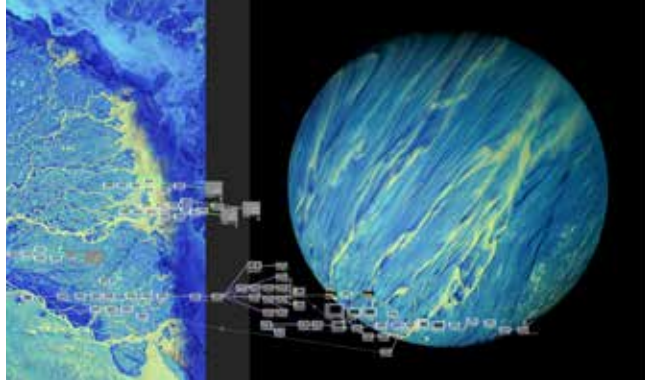
© Dan Tell

JP Carrascal (CO), Tom deMajo (UK), Eva Petric (SI), Sock Redding (NZ), Daniel Rosero (CO), Fransisca Tan (AT)

ArtEO: Environmental Data for Artists

Sensing the Invisible, Feeling the Unknown

ArtEO connects artists with data, experts and scientists to help tell Earth's story through art: sensing the invisible, feeling the unknown. Immerse yourself in sonified Earth Observation (EO) imagery, while shifting perspectives from data to ethereal compositions. Witness planets being transformed into singularly isolated worlds. Unraveling particle clouds, flickering, melting, expanding, tell tales of human traces and pay homage to Earth by exploring our planet's signs of vitality.



ArtEO3, ParticleClouds © Daniel Rosero

Richardo Serban (AT), Jennifer Ye (AT)

ShapeQuest

Many people struggle with the perception of how simple lines can form 2D shapes and, subsequently, 3D shapes. This project aims to enable players of all ages to gain an understanding of how basic shapes combine to form everyday objects. This can be helpful for understanding how simple 3D modeling works. *ShapeQuest* is an immersive and educational game designed to be played using Ars Electronica's Deep Space 8K environment. Players embark on a journey of discovery, using their own physical movement to uncover components of basic geometry projected onto the floor. Through collaborative efforts, players gradually reveal hidden dots, which then are transformed into lines and, eventually, simple 2D shapes. As players progress, they evolve these shapes into more complex

3D figures, creating recognizable items that are projected onto the wall. Each level has a story with each segment of it being dedicated to uncovering shapes and to creating the necessary objects in order to progress the story.

Richardo Serban, Jennifer Ye / University of Applied Sciences Hagenberg / Prof. Jeremiah Diephuis



© Jennifer Ye

Gerhard Funk (AT)

Cooperative Aesthetics: Four New Works

The idea behind *Cooperative Aesthetics* is to create a space in which users can influence the visual output of the projections and the sound by walking around. Participants playfully explore what is controlled by their movements. In doing so, they come into contact with others, can coordinate their movements and thus create a shared aesthetic experience.

In *Crossings*, when a user crosses the path of another user, the creatures connected to each user exchange body parts, creating two new crossbreeds. *Sound Ping Pong* is a kind of rhythm machine that allows users to develop and vary a common rhythm. A minimalist visual equivalent of the common rhythm can be seen in the wall projection.

Squeegee allows two people to form a (toothed) squeegee and drag paint across the floor, creating a complex, collaborative painting.

Sun encourages users to stand as close as possible to each other. The more people gather in the middle of the room, the more powerful the solar projection becomes.



Sun © Gerhard Funk

Jiabao Li (CN), Matt McCorkle (US), Amber Botao Hu (CN)

Nocturnal Fugue

Becoming Bat with EchoVision

“What is it like to be a bat?”— Experience the world of bats in *Nocturnal Fugue*, where bat vocalizations transform into evocative spatial music set to digital recreations of their habitats. Echolocate like a bat in *EchoVision*, a custom bat-shaped Mixed Reality mask that adjusts visual feedback based on your voice. Screaming allows you to navigate your surroundings even in total darkness.



© Jiabao Li

David Szauder (HU)

Illuminated Canvases

Today's popular generative AI systems often build compositions from pre-programmed images. That is, the works of well-known and lesser-known creators from the past are reflected in the generated digital creations. *Illuminated Canvases* specifically strives to deprive Artificial Intelligence of this joy, creating an alternative art history through deliberately uploaded images, which becomes distorted through the AI lens. In this case, while the distortion is neutral, the result is something strange, not unknown but still mechanically spectacularly animated. In this selection, several European masters



© David Szauder

also play a role, including Gustav Klimt, Pieter Bruegel, László Moholy-Nagy, Salvador Dalí and many others.

Christian Ekhatör (AT), Julian Kapl (AT), Julia Meyr (AT), Amina Gabeljic (AT)

HackTrap

Can you Unhack Deep Space?

How can we make children more familiar with IT security in an engaging way? Our project addresses this by developing an interactive game that simulates a hacking experience, showing how quickly one can fall victim to cyber threats. The audience sees a vivid, dynamic simulation of a hacking attempt in real time. The setup includes high resolution imagery, tracking and real time feedback to create a fully engaging experience.

Participants make decisions and observe the immediate consequences of their actions.

HackTrap highlights the importance of digital literacy and cybersecurity awareness. By targeting a younger audience, we aim to foster a generation that is more knowledgeable and

cautious about online security. In turn, this will contribute to a safer digital future.

We extend our heartfelt thanks to HTBLA Leonding for their invaluable support and to the Deep Space 8K Team for their guidance and assistance throughout this project.



© Amina Gabeljic



© Astrid Safron

Lina Alea Roth (DE/AT), Damián Cortés Alberti (AR/ES), Ilona Roth (DE), Astrid Safron (AT), Liivo Safron (AT), Ravel Safron (AT), Jung In Lee (AT/KR), Samer Alkurdi (SY), Elisabet Bort Giramé (ES)

Peter, Paula & Panini

Presentation of a Kids' Book & Preview of a Dance Theater Production

After the successful *Klimatheater (Climate Theater)* project at the Europaschule Linz, Lina could not let her wealth of ideas rest. Together with friends, she developed the fairy tale *Peter, Paula & Panini*, a climate book and play, supported by AI text generators. This was then handed over to the director Damián Cortés Alberti, who created a dance theater piece from it. The premiere took place as part of the City of Linz's Children's Culture Week in October 2023. The performance movingly illustrated the effects of climate change, represented by the characters *Peter, Paula & Panini*. The piece

was a success and was subsequently compiled into a book that also integrated the children's drawings from the project, using image generators to create a harmonious overall picture. For the Ars Electronica Festival 2024, the scenery will be developed through a workshop with children that combine their individual drawings with image AI, thus creating the scenery for the dance theater pieces, displayed in the Deep Space 8K of the Ars Electronica Center. The dance theater production will be taken up again and further developed into a new piece for 2025. For now, we allow ourselves a sneak peek into the new production.

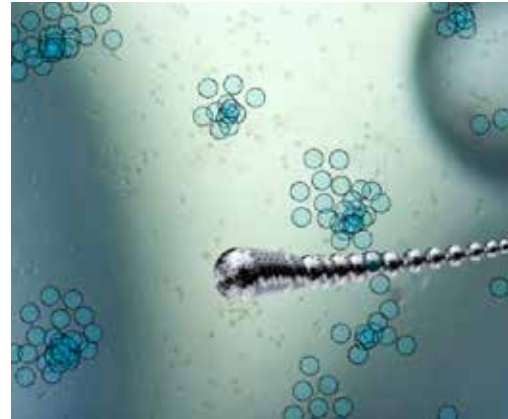
Interplayful Sensoric Environments

A major area of research within the Time-Based and Interactive Media Arts Department is the playful exploration of 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 experi-

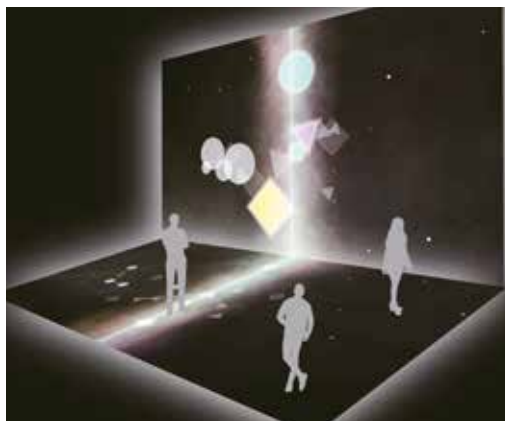
ment and interact, as well as live performances in collaboration with dancers and performers. These recent works will be presented in Deep Space 8K of the Ars Electronica Center and in Studio 1 at Hauptplatz 8 as part of the University of Arts Linz Campus exhibition.



Paragon © Carlotta Borcharding



MICROBIOM © Hannes Buchwieser



Voyage © Joann Lee



Eternal Voices © Teodor Dumitrache

Carlotta Borcharding (DE), Semi Lim (KR),
Veronika Maidukova (UA)

Paragon

Paragon is an interactive audiovisual Deep Space 8K performance reflecting on the question of space, light and darkness.

The performance is based on a program that responds to movement within a sensory tracking system. The layers of sound, projection and movement are thus intertwined while the body itself is placed as a medium within a digital and interactive context. The structure of the projected images determine the radius of action and interaction of the performers as the piece tells a story about two characters, the dynamics between them and their relationship to light and to darkness, to be seen and not to be seen. The choreographic, musical and visual elements thereby tell us the story of two avatars who shape their characters in the course of time and finally interact with each other and with their source of light.

Joann Lee (KR)

Voyage

Voyage is an interactive program presented in Deep Space 8K, inviting audience participation. Inspired by the artist's previous work *Sound of Kandinsky* and the visual aesthetics of the cosmos, the project explores the theme of cosmic travel and collective creation. In this program, one user embodies a linear nebula while other participants become stars positioned on the stage. As the nebula user moves closer to these stars, the stars emit sounds corresponding to their locations, creating a symphony of cosmic melodies. When users with similar shapes gather, they form constellations on the screen. Through *Voyage*, participants collaboratively generate ever-changing music and visual patterns, simulating a journey through the universe.

Hannes Buchwieser (DE)

MICROBIOM

Enter the world of microscopy

MICROBIOM is a Deep Space 8K application developed by Hannes Buchwieser in the BioLab of the Ars Electronica Center. The soundscape was produced with analogue synthesizers and recorded at Semmelweislinik, Vienna. Visitors are invited to enter the microcosm of a petri dish and devour as many other organisms as possible. The game ends when all assimilable microorganisms have disappeared. Thus, *MICROBIOM* is an artistic approach to the impacts of our current economic practices on ecological systems and the resulting socio-cultural consequences for human societies. An otherwise inaccessible world is made visible in a way that is playful. One finds oneself in a microscopic world with the goal of catching as many other organisms as possible. Enter the petri dish and eat as much as you can!

Teodor Dumitrache (RO)

Eternal Voices

Eternal Voices is an ever-changing timeless space that invites you to walk in and float between the threads of the universe. It is an audio-visual program that simulates the life and death of hundreds of particles. As you walk in this space, they will move to the music, and flee from you. It is a randomized environment which activates randomized systems that create, destroy and twist the parameters. Your steps will leave pulsating traces of your movements in the past. *Eternal Voices* is presented as a full-scale room projection as part of a live performance, where the audience is invited to enter the space and interact with it.

Lynn Mayya (SY)

Tile Trial

Tile Trial is an interactive experience created using vvvv, inspired by Truchet tiles and minimalistic geometric aesthetics. The installation showcases how simple modifications can generate new patterns or a feeling.

Participants step on certain buttons that move in space to trigger changes in tile rotations and effects. These create a constantly evolving visual landscape. *Tile Trial* invites the audience to become active creators, blending art and technology to reveal the beauty of geometric transformation.

Benjamin Brunnbauer (AT)

Painting Linz

Painting Linz examines the artists' relationship with their chosen home of Linz. It allows visitors to explore important symbols of the city by creating pixel art in vibrant colors. By running, visitors create fluid particles forming sights like the Ars Electronica Center and the Pöstlingberg. The work is especially suited for kids as its applications are simple to understand, but is no less fun for adults. This shared creation lets viewers connect with the city in ways they have never seen before.

Ildiko Mayr (AT)

Queens

Queens is an interactive digital artwork for Deep Space 8K by Ildiko Mayr. By involving the audience, the installation challenges gender norms in a playful way and is designed to surprise and entertain. Visitors can use a tracking system to create three personas who will later perform for them. In the end, it remains unclear who really pulled the strings: the audience or the three personas.

Oleksandra Fesenko (UA)

Waterfall

Waterfall is an interactive digital artwork created by Oleksandra Fesenko for Deep Space 8K. The work offers a safe, secure creative space to contemplate the atmosphere and drawings, to feel calm and to accept ourselves and the world around us.

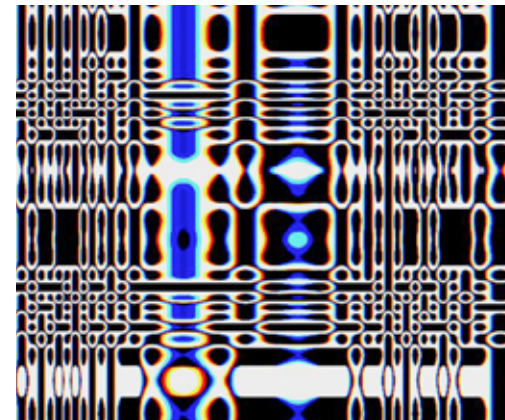
The work consists of three hand-painted backgrounds, which include watercolors and graphics on various natural themes, as well as an interactive character—a girl who chases the participants across the field in front of her. The girl reacts to the fastest mover, creating the feeling of being “watched”.

The project creates a special creative environment where participants receive a unique painted cursor and a brush that they can use to create patterns and the environment around them.

Maria Orciuoli (IT)

Ripple

Ripple invites participants to perceive themselves as temporary force fields, interacting and shaping their environment through complex relationships. A tracking system translates the participants' positions into visible disturbances, while the sonification of historical rainfall measurements plays in the background. As participants move across the environment, their individual effects merge to form a generative system, making it impossible to distinguish one's own impact from that of others. This blurring of boundaries leads to a dissolution of subjectivity, transforming participants into relational knots. In this way, *Ripple* invites to reflect on our place within the inherent chaos of existence and our attempts to impose order upon it.



Tile Trial © Lynn Mayya



Painting Linz © Benjamin Brunnbauer



Waterfall © Oleksandra Fesenko



Queens © Cecile Bucher



Ripple © Maria Orciuoli

ARS ELECTRONICA

Between Art, Technology and Society.

Ars Electronica is a creative ecosystem that enjoys a worldwide reputation.

The origins of our endeavor lie in our drive to connect to the global media arts scene and position ourselves as a prominent voice in the field. This mission kicked off in **1979**, when the first **Ars Electronica Festival** was celebrated in Linz, Austria. Since then, artists, scientists, developers, designers, entrepreneurs and activists come to Linz, Austria annually to develop, debate and showcase central questions of and grand visions for our future. Since **1987**, we celebrate the most outstanding people in the field with the **Prix Ars Electronica** in various categories. We award them with the Golden Nica, the most prestigious prize of the global media art scene.

In **1996**, we permanently integrated Ars Electronica into the cityscape of Linz by building the **Ars Electronica Center** to discuss the ever-increasing digitalization of our world with our audiences, especially young people, who together with us have been shaping the program of **create your world** since **1998**. This year-round program awards its own Golden Nica to under 19 year olds, is a major part of the annual festival and tours the region.

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 to foster democratic discourse.

Ars Electronica Solutions develops market-ready products and services for exhibitions, brands, trade fairs and events inspired by visions and prototypes from the artistic cosmos of Ars Electronica since **2013**. The **2019** created **Future Thinking School** supports companies and institutions in understanding change and recognizing connections in order to actively shape the digital revolution and with **Home Delivery** we accompany our virtual visitors on an artistic-scientific journey into our future since **2020**.

On an international level, we have been actively engaged since the **2004** foundation of **Ars Electronica Export** with a first exhibition that took place in New York and many more activities to follow around the globe. Since **2016**, we are especially active all year round in **Japan**, working together with leading Japanese universities, museums and companies to investigate the future of digital society. **Ars Electronica Platform Europe** is the umbrella for our long-standing efforts in European collaboration, predominantly in projects funded and co-funded by the European Union.

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**. It provides a unique collection of more than **75,000** projects from over four decades of Ars Electronica.



ARS ELECTRONICA CENTER

With interactive installations, unique works of media arts, in-depth research projects and large-scale projections in unprecedented 8K resolution, the Ars Electronica Center has been a hub of art, science and society since its inception in 1996. And as a platform for innovation, it does not rest on its laurels—on the contrary, it has continuously adapted to the social and technological developments of the 21st century, notably with two major redesigns in 2009 and 2019. In addition, it has expanded its focus to include Artificial Intelligence and neuro-bionics, autonomous systems and robotics as well as genetic engineering and biotechnology. In 2023, enriched by the experience of a pandemic that also led to a massive digitalization push in all areas of life, it was time to “recalibrate the compass”. The topics of Artificial Intelligence, neuro-bionics, genetic engineering and biotechnology and the far-reaching global changes that we already addressed in 2019 are more relevant today than ever. New technological developments in the aforementioned areas raise new questions about how they will affect daily life and society more broadly. We need, therefore, to understand more profoundly these technologies and how they work. This is both an incentive and a mandate to address the latest developments in our exhibitions and to radically update some of the stations. Compass reloaded!

EXHIBITION HIGHLIGHT 2024

Being Anton

“Space is killed by the railways, and we are left with time alone...”

— Heinrich Heine 1843

The immersive sound space *Being Anton* takes us acoustically into the mind and thoughts of Anton Bruckner and his contemporaries. When we think of Bruckner's legacy, we think of the sound of his music. But what sounds shaped Bruckner's everyday life?

On September 4th, 1824, Anton Bruckner was born into a world fundamentally different from the one he would leave behind 72 years later in 1896. His lifetime was marked not only by many social and political upheavals and war, but also by ever new phases of the Industrial Revolution. A world that had been slowly changing for centuries was dramatically transformed within a few decades.

In 1824, for example, a stagecoach could travel about 6.5 kilometers per hour, or some 40 kilometers per *day*; by 1854, it could travel 60 kilometers per *hour*. In 1824, there was no photography, no electric light, no telegraph and no telephone. In 1896, when Bruckner died, railroads and telegraphs spanned all the continents, the first automobiles were on the road, sound and film recordings existed, as did the first successful radio broadcasts.

Technological developments and resulting social upheavals led to a transformation of the world's visual and acoustic landscape. New sounds of machines suddenly characterized everyday life, huge industrial halls, steam-powered trains and even electric trams altered the visual and acoustic landscape of the world. At the same time, a romantic longing for nature emerged as a contrast to industry and city life.

A cooperation between the Upper Austrian KulturExpo *Anton Bruckner 2024*, City of Linz and Ars Electronica.

Team:

Ars Electronica Futurelab: Arno Deutschbauer, Peter Freudling, Ali Nikrang, Gerfried Stocker
 Sound design: Julian Pixel Schmiederer
 Sound recordists: Lukas Schönwiese, Tobias Fischbach, Tobias Türk
 Recorded on Location at Textiles Zentrum Haslach (Doris Vierlinger, Judith Weger, Sepp Eckersdorfer, Liese Grusch) & Stift St. Florian (Dr. Sonnleitner)
 Vocals: Claus Blochberger, Michael Feichtenberger, Gerald Hartwig, Rahel Kislinger, Marie Treuer
 Mixed at Stress Studio
 Partners: usomo, Norbert Trawöger, Lydia Zachhuber

Being Anton

Ars Electronica Futurelab (AT), Sound design by Julian Pixel Schmiederer (AT)

The immersive sound space *Being Anton* introduces us to the thoughts and intellectual world of Bruckner and his contemporaries. When we think of the legacy of the Upper Austrian composer Anton Bruckner, his music comes to mind. But what sounds surrounded Anton Bruckner himself in his everyday life? When Bruckner was alive, the industrial revolution was changing the world at an unprecedented pace. The life of the composer, born in 1824, was thus marked by massive social upheaval. Machines not only changed people's everyday existence, but also brought with them completely new sounds. Developed by the Ars Electronica Futurelab, the immersive sound space *Being Anton* offers visitors to the Ars Electronica Center in the anniversary year 2024 a sense of the world of sound that surrounded Anton Bruckner and those around him at the time.



© Ars Electronica / Birgit Cakir

Deep Space Special: Playing Anton

Immerse yourself in Bruckner's unique soundscapes and explore his music interactively in Deep Space 8K. With *Playing Anton* you are not just a listener. Rather, you become part of the orchestra yourself. State-of-the-art interaction technology enables you, together with others, to recreate the various sections of the Bruckner Orchestra Linz and experience Bruckner's music as impressive 3D visualizations. This innovative application was developed by the Ars Electronica Futurelab especially for the Bruckner anniversary year 2024. *Playing Anton* uses the virtual environment of Deep Space 8K to create an interactive musical experience that allows you to explore the grandiose soundscapes of the Upper Austrian composer. No doubt about it: Bruckner was one of the most innovative composers of his time!



© Ars Electronica / Martin Hieslmair

EXHIBITIONS

Current Exhibitions

Interactive stations, artworks, research projects, large-scale projections and laboratories. The Ars Electronica Center invites visitors to explore the fascinating future fields of Artificial Intelligence and neuroscience, robotics and autonomous mobility, genetic engineering and biotechnology.



© Ars Electronica / Birgit Cakir

Understanding Artificial Intelligence

Artificial Intelligence versus natural intelligence—how do they differ, what do they have in common? How do machines “think,” how do they learn, and what distinguishes humans from machines? Artificial Intelligence in all its complexity is a central focus of the new Ars Electronica Center. Hence, the exhibition views the field from various angles, providing visitors with insights and explanations, offering opportunities to train neural networks and showcasing artists who use Artificial Intelligence as a medium.



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Neuro-Bionics

The findings of the neurosciences have long been an inspiration for Artificial Intelligence. research and many models of machine learning are derived from human physiology. The results of this research offer hope for decisive breakthroughs in Artificial Intelligence. Yet, even as we make rapid progress in neurology and machine intelligence inspired by biology, the human brain as a whole will remain far more powerful than its machine counterparts for many years to come.

Global Shift

What will the new geography of the digital age look like? How do populations and their structures develop? What will our world look like in the future? Anthropocene is the name given to the age in which primarily human actions account for biological, geological and atmospheric changes. *Global Shift* offers a representative sample of the current conditions prevailing in our world.



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AI x Music

Music might be the most emotional of all art forms, but it is also deeply connected to mathematics, the physics of sound production and the craftsmanship of instrument makers. The exhibition examines the cultural and technological history of mechanical music players, bridging the gap between them and new developments in machine learning and Artificial Intelligence. Fundamental questions are thereby raised about the relationship between humans and machines.



© Ars Electronica / Birgit Cakir

Ars Electronica Labs

The idea of the laboratory far away from everyday life, where scientific results are produced in isolation from the world, is out of date. Instead, the laboratory should be understood in a broader sense as a hub of creativity, technology, society and science. The Ars Electronica Labs are multi-faceted locations, allowing us to discover and design the world, to reach our full potential through interdisciplinary cooperation.



© Ars Electronica / Birgit Cakir

Kids' Research Laboratory

With the Ars Electronica Kids' Research Laboratory, a versatile playing field has been created that gives children time and space to play and discover our world—the digital and the analog, the natural and the artificial. For children, the whole world is a kind of laboratory full of research and experimentation.

The Kids' Research Laboratory is supported by SIEMENS



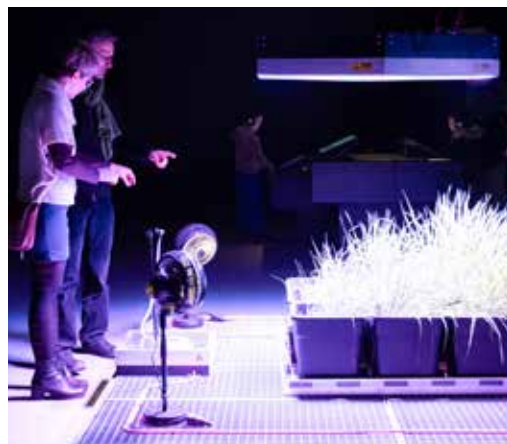
Impression of Family Days: More than a Planet at Ars Electronica Center © Tom Mesic



© Tom Mesic

Deep Space 8K

Three visually stunning dimensions, 33 million pixel resolution and a high-performance laser tracking system make Deep Space 8K at the Ars Electronica Center one of the most interesting digital experience spaces in the world. In the space between the two 16 by 9 meter projection surfaces on the wall and floor, visitors can experience a completely new dimension of Virtual Reality. The three-dimensional experience room offers a unique way of learning about a wide range of topics such as astronomy, anatomy, media arts and cultural heritage. The brilliance of the colors creates an extraordinary space for exciting stories and immersive experiences, which enables a completely new form of knowledge transfer.



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There is no Planet B

In centuries past, we primarily relied on energy sources such as coal, natural gas and petroleum to meet our increasing needs. These resources are limited, however; their usage is harmful to the climate. We now know that the way we produce and use energy contributes significantly to global warming. It also contributes to extreme weather events, periods of drought, floods and many other dire consequences. To ensure a green future offering a high quality of life, we must therefore act as a global community to reduce drastically our ecological impact on the planet. To halt global warming is no easy task: many technological, social and political aspects need to be considered. So everyone must be involved: individuals as well as public institutions, the business world, international policymakers. The exhibition *There Is No Planet B* illustrates the urgency of the situation, but more than that, it showcases potential solutions and a growing social commitment to dealing with the crisis.

TIME OUT .12

The exhibition series *TIME OUT—Time-based and Interactive Media Arts meets Ars Electronica* is a cooperation between Ars Electronica and the Time-based and Interactive Media Arts department at the University of Arts Linz.

This exhibition gives students a platform to present their work to the public at one of the most renowned exhibition venues for media arts. It also enables them to access an international audience, receive feedback and build networks. Visitors get acquainted with fresh perspectives as well as unconventional, young artistic

creativity. Together with the Ars Electronica team, the most interesting works of media arts are selected each year in line with the overall concept of the Ars Electronica Center. Projects are highly diverse, reflecting the individual approaches and interests of the artists, both in form and content.

What began in 2013 as a promising idea by Gerhard Funk, then head of the faculty, and Gerfried Stocker, artistic director of Ars Electronica, has since become a fixture in Linz's cultural program.

Tolga Karaaslan (AT)

Aberration

Based on a film idea, a standalone installation has been created in which the themes and mood of the film are captured. The movie tells the story of a graphic designer in a fictional authoritarian Europe. After her sister disappears during a protest, the protagonist evolves to become politically active and subsequently develops a universal alphabet, based on existing alphabets. Her dream is to solve the world's conflicts and unite nations.

Concept and realization: Tolga Karaaslan / Coding support: Gerhard Funk / Special thanks: Joachim Smetschka, Holunder Heiß, Farila Neshat, my family



© Ars Electronica / Birgit Cakir

Jakob Luckeneder (AT)

Alien Harmonies

An intriguing interactive audio sculpture, *Alien Harmonies* captivates with its enigmatic design. The warped cube is covered in brass plates. Visitors embark on a journey of discovery, as

multiple participants engage with this extraordinary alien device. The touch of a fingertip awakens an array of distinctive sounds, fostering collaborative exploration.

Isabel Schulz (AT)

creative differences

In this work, participants come up with prompts that are made into images by both the artist and an AI program trained in her style. Visitors can observe how the AI and the artist work separately on their prompts. The resulting pairs of images are also exhibited. The work offers space for reflection on the topic of AI-generated art and its impact on the art world as further technical and legal developments continue to take place.



© Ars Electronica / Birgit Cakir

Daniel Haas (AT)

dBlech

In *dBlech*, a metal plate with a reflective surface is made to vibrate by means of sound transducers controlled by an audio signal. The signal is thus audible through the plate, and its material properties have a direct effect on the sound characteristics. The surface is deformed, whereby the transverse waves become visible in the reflection. If a spotlight is pointed at the mirror plate, these so-called “standing waves” can be observed in the light reflection.

Funding: Förderungsverein der Kunstuniversität Linz
Support: Joachim Smetschka, Holunder Heiß, Caroline Bobek, Cécile Bucher, Matthias Narzt, Enrique Tomas, Wolfgang Dorninger



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Sofia Jüngling-Badia (AT)

The most beautiful place on earth

In *The most beautiful place on earth*, analog photographs depict unusual scenes from everyday life, accompanied by audio recordings of a fragmented narrative about being the daughter of a father with dementia. The audio is interrupted by utterances from people afflicted with dementia who are seeking to regain their footing in a conversation, thereby symbolizing the disorientation and arbitrary nature of life's challenges.



© Ars Electronica / Birgit Cakir



© Laurenz Vojka

Laurenz Vojka (AT)

Dream Wave Group

Dream Wave Group is an RPG Lite / Chillout video game in which players enter the dreams of random people to subconsciously help them cope with the problems and torments of dreary everyday life. Explore the vast fields and bustling cities that reside in the brains of complete strangers. Vibe out with a large cast of quirky characters and help them with their equally quirky struggles—or not! Go wakeboarding with wrinkly old dudes! Experience the insurmountable excitement of cleaning the living room of someone you just met! Use the flawed logics of the dream realm to summon objects out of thin air! Dream up crazy solutions for crazy tasks! Or just go to sleep... Everything is possible on the shore of dreams, just let yourself be carried away...



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Friederike Weber (DE) &
Juliana Vargas Rodriguez (CO)

es mucho tiempo

es mucho tiempo is a video-installation piece which translates different aspects of time through movements, kitchen towels, writings and numbers. The first idea was observed by accidentally throwing coffee on the floor in a dance studio: cleaning it with a paper towel revealed unexpected creative patterns. This simple situation triggered questions that concern our notion of time and aroused curiosity to observe different forms of waiting. The observation took place in the streets of Linz, Austria. How do we define beginnings and endings? How does our focus change the perspective of time? Are we slaves, owners, partners of time? Where is time contained in space?

Concept: Juliana Vargas Rodriguez & Friederike Weber
Dancer: Juliana Vargas Rodriguez
Camera: Friederike Weber
Editor: Friederike Weber
Sound Design: Max van der Meer

Emilia Vogt (DE)

Klang Kontakt

This performance renders physical touch as a powerful emotional connector made audible. *Klang Kontakt* focuses on generating sound by touching another human. In this way, the circuit is closed and different sound filters are triggered. The performance showcases a connection between two or more people in both a visual and audible way. Receiving physical signs of affection is a strong and wholesome sub-language in our communication. *Klang Kontakt* is this sub-language in the form of a sound performance.



© Ars Electronica / Birgit Cakir

Lisa Studener (AT)

Krisenherd

Krisenherd examines the great and small challenges of our Western world and responds to them with ease and a certain charm. The digital illustrations come to life through the *Artivive* app, showcasing short frame-by-frame animations. Each of the 12 images tells a brief story that elicits amusement or contemplation.



© Ars Electronica / Birgit Cakir

Benjamin Ramsmaier (AT)

Neinblicke

What on earth is inside this cube? The narrative of this interactive sculpture is that it is possessed by an “evil and chaotic” algorithm. Its only purpose is to protect the secret hidden inside. As soon as you approach it and try to find out what is contained within, the wooden cube closes. The goal is to figure out a way to glimpse what is inside, thereby revealing its secret. No one has succeeded thus far.



© Ars Electronica / Birgit Cakir

Ania Böhaker (AT)

nexus

Measuring approximately 124x124x124 centimeters, *nexus* is a cube surrounded by interconnected tubes. There are three tubes on each side of the cube that protrude from and into the cube. When you look 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.



© Ars Electronica / Birgit Cakir

Ania Böhaker (AT)

pars

Divided—different opinions—separated—parties—dispute—war—conflict—different perspectives... these are some of the keywords for the video installation *pars*. The artwork consists of a 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.



© Ars Electronica / Birgit Cakir

Pat(ricia) Göckert (AT)

lust

Female desire, longing and masturbation—topics rarely discussed openly. But why not? The art installation *lust* invites people to get comfortable on the canopy bed and immerse themselves in a world where no taboos exist around this subject. Listen to female-socialized individuals as they break the silence with great openness and courage while delving into their personal experiences. Patriarchal issues that influence female desire are revealed in the process. A lack of sexual education and awareness is also shown to lead to the suppression of women's sexual needs, with ensuing insecurities and dissatisfaction in their relationships with themselves and others. The openness of the interviewees encourages reflection, unlocking a dialog on liberating female desire from the constraints of patriarchal structures. This is accompanied and supported by mood images that abstractly represent the narratives.



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Simon Lukas Haunschmid (AT)

EMCP_One

The Electromechanical Cellphone is a design study that aims to re-contextualize modern technology and bring it closer to its users. A discarded cell phone in itself just an artifact of technological progress, becomes the core object of this installation. Its main functions are outsourced and presented as an analog / semi-digital application interface, as well as a hodgepodge of old equipment. The mobile phone, which introduced us to a new era of telecommunications in the 2000s, has grown as *EMCP* into a massive “device” that offers a variety of user interfaces.



© Ars Electronica / Birgit Cakir

Janik Valler (DE)

translucent reverie

translucent reverie explores the layering of different media. Seamlessly merging the physical and digital realms, it blurs the boundaries between traditional art forms and contemporary technology. The layering of the textured surface with illuminated graphics creates an 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.



© Ars Electronica / Birgit Cakir

Janik Valler (DE)

RAS Awakening

The audiovisual sculpture *RAS Awakening* creates a vision of a future comprising the remnants of human technology. Born and self-assembled from microchips and electronic waste, this artificial life form alternates between awakening and slumber. In a choreography of sound and light, the sculpture generates noises that seem to come from within the electronic waste materials, evoking data streams and digital communication but also producing a form of musical soundscape.



© Ars Electronica / Birgit Cakir

Best Off 2023

Best Off is a presentation format that shows selected works by students and graduates of the University of Arts Linz. In addition to the exhibition at the University of Arts Linz, the students presented their work again at the Ars Electronica Center in 2023.



Environment by Carlotta Borcharding
© Ars Electronica / Birgit Cakir

Anastasiya Saparava (BY)

Bulbly Font

The *Bulbly Font* project is dedicated to creating a unique font and distributing it for free. The first phase of the project was to create a font with soft, flexible shapes. The second phase involved generating a 3D version of the font using Nomand Sculp software. Posters were then designed using the font in different techniques and styles and in animated form with Augmented Reality.

Michael Padaritsch (AT)

Simple Robot Experiments

Inspired by the work of Dennis Hong, various experiments were created to mimic human walking. A construction of springs, carbon rods and nylon cords simulates the human knee, which is completed to a gait apparatus by means of mechatronic components and imitates a “walkcircle”.

Carlotta Borcharding (DE)

Environment

Environment is an interactive space in which users can visually change simple line shapes by moving around in it. The program responds to both the direction and speed of movement. The main goal of this work is to transform a rigid environment into a living space through movement.

Lea Schnell (AT)

Technology is...

The work *Technology is ...* aims to explore the socio-political impact of technological discourses in society and make their presence tangible through a touch-sensitive interface made of copper-coated circuit boards. When visitors touch the words of the phrase, sound recordings are activated that play a polyphonic cascade of voices, sound fragments and statements about technology.

Lukas Hoffmann (DE)

Bad Moon Rising, Militaryization of Space

The book combines curated articles, space treaties, interviews, satellite images and a historical NASA photo series to create a basic understanding of the militarization of space. As these topics are so closely related, the book's concept of a contrived numbering system allows readers to read the chapters in a linked way.

NEXTCOMIC Festival 2024

In cooperation with the Master School of Communication Design Linz, comics came to life again in the foyer of the Ars Electronica Center using Augmented Reality. In 2024, the festival was all about spatial and sound experiences.

nextcomic—Austria's unique comic festival—once again invited visitors on a journey of discovery through the world of drawn images. Fans of the graphic arts could discover comics, graphic novels, children's and art comics as well as related genres such as illustration, cartoons and animated films. From March 15th to 23rd, sequential and graphic art was presented in the Ursulinenhof

as well as at the partner institutions in Linz and Upper Austria. The *nextcomic* exhibition in the foyer of the Ars Electronica Center could be visited free of charge.

fluid was this year's theme of the Master School of Communication Design. The word is on everyone's lips. A buzzword? A current term that reflects a mood in society? If you ask yourself what fluid means in relation to spaces and sounds, terms such as fluid hearing and sensing, fluid emotions and fluid communication are topics that arise. *FLUID SONIC SPACES*, in other words, in which you can let yourself drift.

The students of the MKD—Master School for Communication Design embarked on a search for fluid forms and themes of creativity and are thus continuing the *MKD MEETS NEXT-COMIC—Augmented Comics 2024* series under the title *FLUID SONIC SPACES*. Fluid comics designed by the students were augmented with the *ARTIVIVE* app and presented at the *nextcomic* Festival 2024.

COMIC ARTISTS of the MKD—Master School for Communication Design: Marie Atzmüller, Lena Harrer, Sebastian Gantioler, Lukas Kalkhofer, Marie Lengauer, Lukas Felix Hanke, Nicole Seyr, Olivia Brandstetter, Emilia May, Konstantin Gartner, Julia Brunnbauer, Lusine Mgoyan, Lisa Perendi, Anna Sophia Buchegger, Serafina Ludovica Schäfer, Sophie Gründl, Sophie Gattermair, Laura Sophie Neumüller, Mirjam Tabea Reisner, Felix Bernhard, Paula Hausberger, Hannah Janiczek, Magdalena Nigl, Liane Schöffmann

PROJECT TEAM TEACHERS MKD/NEXTCOMIC 2024
Project lead: Viktoria Schlögl & Helmut Höllerl
Team: Georg Wolf, Klaus Taschler, Christina Preitschop



Brain-Comic © Julia Brunnbauer

Space for All—ESERO Austria

"Space is for everyone. It is not just reserved for a few people in science or maths, or for a select group of astronauts."

—Christa McAuliffe (teacher & astronaut)

The Education Office of the European Space Agency (ESA) in Austria has been based at the Ars Electronica Center in Linz since 2016. As ESERO Austria, it is a fixed star in Austrian STEM education and part of the museum's focus on space. Over the years, ESERO Austria has published more than 60 educational tools and resources in German, trained 1,700 teachers across Austria and inspired more than 300,000 pupils with the fascination of space as it relates to mathematics, computer science, natural sciences and technology.

In summer 2024, a new exhibition area with inspiring works at the intersection of art and space will open its doors on the mezzanine floor above the foyer of the Ars Electronica Center. The exhibition showcases award-winning submissions

from various ESERO Austria projects. Whether as a climate detective, designer of a moon station or programmer for the International Space Station ISS, young people of all ages enthusiastically take part in projects, programs and competitions.

According to the slogan "Space for All", ESERO Austria introduces children and young people to various space-related career paths to imagine their own future in (or perhaps even around) space. Interactive stations motivate 3 to 19-year-olds to participate.

The exhibition also acts as a service center for mentors: There are take-away learning materials, tutorials and videos tailored to the target group, which can be used to put together your own personal space-inspired STEM education program.



Mission X 2023 © Ars Electronica / Birgit Cakir

INSTALLATION HIGHLIGHTS 2023/2024



© Ars Electronica / Birgit Cakir

Organ Of Radical Care: Una Matriz Colaborativa

Charlotte Jarvis (GB),
Patricia Saragüeta (AR)

Organ of Radical Care: Una Matriz Colaborativa is an ongoing project at the intersection of art and science. It applies the latest scientific knowledge to create a collaborative uterus from cells derived from the menstrual blood of different people (women, trans* and non-binary people) in which a fertilised egg can grow.

In the artistic realization of the project, a glass chalice hosts a cell colony consisting of endometriosis cells derived from anonymous donors. In a daily ritual of care, the cells in the exhibition are kept alive by cleaning the glass chalice and its surroundings in the evening, supplying them with nutrients and storing them overnight in the sterile environment of an incubator before returning them to the installation the next day.

This project has been developed in the context of the *EMAP* project. *EMAP* is co-funded by the Creative Europe Programme of the European Union.



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FASHION FRONTIER PROGRAM

Fashion Frontier Program (JP),
Yuima Nakazato (JP)

The fashion industry must fundamentally change to meet future standards of sustainability and ethics. The goal is to overcome the negative impact on the environment and society.

The *FASHION FRONTIER PROGRAM*, initiated by Yuima Nakazato, aims to drive this change. Offering an innovative training environment for aspiring fashion designers, it encourages them to create garments that combine social responsibility with creativity. The *FASHION FRONTIER PROGRAM* provides materials and support from technical advisors and experts in various fields.



© Ars Electronica / Birgit Cakir

DFT Textile

Yuima Nakazato (JP)

Vast quantities of discarded clothing are piling up in Kenya—a shameful reminder of the social injustices of our time.

Fashion designer Yuima Nakazato traveled to Kenya to see this phenomenon for himself. When he saw the masses of cheap and generic clothing remnants, he realized that there was no longer a need to produce completely new clothes. He decided to transport 150 kilos of old clothes from Kenya to Japan and recycle these worthless textiles using a new dry fiber technology from Seiko Epson to give them a new life.

The garment on display is an excellent example of this innovative production process. By promoting gender-neutral designs, the project is also strongly committed to social inclusion.

Yuima Nakazato's Spring/Summer 2023 collection also makes him the first Japanese designer to show at Paris Haute Couture Week.



© Ars Electronica / Birgit Cakir

Biosmocking

Yuima Nakazato (JP)

Biosmocking is a textile modeling technique that can be used to create three-dimensional textures. This technique uses digital fabrication to control the super-contraction properties of Brewed Protein textiles.

Brewed Protein textiles are made from plant-based ingredients through a fermentation process and can be molded in diverse ways using *Biosmocking* technology. By testing various prototypes and manufacturing techniques, the production process has been improved to such an extent that sustainable garments with a unique sense of depth, volume and style can now be produced.

EVENTS 2023/2024

Topic Weekend: Being Anton

On the weekend of February 3rd to 4th, everything revolved around the link between music and technology at the Ars Electronica Center. The focus was of course on the new exhibition installation *Being Anton* and the Deep Space presentation *Playing Anton*, which visitors could experience several times.

International Women's Day 2024

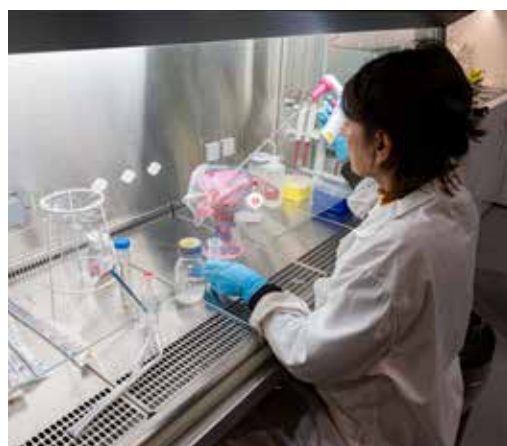
In the fight for recognition and equal rights, International Women's Day originated in the period before the First World War. Since then, it has been celebrated annually on March 8th.

However, 100 years later, women are still under-represented at the interface between art, technology and society. History has shown that the commitment and public visibility of women can drive progress towards equality and greater justice. The gender gap has narrowed in recent years. Nevertheless, there is still much to be done!

To mark International Women's Day 2024, the Ars Electronica Center once again took part in this public discourse. On March 3rd, 2024, visitors attended an evening of rousing performances and exciting project presentations by globally active female artists in Deep Space 8K. Admission to the evening program was free. The following weekend, visitors could view the new exhibition installations by international female artists in the museum.



© Ars Electronica / Magdalena Sick-Leitner



© Ars Electronica / Magdalena Sick-Leitner

Deep Space Concert: DRD80—Piano Music meets Digital Images

The charity concert by Maki Namekawa and Dennis Russell Davies on April 21st, 2024, which was primarily held to celebrate a milestone birthday, was dedicated to the *Hodgkin's Long Term Survivorship* project. This lymph gland cancer has an extremely high cure rate, and studies in recent decades have therefore been able to focus significantly on reducing treatment-related side effects and long-term consequences.

Nevertheless, there are patients who have beaten cancer and completed their treatment without measurable organ damage but are still unable to regain their former vitality and zest for life. One of the aims of the *Hodgkin's Long Term Survivor* project is to decipher the often-varying causes in these patients to provide them with individual support programs.

Piano: Dennis Russell Davies, Maki Namekawa

Real-time visualization: Cori O'Lan

With music by: Bedřich Smetana, John Cage, Laurie Anderson, Philip Glass, Arvo Pärt and W.A. Mozart

In cooperation with: Ordensklinikum Linz, Ordensklinikum Elisabethinen Linz, Cubus



© Ars Electronica / Magdalena Sick-Leitner

Family Days: More-than-a-Planet

On Saturday, April 20th, and Sunday, April 21st, 2024, visitors and their families were invited to celebrate our home planet at the Ars Electronica Center. We showed the world that we are proud inhabitants of our planet and that we can—and want to—treat it and all its unique characteristics with respect and care! My home, my “hood”, my planet: Earth. The blue planet is the origin and home of all living creatures known to us, large and small. It is well known that life requires light, water, air and food—but to live well, these basics must be clean and unpolluted. The Family Days took place as part of *More-than-a-Planet—the #NewEuropeanBauhaus 2024 Festival*. The New European Bauhaus is an interdisciplinary initiative that connects the European Green Deal with our living spaces. In April, this initiative organized a dispersed yet connected festival—with cities across Europe contributing to a common movement! Together with the City of Linz, the University of Arts Linz and Tabakfabrik, Ars Electronica was part of the *More-than-a-Planet Festival*.

In cooperation with: City of Linz, University of Arts Linz, Tabakfabrik

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



© Tom Mestic



© Ars Electronica / Birgit Cakir

Long Night of Research 2024

The Long Night of Research took place on May 24th, 2024, from 5 to 11 pm at over 200 exhibition venues throughout Austria. In all nine federal states, exciting, surprising and amazing things that otherwise often remain hidden could be discovered free of charge.

Hands-On Stations, Workshops, Lectures, Guided Tours and Presentations

This year, the Ars Electronica Center was once again an exhibition venue, opening its doors late in the evening and offering visitors a glimpse behind the scenes. The latest research findings from a wide range of subject areas were presented. A total of 24 stations, 12 hands-on stations, two workshops, four guided tours, three expert lectures and three experiments/demonstrations awaited the visitors. In the Ars Electronica Center, the in-house research department, the Ars Electronica Futurelab, and a number of external project partners invited visitors to take a look behind the scenes of their research.



© Ars Electronica / Magdalena Sick-Leitner

Deep Space Experience— Premiere: Connected— How the World is more than the Sum of its Parts

Connected—How the World is more than the Sum of its Parts reveals the diverse nature of Earth's systems and unravels the underlying structural principles of the system, from natural phenomena to human creations. The premiere took place on Wednesday, May 29th, 2024, from 7 to 8 pm at the Deep Space 8K.

Visitors were invited to explore the diverse biomes of the earth from the perspective of three different avatars: a fox exploring the land, a turtle diving through open water and a bird discovering the seemingly endless sky. Through the eyes of the avatars, visitors experienced microscopic and macroscopic systems—from swarms of animals and networks of flora to extensive infrastructures and the infinite expanses of the World Wide Web. The human organism itself could also be experienced as a complex network of biomolecular interactions.

Jörg Menche, Sebastian Pirch, Norbert Unfug, Felix Müller, Christiane V. R. Hütter from research group Menchelab



© Ars Electronica / Birgit Cakir

Topic Weekend: Above and Below—Seeing and Understanding the World

Our view of the world changes with the technologies we use. The weekend of June 15th to 16th, 2024, we focused on the technological developments that enable us to view the world from above, using satellites, or analyze it from below, by means of social digital networks.

How we humans see, understand, plan and negotiate the world is linked to our view of the world. This in turn changes with how we choose to observe and measure the world. Alongside spiritual and religious beliefs, the scientific status quo also determines our view of the world.

EDUCATION & CONTENT DEVELOPMENT

Basic Digital Education

Digitalisation has arrived at the heart of our society. What were once technologies of the future are now part of our everyday reality. But digital culture needs to be mastered—as does technology. Since the school year of 2022/23, the lower secondary level curricula have included a new subject: Basic Digital Education. The Ars Electronica Center responded with an adapted guided tour and workshop program for school classes.

For the topics of Artificial Intelligence, Neuro-bionics and Climate and Environment, the team put together three topic packages based on the themes addressed in the Ars Electronica Center exhibitions. They are tailored to the curriculum

and can be booked either individually or as a complete package. Teachers integrate the program into their annual planning to train their pupils' digital skills. Over the course of the school year, the program has been expanded—with partners such as iDEAS:lab and AK Oberösterreich. With workshops on the topics of "Digital Resilience", "AI and Me", "Social Media Analysis" and "Fake News and Manipulation" in collaboration with the iDEAS:lab of Paris Lodron University, pupils from the 7th grade onwards acquire new strategies and skills to move safely, confidently and resiliently in the digital world, learning how to use AI technologies responsibly and discovering the hidden power of social media.



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Tour: Playing, Being... Experiencing Anton

To mark the 200th birthday of the Upper Austrian composer Anton Bruckner, the Ars Electronica Futurelab reflected on the question: What could have inspired him to create his incomparable sounds?

With the *Playing, Being... Experiencing Anton Tour*, visitors can now find out exactly that and even play first violin with a virtual version of the Bruckner Orchestra Linz. On Thursdays, Saturdays, Sundays, public holidays and during the Upper Austrian school holidays, they can immerse themselves in the world of Bruckner on a guided walk through these immersive and interactive sound experiences.

A cooperation between the Upper Austrian KulturExpo Anton Bruckner 2024, City of Linz and Ars Electronica.

Tour: AnTon&Töne

Anton Bruckner, have you heard of him...? This year he will be 200 years old, quite an age! On this tour, kids can find out what the exceptional Upper Austrian composer Anton Bruckner and the Ars Electronica Center have in common. We will listen to Bruckner's long tones, low tones, high tones and weird tones. What might have inspired him? Listen carefully!

A cooperation between the Upper Austrian KulturExpo Anton Bruckner 2024, City of Linz and Ars Electronica.

ESERO



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Mission X—Train Like an Astronaut: Carmen Possnig Inspires 460 Pupils at the Ars Electronica Center

Mission X—Train Like an Astronaut is an international competition for pupils and young people that was held for the 14th time last school year. The American and European space organizations NASA and ESA have developed a series of exercises for *Mission X* that teach children about space, exercise, sport and the importance of healthy eating in everyday life. The project's active phase took place from January to May 2024 at the participating schools and institutions. The exercises—missions—show the children how astronauts train and what their fitness program is like. In recent years, 7,500 Austrian schoolchildren and 350 schools have successfully taken part in the competition. This year, the Ars Electronica Center once again became a meeting place for young astronauts. On Monday, June 24th, 2024, the *Mission X* participants aged between ten to 14 were honored for their achievements. Held jointly with guest speaker Franz Viehböck, who began his career in 1991

as part of the Soviet-Austrian space project *AUSTROMIR-91*, space exploration was the focus of the event.

For the first time this year, *Mission X* was also offered to secondary school students—and was very popular. 53 teams registered and 17 teams made it to the final. The final event of the 2023/24 school year took place on June 3rd, 2024, at the Ars Electronica Center in Linz. A varied program on space technology and space travel awaited the participants.

They traveled through the solar system with Uniview in Deep Space 8K and talked with experts from PEAK Technology and AAC, both Austrian providers of technical solutions in aerospace, in a workshop setting. The highlight was a presentation by Carmen Possnig, ESA reserve astronaut, who delighted the audience in the Sky Loft with insights into the Concordia research station in Antarctica and reports on scientific body experiments in zero gravity.

CanSat

As every year, the CanSat Austria competition in 2024 once again involved hundreds of hours of tinkering, soldering, screwing, calculating and programming. On April 4th, 2024, the CanSat mini satellites were successfully launched again at Schärding / Suben Airport. And as always, this was made possible by the TU Vienna Space Team! An incredible number of 13 teams were registered, ten of which made it to the final: Parallax Space Team from GRG 19 in Vienna, Mission CanSat from HTL Rankweil in Vorarlberg, Voyager 12 from GRG 12 in Vienna, Spaceteam Zirkusgasse from BG BRG 2 in Vienna, EFMK Space Engineering from BRG Steyr in Upper Austria, Sputnik from Schottengymnasium in Vienna, Gmunden Space Agency from BG/BRG Gmunden in Upper Austria, Intergalactic Genius from Lise-Meitner Realgymnasium in Vienna and Daidalos and Aiolos from BG/BRG/BORG Schärding in Upper Austria.

After initial drop tests at the Ars Electronica Center, the teams gathered at the airfield in Suben near Schärding on Thursday. There, their CanSats were raised to an altitude of 500 meters with the help of a 2.10-meter-long rocket from the TU Vienna Space Team. Around 200 pupils and other interested parties watched the event with excitement and took part in space workshops.

During the descent, the CanSats demonstrated their skills: they had to measure temperature and air pressure and send the data to the ground

station. In addition, they had to calculate the ejection altitude and drop speed, as well as create a temperature profile. Each team also had an individual “secondary mission”, such as simulating a landing on another planet. The winning team, the Gmunden Space Agency, focused on energy generation using solar cells and topped the leaderboard by developing a rotating mechanism for the solar panel. With this approach, the team was able to convince the jury, which consisted of representatives from various companies and institutions (FFG, bmk, Peak Technology, TU Vienna Space Team, Technisches Museum Wien and Ars Electronica Center). They won a trip to the ESA technical centre (ESTEC) in the Netherlands for the “Space Engineer for a Day” event. In addition to the main prize, further prizes were also awarded in three categories for the first time this year. The prize for *Best Technical Achievement* went to the CanSat Mission team from HTL Rankweil, the prize for *Best Public Relations* went to the Daidalos and Aiolos teams from BG/BRG/BORG Schärding and the prize for *Best Scientific Mission* went to the EFMK Space Engineering team from BRG Steyr.



© Philipp Greindl

Climate Detectives

Whether it is the development of the weather, the continuous measurement of expanding cities, the monitoring of the sea surface or the detection of forest fires—satellites help us to recognize and analyze complex global relationships.

Thanks to satellite technology, we can obtain the precise data we need to protect our environment. More and more satellites are therefore orbiting the earth—many of which exclusively observe our home planet. In the *Climate Detectives* project, pupils identify a local environmental or climate problem and analyze it using satellite images and/or on-site measurements they have taken themselves. The aim is to raise awareness in their own community and develop a proposal for monitoring or reducing the problem. The pupils are accompanied by Austrian and ESA scientists.

Three teams took part in the ESA/ESERO *Climate Detectives 2023/24* competition: two from Vienna (including FAW13) and one from Klagenfurt (Europagymnasium). A total of 51 pupils were involved. All teams presented their projects at the *Climate Detectives Summit* at the Ars Electronica Center in May. The *Green Day* team from GRG19 in Vienna won the competition. Five students had the opportunity to visit the ESA Earth Observation Centre (ESRIN) in Frascati near Rome, Italy, with a teacher and experience the work of the researchers on site. In the *Climate Detectives Kids* category, two classes from Styria (VS St. Veit am Vogau) earned all three badges (bronze, silver, gold) by carrying out activities related to the topic.



© Ars Electronica / Andreas Bauer

Step into Space—Travelling Exhibition

ESERO Austria brought the fascinating world of space exploration directly into schools with the travelling exhibition *Step into Space*. Aimed at pupils at secondary levels I and II, *Step into Space* is easily set up and consists of three modules. Under the title *SpaceEU*, part of this exhibition was on display in ten different countries from December 2019 to October 2020 and inspired numerous visitors. *Step into Space* is accompanied by training for teachers. Pupils explore how space research influences our daily lives, learn about innovations that have emerged from space science and career opportunities offered by the space sector and how technologies originally developed for space travel are used in various areas of our everyday lives. The exhibition shows how satellites are used to observe the Earth, how to interpret satellite images and how publicly available information can be used to help combat the climate crisis. Pupils learn about

the importance of Earth observation and explore the possibilities opened up by the use of satellite data. But *Step into Space* also presents Austria's contributions to space research and spaceflight, showing how local companies and research institutions are active in the field of space research and what training opportunities are available. In addition, special offers for schools are presented to awaken and promote pupils' interest in space activities.

The program also offers materials and activities that can be integrated into regular school lessons. These include missions for students that provide further tasks and experiments, an interactive Kahoot! quiz on the entire exhibition, a step-into-space tetrahedron that illustrates the complexity of space and a Space Agent Pass that allows students to document their progress. With a tool called *Where on Earth am I* pupils can locate and observe the Earth from space and learn how to use Earth observation data.



© Ars Electronica / Thomas Schwarz

FUTURE THINKING SCHOOL

The digital transformation has now encompassed all areas of life, with new technologies and business models continuously being produced. This is constantly presenting managers and teams with new challenges. To decisively shape digital transformation and set the course for the future, we need people who are aware of these changes, enabling them to recognize correlations and develop new strategies.

Ars Electronica has been striving to shape the future and the impact of new technologies on our

lives since 1979. At the Future Thinking School, apprentices, employees and managers can acquire future-oriented skills and explore what digitalization means for their area of work, their organization or their team. The training program helps organizations prepare their teams, students or apprentices for the future. With its workshops, the Future Thinking School teaches the basics, offering insights into what is to come and into new ways of thinking. It also develops individual training programs jointly with organizations.



Future Thinking School: Artificial Intelligence and Human Resources © Ars Electronica / Birgit Cakir



Apprenticeship program: *Future in sight, future in hand*
© Ars Electronica / Birgit Cakir



Future Thinking School: Artificial Intelligence and Human Resources
© Ars Electronica / Birgit Cakir

Making Technologies Tangible —Trainings for Organizations and Teams

Artificial Intelligence and blockchain are still uncharted territory for many people. The Future Thinking School workshops enable teams to look inside the black box of the most relevant technologies of the present and future.

The *Insights into the future* training module and the *Future in sight, future in hand* apprentice program can both be flexibly adapted to different needs in terms of time and content and can be held on site at the Ars Electronica Center and/or online. The aim of the workshops is to explain those technologies that are already ubiquitous in our everyday and professional lives. Furthermore, the goal is to create fresh awareness about the need for creative collaboration and innovative thinking and develop shared visions. The Ars Electronica ecosystem—particularly the interactive exhibitions at the Ars Electronica Center, as well as the 3D multimedia room Deep Space 8K and a large network of international experts—support creative educational methods, both analog and digital.

Future Impulses: Artificial Intelligence

Whether in personalized marketing activities, traffic analysis, medical diagnosis or self-driving vehicles—Artificial Intelligence is already part of our everyday lives. Its impact can be felt on various aspects of our economy and even in our social interactions.

In addition, Artificial Intelligence is already being used to create works of art. But what exactly does that involve? An interactive workshop at the Future Thinking School provides an understanding of the fundamentals of Artificial Intelligence and playful insights into current creative applications.

The European Digital Innovation Hub (EDIH) AI5production, which consists of 16 partner institutions in Vienna and Upper Austria, offers manufacturing companies comprehensive support with digitalization. The hub is funded by the European Commission and the Federal Ministry of Labor and Economic Affairs.



Future Thinking School: Artificial Intelligence and Human Resources
© Ars Electronica / Birgit Cakir

Insights into the Future: Artificial Intelligence

This interactive workshop is based on the current exhibition *Understanding Artificial Intelligence* at the Ars Electronica Center, providing participants with a basic understanding of Artificial Intelligence and an awareness of the importance of this topic. In addition to understanding basic terms and practical application examples, they also gain insights into the most important technical aspects: How is an AI system structured and how are AI applications trained? The topic is also examined from a critical perspective: How can data sets distort the perception of reality and what impact could this have? Participants learn to classify the term "AI" and to specifically deal with this essential form of technology at an organizational level.



Future Thinking School: Artificial Intelligence and Human Resources
© Ars Electronica / Birgit Cakir

Ideas Workshop: Digital Mindset

In a digital, constantly changing world, it is not only a technically reliable infrastructure that is needed, but also a "digital mindset"—an open approach towards new technologies and tools. Promoting this mindset among employees and managers is invaluable for companies and organizations. In this interactive Future Thinking School workshop, participants develop a common language and understanding, as well as concrete approaches to help sharpen their own digital mindset.

Apprenticeship Program: Future in Sight, Future in Hand

The Future Thinking School has developed a program for apprentices that allows young people to immerse themselves in the exciting topics of Artificial Intelligence, innovative spirit and media skills. This varied, interactive workshop includes exhibitions at the Ars Electronica Center and a performance in Deep Space 8K.

The program aims to examine more closely those future technologies that are currently or will soon be omnipresent in the everyday and professional lives of apprentices. In addition to understanding the basic concepts of AI and practical application examples, the participants gain an insight into the most important technical aspects and potential applications.

Together, they develop ideas for the future and an awareness of the need for creative and innovative communication and collaboration. Alongside learning, there will be plenty of time to get to know each other and grow together, too—whether over lunch or by working on a joint task.



Future Thinking School: Beyond Coding: New Technologies in Context
© Ars Electronica / Birgit Cakir

AMS: Future Studio for Women

The Future Thinking School has developed a workshop program in association with the AMS Upper Austria and VFQ Gesellschaft für Frauen und Qualifikation Linz. Its goal is to support women re-entering the world of work or switching to a new professional field. The *Future Studio* gives participants insights into the world of digitalization, especially Artificial Intelligence: what impact is AI likely to have on the world of work and society? In addition to imparting knowledge, the focus of the workshop is on increasing interest in new technologies. The aim is to boost participants' self-confidence by making digitalization topics that seem complex at first glance more accessible, enabling them to use future technologies themselves. In collaboration with the AMS Upper Austria, the *Future Studio* program has been held a total of 142 times for women since March 2022, and has encouraged 1,604 participants to use new technologies as tools and actively shape their future. The last workshop in this series took place on July 22nd, 2024.



Workshop Artificial Intelligence & Digital Humanism
© Ars Electronica / Robert Bauernhansl

ARS ELECTRONICA FUTURELAB

CO-CREATION OF HOPE

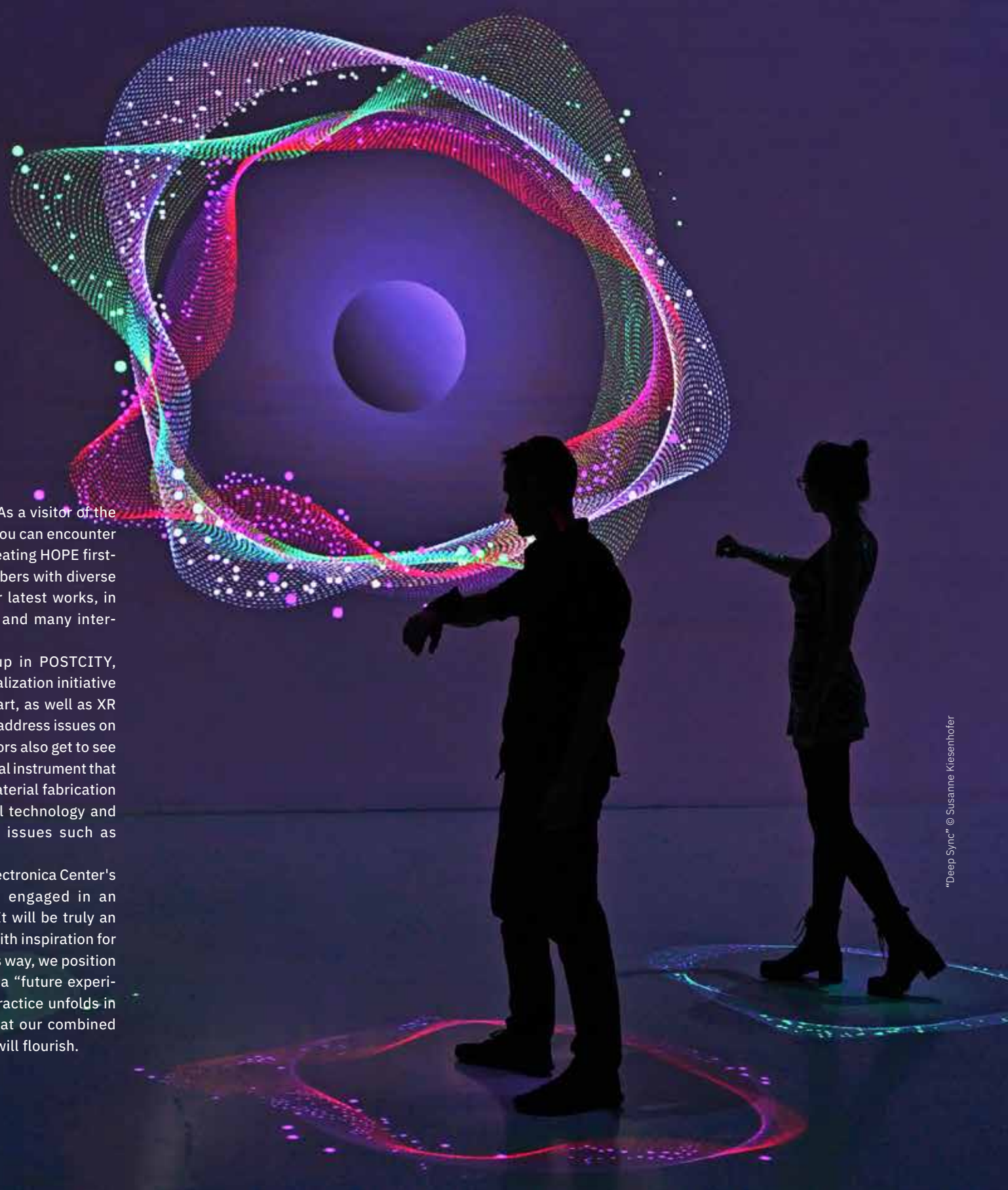
Text: Hideaki Ogawa, Horst Hörtner, Roland Haring

HOPE does not come for free. Sometimes it can be hard work to even achieve the status that allows for HOPE. And having HOPE is more than pure, unreflective optimism, it is based on active preparation for something we can't fully understand or control—hoping that the preparation is sufficient to master the unknown. Art is one of humanity's most powerful instruments to meet these invisible "questions of the future," allowing us to perceive and experience the new worlds. Art gives us space to enter a dialog about the future in its plural forms, inspiring HOPE in the process. We see the Ars Electronica Futurelab as an interface and catalyst for different disciplines and ways of thinking to "co-create" that HOPE. Our philosophy is to promote an understanding of ourselves that transcends traditional boundaries—through artistic practice and technological innovation. We believe in the power of creativity to initiate social change and shape visions of the future. The Futurelab is a place where experimental ideas and projects are realized that demonstrate how art and creativity can inspire and guide the development of new technologies. Our mission is to create works that reveal the HOPE for the future inspired by the convergence

of art, society and technology. As a visitor of the Ars Electronica Festival 2024, you can encounter this Futurelab process of co-creating HOPE first-hand: You meet Futurelab members with diverse expertise and experience their latest works, in co-creation with other artists and many international partners.

At the Open Futurelab pop-up in POSTCITY, visitors experience a local revitalization initiative that crosses data science and art, as well as XR technology and the use of AI to address issues on public health of the future. Visitors also get to see a performance on a future musical instrument that mixes the latest origami and material fabrication technologies, as well as digital technology and civic engagement on serious issues such as democracy and climate crisis.

During Futurelab Night at Ars Electronica Center's Deep Space 8K, visitors are engaged in an experimental live experience. It will be truly an immersive future report filled with inspiration for the future of co-creation. In this way, we position the Ars Electronica Festival as a "future experimental zone" where creative practice unfolds in the City of Linz. Let's HOPE that our combined visions, creations and designs will flourish.



Art Science Research Domains

Framing questions for the futures

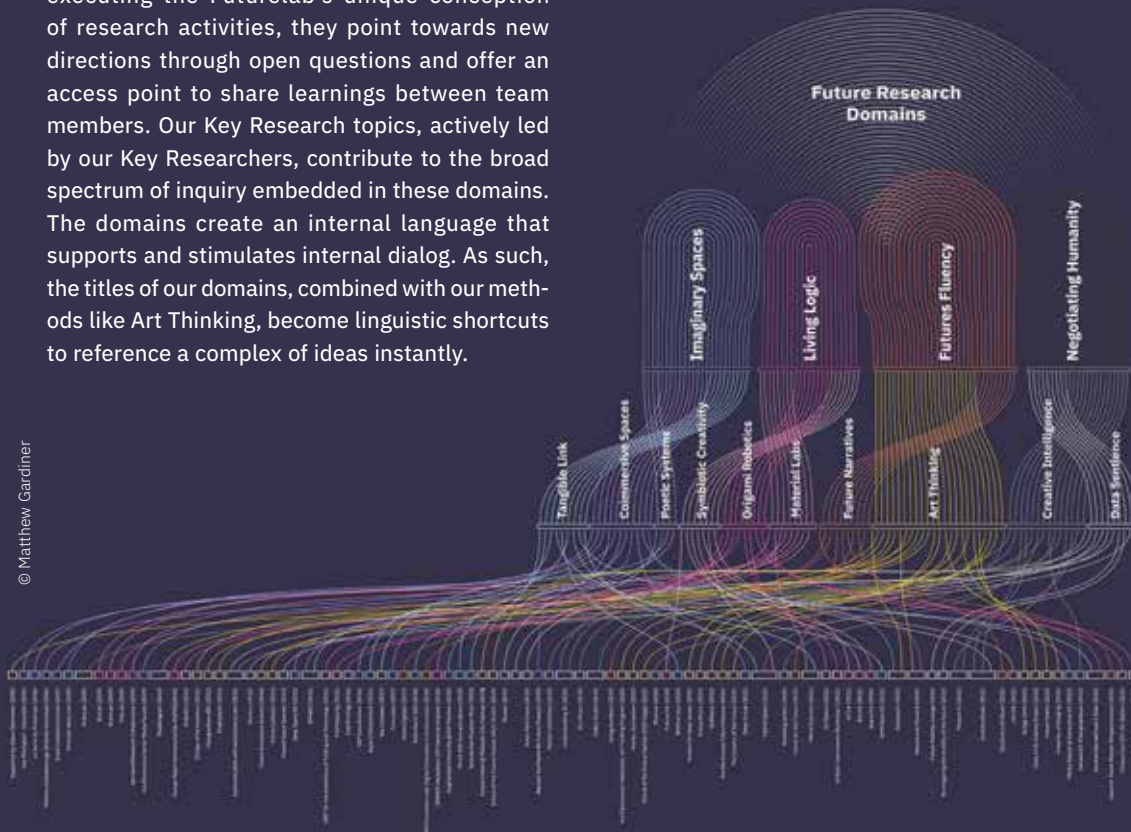
Text: Matthew Gardiner

The Ars Electronica Futurelab is launching its first Art Science Research Domains: Futures Fluency, Negotiating Humanity, Imaginary Spaces and Living Logic. They are implicitly inter-, multi- and transdisciplinary domains of research that dovetail with the Ars Electronica philosophy of art, technology and society. The strategic intention of these domains is to provoke and support the Futurelab and our collaborators on many levels within our collective research activities.

In the background, our research domains allow us to recontextualize and reflect on past works, providing a new lens to reconsider the multitude of paths we have followed in the past and bring them into contemporary coherence. They signal our intent to follow them into the future, allowing our team to infuse and frame our new works with curated, pre-positioned references with relevance to art, society and technology.

In the middle ground, in the active moment of executing the Futurelab's unique conception of research activities, they point towards new directions through open questions and offer an access point to share learnings between team members. Our Key Research topics, actively led by our Key Researchers, contribute to the broad spectrum of inquiry embedded in these domains. The domains create an internal language that supports and stimulates internal dialog. As such, the titles of our domains, combined with our methods like Art Thinking, become linguistic shortcuts to reference a complex of ideas instantly.

In the foreground, the domains guide our team in forming and creating new collaborations, casting a wide and diverse net of interwoven topics. Our works often play within multiple domains. Quite simply, our domains need to be complex enough to position and create our works, to challenge and provoke dialog intentionally, and at the same time, be conceptually loose enough to be co-opted to fit emerging creative questions, leaving room for play and open interpretation.



© Matthew Gardiner

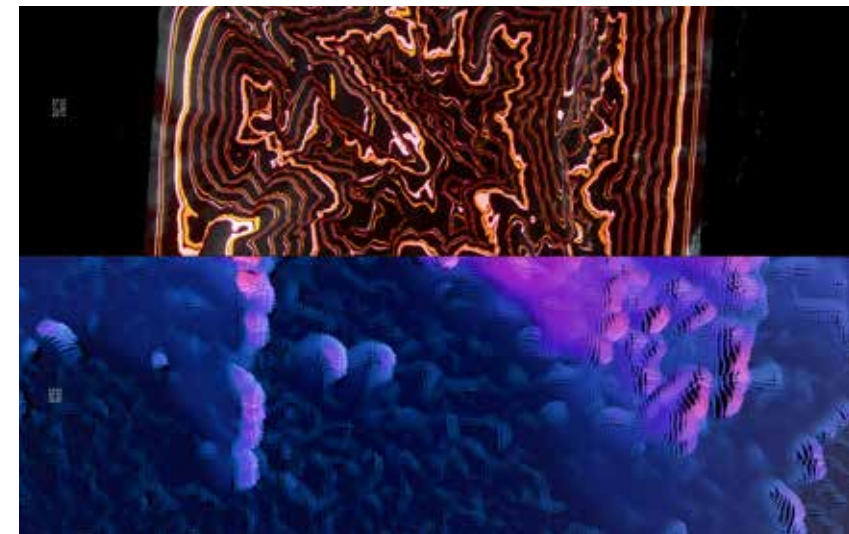
Data Sentience

Text: Peter Holzkorn

In addition to the major Art Science Research topics of the Ars Electronica Futurelab, some lab members lead special Key Research areas. This year, an additional field has taken form: *Data Sentience*.

Our systems of decision-making are increasingly built on vast amounts of never-ending data streams—from air pollution to weather patterns and from music preferences to stock values. As we delegate more and more interpretive agency for all this information to complex AI-enhanced systems, how do we stay connected to its meaning and keep our ability to converse about it as a human society? How do we talk about data in terms of “sensing” and “feeling” in addition to knowing and understanding? What if we need not only data science but also “data sentience” to make sense of our measurement of the world? Where data science and data visualization aim to understand and communicate the data as clearly as possible or even reduce it to an answer, data sentience uses data as a raw material for artistic explorations that change and shift in response

to the underlying information streams. Data as substance and content engages us aesthetically and emotionally and allows us to find our own interests, observations and fascinations, within the expressive frame the artist has constructed. This approach means taking a step both back and forward—from machine learning to machine dreaming, from information visualization to information formations, and from data analysis to data poetry. Through these explorations, we raise further questions: Who collects and owns data about us and our environment, how do we access the data we have the right to see, and who decides about these rights? How can art be used to connect complex scientific matter intuitively to a larger audience? What happens if we use the tools for massive data processing to create visual languages and inspire our imagination?



© Peter Holzkorn

Futurelab Ideas Expedition

The Ars Electronica Futurelab Ideas Expedition is a competition for internal talents to collaborate and freely develop ideas and projects. This year's winners are *Schmilz, schmilz, Baby! / Melt This!* and *Persistent Time Sink Resonance*.

Schmilz, schmilz, Baby! / Melt This!

Aggro Climate: Alexandre Bezri, Denise Hirtenfelder, Nicolas Naveau, Maria Pfeifer
Text: Denise Hirtenfelder

The ice age is over—at least in terms of Alpine glaciers that are estimated to lose around 91% of surface and 94% of mass by 2100. According to the Alpine Association, the tipping point of glacier melting has been reached and in about 45 years Austria could be ice-free.

While scientists are brainstorming geoengineering inventions to prevent massive glaciers like those in Antarctica from collapsing and causing sea levels to rise rapidly, smaller areas like Austria will face the challenge of adapting to new ecosystems after the glacier melt. The climate awareness activist group Aggro Climate is therefore addressing the transformative potential of post-glacial landscapes and how these public lands can be utilized democratically by future generations.

Schmilz, schmilz, Baby! / Melt This! is a call to

citizens via an over-the-top campaign by Aggro Climate to participate in the process of shaping post-glacial future narratives for Austria's biggest glacier Pasterze.

A campaign video conveys arguments to citizens about the glacier melt, and simultaneously bitterly-sweetly invites them to participate in a competition, using generative AI applications to submit their coolest ideas for after the melt of Pasterze. The winners with the best ideas will be announced during the Futurelab Night.

The hyperbolic message of Aggro Climate in *Melt This!* is to radically accept our self-induced fate and instead of provoking panic in society in times of climate change, we need to give people from all corners of society a voice for a transformational dialog about future environments.



Persistent Time Sink Resonance

Johannes Poell (AT), Raphael Schaumburg-Lippe (AT)
Text: Johannes Poell

Reality is a persistent time sink. Something which continues to exist or occurs over a prolonged period, consuming vast amounts of time in the process. Resonance, in physics, is the relatively large selective response of an object or a system that vibrates in step or phase, with an externally applied oscillatory force. We are like that force, poking at reality trying to recollect and understand as we capture it as digital memories.

Persistent Time Sink Resonance is an artistic exploration of reality volumes utilizing 3D Gaussian Splatting. This recent rasterization technique supports the spatial reconstruction of real-life objects or even our surroundings in the computer. Reality capture is the active process of scanning, for instance with a camera and then

reconstructing that object in digital space. Here a reality volume is created, as Gaussian Splatting allows for real-time rendering of photorealistic scenes learned from small samples of images. The reality volumes of *Persistent Time Sink Resonance* tend to shatter and break at the point of low or withheld information. Gaussian Splatting is not only used for the direct visual transfer of spatial data. Rather, it is a matter of lingering in the gaping interstices that open up when capturing reality with this rendering technique. Representation tends to get fuzzy like memories, as objects split open and colors are scattered like digital glass shards in 3D space. It is here where we linger, as digital reality bursts apart. This is where machinic expressiveness is revealed in spatial aesthetics.



© Jochen Manz—Wacom Co., Ltd.

Creative Business Innovation

Text: Yoko Shimizu

Creative Business Innovation at Ars Electronica Futurelab fosters creativity and best practices in innovative projects, creating unique prototypes and initiatives that blend artistic vision with business strategies. We support partners worldwide in industry, academia and government, collaborating internationally and cross-functionally to support diverse stakeholders.

In the consulting phase, we understand our partners' visions and challenges to develop strategic directions for creative projects.

In the conceptualization phase, we use our Art Thinking methodology and tools to organize tailored ideation workshops such as Creative Compass, Future Vision, Future Scenario and Bridge 2040. Together, we envision society's future, identify creative questions and explore research seeds. In the experimentation phase, our interdisciplinary R&D team in art, science and technology conducts experiments and develops creative prototypes, cultural programs, initiatives and platforms, blending technological novelty

with social impact. During realization, we present prototypes that stimulate public discussions at venues such as the Ars Electronica Festival and Center, museums, exhibitions, schools, and universities. Futurelab collaborations are prominently featured at the Ars Electronica Festival through Open Futurelab and Futurelab Night. The dissemination and evaluation of research outcomes are crucial. Insights from societal feedback are summarized in the Future Report, helping update our creative compass and inspire the next Art Thinking cycle. Engaging with diverse artists, researchers and the public helps navigate ever-changing futures.

WORKS



© Ars Electronica Futurelab

What if Participatory Art Could Shape the Future of Democracy?

Pillars of Democracy

Parlament Österreich—Parlamentsdirektion (AT), Ars Electronica Futurelab (AT)

Text: Maria Pfeifer, Peter Freudling

This playful and interactive installation aims to increase civic participation and enhance awareness of the importance of democracy. The artistic intervention on the pillars of the Parliament building in Vienna invites people to express themselves, reflect and take a stand on democracy. The goal is to establish an emotional and personal connection to democracy, emphasize the significance of participation and promote democracy and voting on an emotional level.

In the weeks leading up to the 2024 National Council elections, LED meshes on the columns of the Parliament will display videos featuring shadow silhouettes of the participating visitors. With these “shadow clips” people can cognitively and physically express their attitudes toward various aspects of democracy, such as solidarity, freedom of choice, compromise, diversity, decision-making, co-creation, and tolerance—pillars of democracy, that are taken literally here.

The Parliament will be showcased as the House of the People with the message: We participate, we care, we vote. *Pillars of Democracy* is part of an awareness campaign by the Austrian Parliament and created in cooperation with the Ars Electronica Futurelab. The installation is based on *Shadowgram*, a tool by the Futurelab: Initially designed to combine aesthetic entertainment with the creation of a physical object—a sticker in the form of a shadow—it enables semi-anonymous participation in social brainstorming of large groups with full physical individual engagement. For the Parliament installation, this tool was further developed: people can take a stand on eight democracy-related themes using their silhouettes and record short videos, which are then displayed on the Parliament's columns and, if shared by the participant, on social media to stimulate lively discussions about democracy and increase civic engagement.

How Can We Prepare for a Future Where Humans and Digital Avatars Collaborate?

SHARESPACE

Text: Cyntha Wieringa

How can humans use avatars in the near future? How can we engage in social situations that include both humans and avatars? And what technology do we need to explore these “hybrid” spaces together? This is what the Horizon Europe research project SHARESPACE is all about. The project aims to push the boundaries of digital embodied collaboration through the development of novel XR technologies.

Within the research project, the Ars Electronica Futurelab is responsible for the artistic exploration of this novel SHARESPACE technology. Through the development of different artworks for the Deep Space 8K, this exploration uncovers the capabilities, possibilities, limitations and challenges this technology and research brings to the media arts world. In the past year of the SHARESPACE project, three Deep Space artworks have been developed:

1. *falcon heavy*, conceptualized by Johannes Poell, an audiovisual application where synchronizing with others is key for the ultimate collective experience.

2. *Converge*, conceptualized by Patrick Berger, an exploratory piece where decentralized interaction and collaboration between humans and avatars is central.

3. *State of Play*: شه‌ربازی, created by artists Tara Habibzadeh, Harriet Davey and Mati Bratkowski (recruited through the SHARESPACE Open Call 2023) is an interpretation of the Last Labour of Rostam's 7 Labours in *Shahnameh* as a deconstructed video game boss fight.

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement No. 10192889.



© Nicolas Naveau

Which Contributions Can Data Art & Science Make to Local Revitalization in Rural Japan?

Data Art & Science Project

Toyota Coniq Alpha (JP), Ars Electronica Futurelab (AT)

Text: Cyntha Wieringa

The Data Art and Science project is a collaborative project between Toyota Coniq Alpha and the Ars Electronica Futurelab. This year's project focuses on developing Data Art and Science (DAS) as a methodology to study local revitalization in Shiga Prefecture, located east of Kyoto and Osaka, and bordering Biwako Lake, the largest freshwater lake in Japan. Known for its natural beauty, historical sites and cultural heritage, Shiga has faced challenges like depopulation, an aging society, vacant housing, flood risks and landslides. The project envisions a future regional center using DAS to address these local issues. Collaborating with Shiga University and other stakeholders, it will produce artworks showcasing DAS's

practical applications. *Memories for Futures* is a multi-modal media arts installation designed to foster care and discussion about rural life's future. It centers on Azusakawachi village and offers visitors a glimpse of village life through local narratives, places and impressions. Data for the project was collected in a two-day workshop in the village where participants created real-time 3D models of significant objects and places. Their individual stories were gathered through qualitative interviews. By creating an artwork driven by Azusakawachi residents, *Memories for Futures* aims to give back to the region and inspire local action. The goal is to strengthen the social fabric in areas by cultivating relationships.



© Johannes Poell

How to Share the Medical Teaching of the Future?

Cinematic Anatomy x Deep Space

Johannes Kepler University Linz (AT), Med Uni Graz (AT), Ars Electronica Futurelab (AT)

Text: Bernadette Geißler

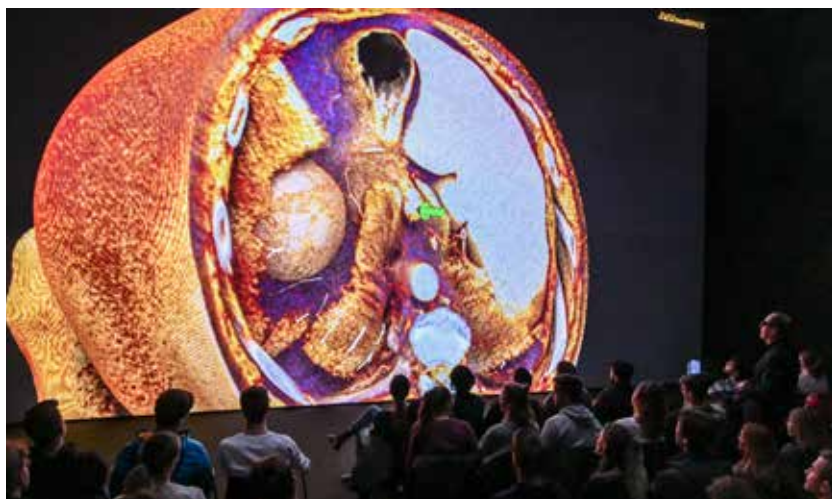
In 2021, the revolutionary medical lecture hall JKU medSPACE for virtual anatomy in 3D opened at the MED Campus of the Johannes Kepler University in Linz—built and maintained by the Ars Electronica Futurelab around its *Cinematic Anatomy x Deep Space* program based on software by Siemens Healthineers. The initiator of the collaboration, Prof. Franz Fellner, teaches Virtual Anatomy at JKU medSPACE: in stereoscopic 3D and larger than life, freely zoomable down to the smallest structures. Some of these lectures are transmitted to the Medical University of Graz as 2D video streams and in return Prof. Niels Hammer from Graz supplements the teaching content with anatomic specimens via video stream back to Linz.

With the technical planning and software infrastructure, the Ars Electronica Futurelab is now supporting another revolution in the field: 3D lectures

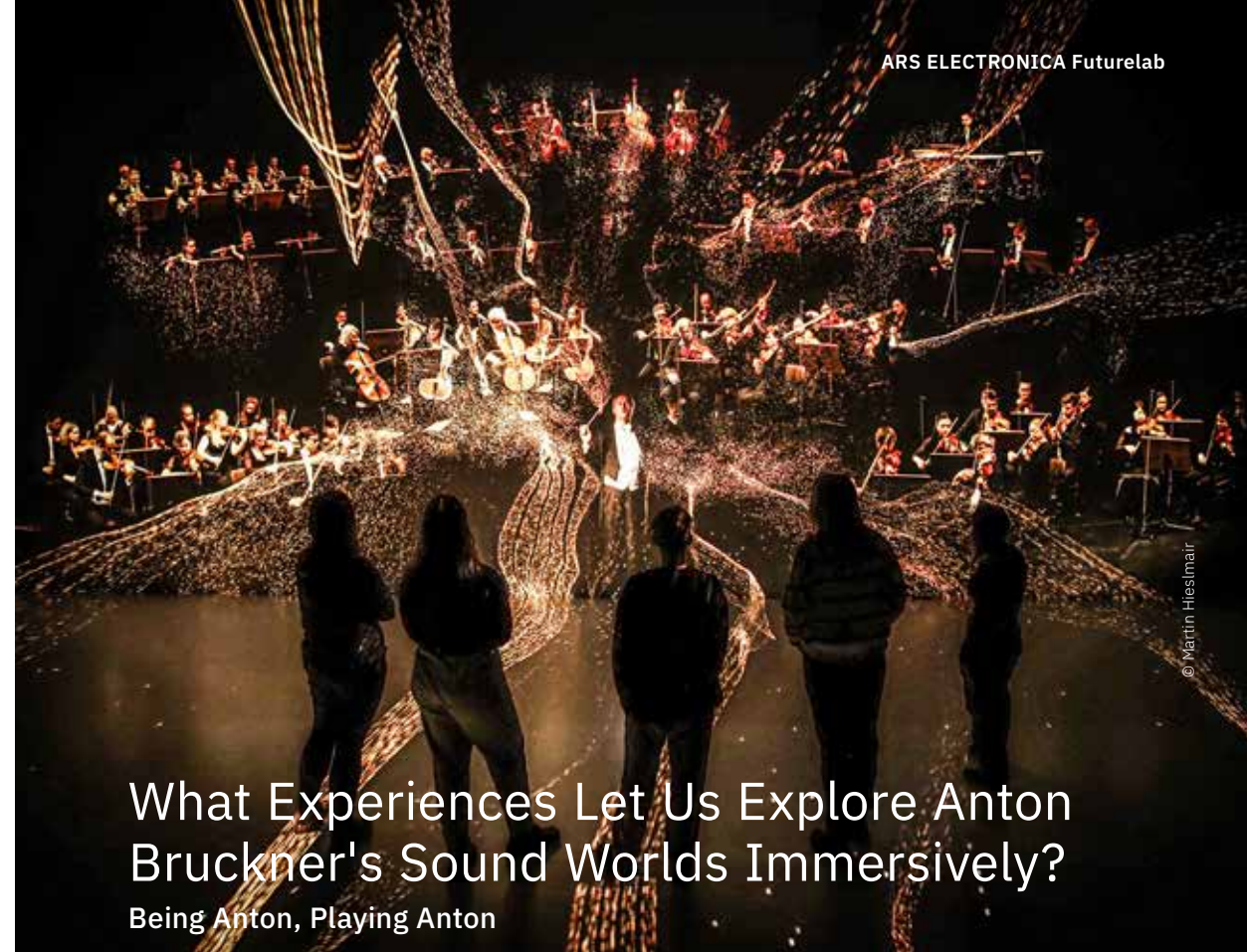
from Linz will be shown live on a new large LED wall at the Medical University of Graz, also in stereoscopic 3D using 3D glasses. The audio signals and control data for *Cinematic Anatomy x Deep Space* from Linz are transmitted to Graz simultaneously so that students at both locations are immersed in the lectures at the same time.

In addition, lectures at the Medical University of Graz will be transmitted live to Linz using a stereoscopic 4K camera so students in the JKU medSPACE will also be able to experience anatomical specimens in 3D to complement the virtual anatomy. In the future, the universities are planning to expand the use of the system to include joint postgraduate and congress events.

Cinematic Anatomy x Deep Space is based on software libraries from Siemens Healthineers for volumetric data visualization, originally developed through the pioneering research of Dr. Klaus Engel.



© Johannes Kepler University Linz



© Martin Hieslmaier

What Experiences Let Us Explore Anton Bruckner's Sound Worlds Immersively?

Being Anton, Playing Anton

Bruckner Orchester Linz (AT), usomo (DE), Ars Electronica Futurelab (AT)

Text: Nina Ebner, Ali Nikrang

As part of the celebrations to mark the 200th birthday of the famous Upper Austrian composer Anton Bruckner (1824–1896), the Ars Electronica Futurelab has created two works for the Ars Electronica Center: the immersive sound space *Being Anton* as well as the playful and interactive experience *Playing Anton* in Deep Space 8K. Similar to the many ways AI is changing the world today, technology radically transformed the life of Bruckner and his contemporaries: humanity suddenly became interconnected and various new forms of communication flourished. And the steam engine not only changed people's mobility at an unprecedented pace, but also brought a completely new soundscape into the world. *Being Anton* allows visitors to immerse themselves in this world of sound. Equipped with headphones, their movement is tracked as they enter the installation. What you hear varies

based on your location and the path you take through the installation area. The patter of rain and the clattering of horses' hooves symbolize Bruckner's everyday life in Vienna, diary entries provide insight into his emotional life, newspaper front pages characterize what was happening at the time, before the sound of organ music permeates the story and orchestral sounds fill the installation.

With *Playing Anton*, visitors experience in a new way what makes up the gigantic, imposing sound of a Bruckner symphony. By interacting with each other, the audience can constantly re-form the various instrumental groups of the Bruckner Orchestra Linz thanks to the innovative interaction technology of Deep Space 8K. Various facets of the musical and compositional perception of Bruckner's music are illuminated, enhanced by impressive 3D visualizations.

How Can Immersive Gameplay Promote Solidary Behavior Towards Collective Action Problems?

Buzz Swatters: Playful Pandemic Prevention

Godot (AT/JP), Ars Electronica Futurelab (AT)

Text: Denise Hirtenfelder

Buzzing noises, an inconspicuous window, tropical humidity and the impression of being chased along the Open Futurelab: *Buzz Swatters: Playful Pandemic Prevention* is the second collaborative project of the Collective Transformation Lab between Godot and the Ars Electronica Futurelab. This innovative endeavour is designed to address the collective action problem of infectious diseases.

Those who dare to enter the exhibition area are quickly greeted by a peculiar festival guest: a sensor-driven animated mosquito. It is the first indicator of an immersive gameplay that draws visitors into a fictional pandemic breaking out in POSTCITY. To avoid spreading the mysterious mosquito disease, players are encouraged to embrace behaviour changes that benefit the

community's health. By navigating interactive challenges, participants experience firsthand the significance of collective efforts in disease prevention, emphasizing the interconnectedness of individual actions and their broader impact on community well-being.

With a flyswatter serving as a voting tool, players are involved in a democratic process to make solidary decisions that shall be implemented in the game. It motivates citizens to adopt proactive measures for the common good, even in situations where immediate personal benefits may not be apparent. The goal of the installation is to investigate when people feel inspired to change their behaviour toward certain common good, utilizing cutting-edge technology such as generative AI and sensor technology.



© Susanne Kiesenhofer, Florian Voggenreder



© Denise Hirtenfelder

How to Zoom In on Our Cultural Heritage to Explore Hidden Treasures?

Mariendom digital

ÖAW Austrian Academy of Sciences (AT), Bundesdenkmalamt (AT), Diocese of Linz (AT), Ars Electronica Futurelab (AT)

Text: Marianne Eisl

For the 100th anniversary of the consecration of the St. Mary's Cathedral (New Cathedral) in Linz, the Ars Electronica Futurelab has been working on an exhibition that makes hidden architectural details visible and otherwise locked-away treasures accessible. This project was implemented jointly with the Austrian Academy of Sciences and the Bundesdenkmalamt (Federal Monuments Office) and is based on a large-scale digitization project to preserve the information about the cathedral's cultural asset for future generations and to convey it in a multi-layered way to the public. In the course of the digitization process, high-resolution images, so-called gigapixels, of the cathedral windows were taken, objects from the cathedral treasury were captured in three dimensions and original historical documents such as architectural plans and sketches of the

stained-glass windows were digitized. In order to make these digital copies accessible, interactive installations were located inside of the cathedral to enable the public to digitally zoom in on these analog objects and reveal previously hidden details. This makes it possible to study the stained-glass windows of the high choir, whose depictions can only be guessed at from a distance, down to the smallest detail with the help of their digital replica. Visitors can even become part of these windows themselves, using a photo station to virtually populate the cathedral with their portraits. All these digital enhancements are intended to enable a change of perspective and encourage liturgy experts as well as art and culture fans to engage with the central content of the cathedral.

Does the Shell Curve the Snail or Does the Snail Curve the Shell?

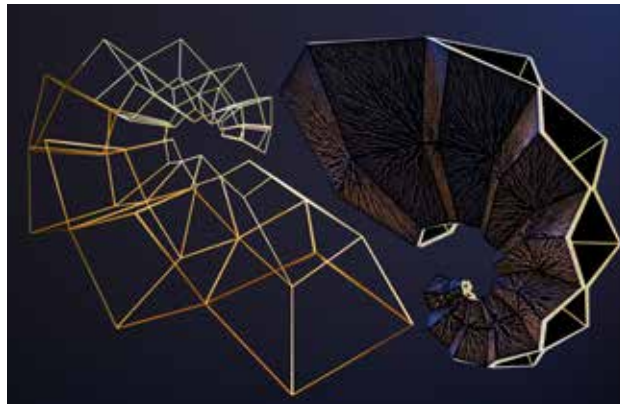
Gigantic Oribotic Spiral

Text: Matthew Gardiner

Our work is a prototype study of the interplay between shells, spirals and their latent biological and social symbolism in the form of a large-scale rigid oribotic spiral sculpture and oribotic instruments. The title reframes a quote from D'Arcy Wentworth Thompson's seminal work *On Growth and Form* that delves into how natural forms, including shells, adhere to mathematical principles. Thompson posits that the mathematics of growth defines the shape of the shell and thus the shell curves the snail. We extend this question to society, do people shape society or does society shape people? The sculpture, elegantly constrained by the mathematics of origami, expands and contracts an acoustic space, reflecting a tension between rigidity and flexibility in systems of thought and social mechanisms. The work is a

collaboration with members of an international multidisciplinary network of scholars in the field of Structural Origami.

This research was funded in whole or in part by the Austrian Science Fund (FWF) [10.55776/AR590] PEEK Grant AR590 ORI*botics On the Art and Science of Origami and Robotics.



© Matthew Gardiner

Behave-Knit: Living Knitwear That Moves with You

Text: Lingxiao Luo, Matthew Gardiner

In her secondment at the Futurelab, supported by the Marie Skłodowska-Curie Actions (MSCA-DN) SOFTWEAR doctoral network, Lingxiao took the opportunity to study and find inspiration in our oribotic methodology to further her research into origami and actuated knitted structures. Her work, *Behave-Knit* challenges conventional notions of fashion by proposing garments that are

more than mere objects—they become entities with personalities, capable of interaction. This raises intriguing questions about the future of clothing and our relationship with what we wear. If our clothing could respond to us as living beings, how would our treatment and perception of these garments evolve? This project invites audiences to envision a future where fashion is a dynamic participant in our daily lives. *Behave-Knit* is presented as a piece of interactive knitwear with a mannequin and a video presentation demonstrating the concept and capabilities of the knitwear.



© Tom Mesic

Can AI Hallucinate Music?

Absolute Hallucination: An AI Self-Playing Piano Improvisation

La Biennale di Venezia (IT), Ars Electronica Futurelab (AT)

Text: Ali Nikrang

Absolute Hallucination: An AI Self-Playing Piano Improvisation by Futurelab Key Researcher Ali Nikrang explores the creative space learned by an AI-based music composition system by randomly traveling through different compositional paths. It provokes questions about the nature of music and the hallucinatory characteristics of generative AI. The world premiere of this piece will take place at Biennale Musica 2024 in Venice. The term “hallucination” often applies to instances where modern AI-based large language models like ChatGPT generate non-factual information. This is a technical problem arising from their statistical nature. In creative endeavors, however, this tendency transforms into an asset, enabling the discovery of novel patterns and connections within data.

The AI behind the musical hallucination is called

Ricercar, an AI-based music composition system developed by Ali Nikrang at the Ars Electronica Futurelab. *Ricercar* (“to seek out” in Italian) refers to a musical form of the Renaissance and Baroque periods in which composers used this form to explore the musical and artistic potential of a theme. The analogy underscores the exploratory nature of AI creativity, which can serve as a passive exploratory space for human artists to actively navigate. The project encourages reflection on the inherent artistic nature of music. Creative in its exploratory nature, AI works at the level of data, breaking down the underlying components that make up music. This raises the question: To what extent is music just data (and exists in isolation from human or artistic means), and at what point does it become an artistic, human and social phenomenon?

How Can We Co-Create the Future(s) in Japan?

Ars Electronica Japan

Text: Hideaki Ogawa

As a special initiative of Ars Electronica and Futurelab, Ars Electronica Japan has been working since 2016 on educational and cultural projects, consulting and advanced research related to media arts in Japan. Underlying these efforts is “Art Thinking” that the Futurelab has been exploring for many years, using art as a catalyst to create the future. Since 2018, we have been collaborating on the conception, strategy and implementation of the Matsudo International Science and Art Festival. This art festival has become known as a new festival format that experiments with the future by utilizing the compact city of Matsudo through citizen participation. Since 2023, Ars Electronica Futurelab has partnered with the Tokyo Metropolitan Government to support the creative direction of Civic Creative Base Tokyo (CCBT), a



© Sakura Sueyoshi / Nacása & Partners Inc.

civic activity center for people to unleash their creativity through art and digital technology. From 2024, we will apply our expertise in creating a cultural and creative engine through art to Shiga Prefecture, known for Lake Biwa, the largest lake in Japan and use the fusion of data science and art for key local creation agendas, such as “future citizen,” “future food,” and “future energy.” Starting in 2023, we have launched a community with Japanese integrated marketing and innovation company Hakuodo to bring this Art Thinking to the business sector. We are also working with Japanese tech companies and startups to present and prototype future possibilities like “Future Ink” with Wacom, and with Godot to explore visions and philosophies for applying AI technology to social issues through art.

How Can Art Be a Catalyst for Japanese Industries?

Art Thinking Japan Initiative

Hakuodo Inc. (JP), Ars Electronica Futurelab (AT)

Text: Denise Hirtenfelder



© Hakuodo Inc.

The 21st century presents complex challenges that demand resilient strategies for navigating cultural transformation. In response, Hakuodo and Ars Electronica have pioneered the Art Thinking Japan Initiative, aiming to cultivate future literacy and reshape corporate mindsets in Japan. This collaboration addresses the need for acquiring the cultural competences of out-of-the-box thinking and generating creative questions through dialog. By combining Art Thinking strategies with Hakuodo's expertise in “People Thinking,” the initiative aims to tackle social challenges and create a new vision for humanity within Japanese industries. The Art Thinking Japan Initiative offers three key platforms. The Art Thinking Lounge serves as a tangible hub for society, introducing newcomers

to the Art Thinking philosophy, tools, works and formats. Through the Art Thinking Forum, the initiative provides a space for businesses to exchange ideas and practices on creatively reshaping the future economy. The Art Thinking School offers lecture and workshop programs, equipping startups and companies with tools and prototyping frameworks to continuously refine their vision. All these activities envision a future where creativity fuels transformation by fostering a collective evolution within the Japanese economy. Through a commitment to encountering future issues without being bound by conventional wisdom and societal norms, the Art Thinking Japan Initiative seeks to drive positive change in Japanese industries and society as a whole.



© Tom Mesic

Open Futurelab & Futurelab Night

Text: Bernadette Geißler

We at the Ars Electronica Futurelab understand this year's Festival motto—Hope—as a process that can be shaped together through active participation. The Open Futurelab in POSTCITY therefore offers hands-on stations, prototypes and installations as well as guided tours and discussions with Futurelab members. On Saturday evening, Futurelab Night is another crowd-pleaser: in Deep Space 8K at the Ars Electronica Center, the Futurelab's work can be experienced audiovisually on a large scale—from immersive research reports to artistic performances. The Futurelab will be showing various current works at the Festival. The EU project SHARESPACE, for example, is researching how people will be able to interact socially in the near future with the help of digital avatars. This vision is being creatively realized by the Futurelab team and a young artist collective from Berlin and

London. In Deep Space 8K, visitors come into contact with their inner child, explore synchronization with others and decentralized interaction between humans and avatars.

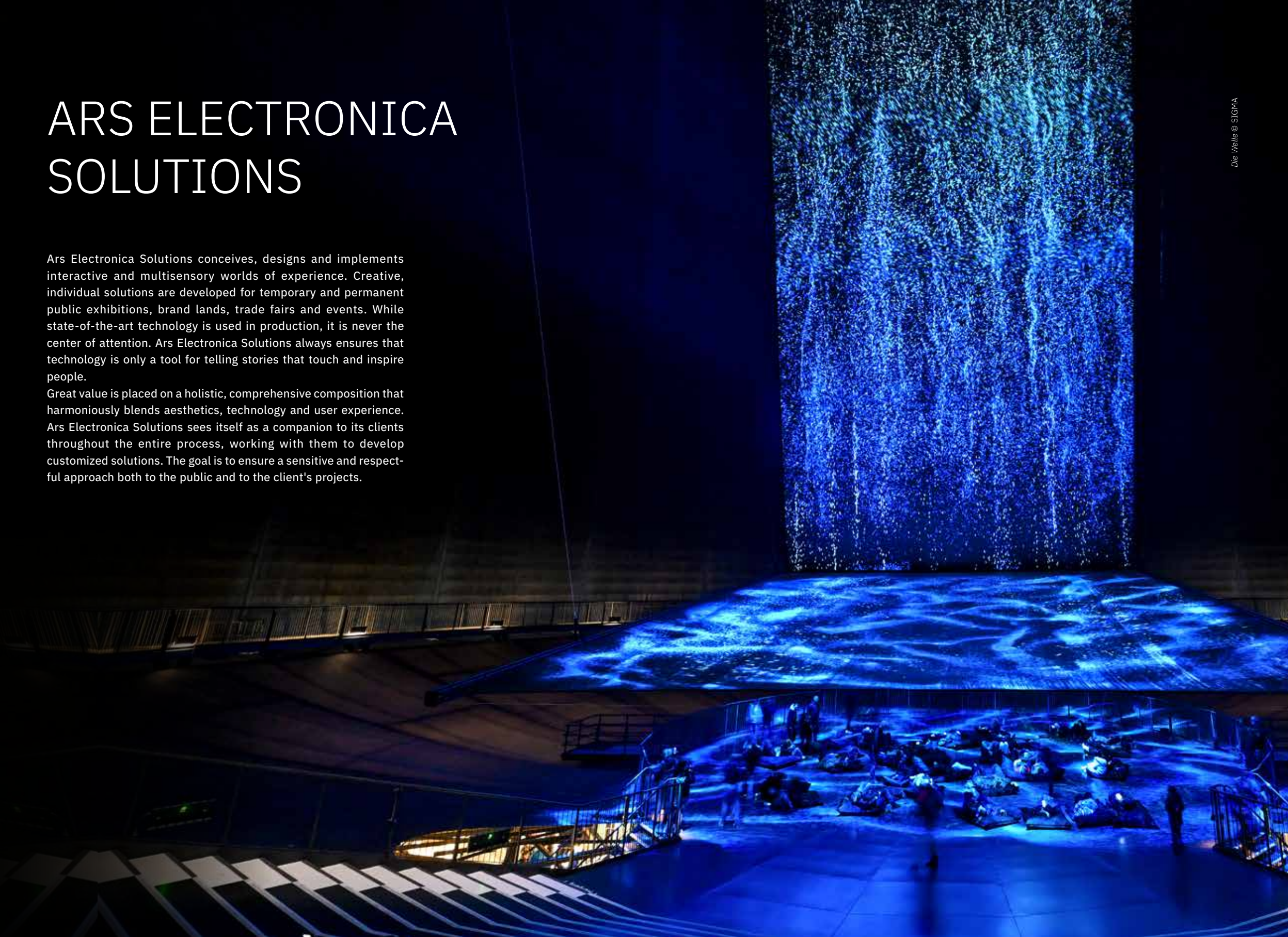
In the Open Futurelab, visitors can throw themselves in a fictional pandemic scenario, among other things: The immersive gaming experience brings the importance of collective action in disease prevention to life. Origami robotics can also be seen again, with collaborations in areas such as fashion and large kinetic sculptures.

The ambitious Data Art and Science Project is focusing on the topic of rural exodus this year: Japanese governmental point cloud data is linked with the memories of villagers confronted with the challenges of population decline. The project shows that citizen science and artistic journalism can be an important part of the discussion about social change—and a key to acting as a society.

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. While state-of-the-art technology is used in production, it is never the center of attention. Ars Electronica Solutions always ensures that technology is only a tool for telling stories that touch and inspire people.

Great value is placed on a holistic, comprehensive composition that harmoniously blends aesthetics, technology and user experience. Ars Electronica Solutions sees itself as a companion to its clients throughout the entire process, working with them to develop customized solutions. The goal is to ensure a sensitive and respectful approach both to the public and to the client's projects.



Ars Electronica Solutions @ Festival 2024

Towards Hope—Transforming Perspectives

Ars Electronica Solutions acts as a link and mediator between society and business, cultural institutions and scientific organizations. In each of our projects with clients and partners around the world, this mediating role continually aims to address the uncertainties and challenges of our daily lives from a hopeful, solution-oriented and empathetic perspective. We have various methods and approaches at our disposal. These play a significant role in both our creative processes and in the implementation of the resulting ideas.

At this year's festival, Ars Electronica Solutions aims to provide insights into its way of thinking and, in collaboration with various partners,

render this tangible through playful, interactive installations and prototypes. For example, a number of interactive stations developed with and by Garamantis Technologies (a close partnership since 2014) will be shown. In addition, an immersive station from the German Aerospace Center (DLR), also a long-term partner, will focus on Earth observation. Furthermore, daily talks and performances with various guests from various fields will collectively provide a platform for discussion of and reflection on the various possibilities and aspects of communicating hope. These events will take place both in the exhibition at POSTCITY and in Deep Space 8K at Ars Electronica Center.



Die Welle. outtime © Markus Wipflinger



Events at Ars Electronica Center © Markus Wipflinger



Deep Space Events at Ars Electronica Center © Tom Mesic



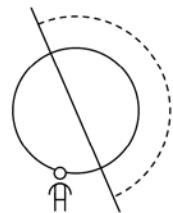
Salon Talks at POSTCITY © Florian Voggeneder

Ars Electronica Solutions Approaches

Pathways to Digital Transformation, Science Experience and Sustainability Thinking

Ars Electronica Solutions assumes a central role offering support to its clients, focusing on three specialized thematic approaches: Digital Transformation, Sustainability Thinking and Science Experience. Drawing on its extensive expertise and artistic know-how from the Ars Electronica network, we assist businesses and institutions in two ways: by navigating

complex challenges of digital transformation and by developing sustainable, scientifically inspired visions for the future. In an era characterized by rapid technological change and global environmental challenges, Ars Electronica Solutions aims to bridge familiar and emerging fields of knowledge, forging innovative pathways towards a sustainable society.



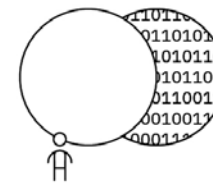
Science Experience

Working closely 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 through 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. After all, 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.



Elevation Model © Ars Electronica / Martin Hieslmair

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. The goal is to raise awareness of the importance of science in our society and on our planet.



Digital Transformation

Historically, mankind has developed analog techniques that simplify life or optimize yield. By contrast, the time span since the beginning of the *Digital Transformation* seems remarkably short. People are adapting their actions ever more rapidly, but the complexity of digitization and its impact on our society is often overwhelming. Ars Electronica Solutions sees its mission as mediator between familiar and unfamiliar content, to collaboratively shape futures inspired

and motivated by science and research, art and culture and business and innovation.



Samurai Museum Berlin © Ars Electronica / My Trinh Müller-Gardiner



Sustainability Thinking

Ars Electronica Solutions defines *Sustainability Thinking* as being located along the intersection of art, technology, science, society and the economy. We try to develop mediation and communication strategies for our clients that consider both the intellectual and the emotional perspective on the necessary transformation toward sustainable thinking in politics, society and business. As human beings we all possess emotions that increasingly contend with our intellect-based problem-solving strategies in the face of the growing complexity of modern-day issues: Digitalization, restructuring of the economic system, the biodiversity crisis and climate

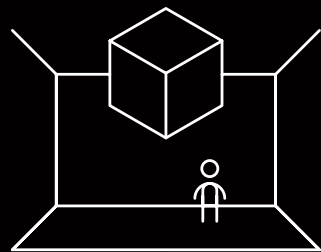
change, all present us with great challenges. Together with its clients and their projects, Ars Electronica Solutions sets out to reunite these two seemingly separate worlds in the direction of a more holistic view of the world.



1. EXPO Austrian Pavilion © EXPO AUSTRIA

Deep Space Worldwide

Growing Community with Soul



Deep Space by Ars Electronica is more than just a room—it is an immersive experience with a unique soul that opens up fascinating perspectives on our world that would normally remain hidden to the naked eye. Visitors can experience interactive media arts and interact with Virtual Reality. The Deep Space offers a collaborative and interactive atmosphere where visitors can freely engage with content while sitting, lying down or moving. The versatile space transforms lectures, events and more into uniquely immersive experiences. With unmatched visual and acoustic resolution, it can be adapted to different venues, making it a customizable and unique solution for memorable encounters. A variety of media formats are integrated, completing the many presentation possibilities and adding to the uniqueness and richness of the visitor experience. At its core, Deep Space is an immersive space with a soul, offering unparalleled experiences.

Ars Electronica Solutions has set itself the task of making Deep Space known worldwide. Last year especially, Deep Space has grown in importance internationally. More and more institutions and companies are recognizing the value of this unique and versatile experience. In a hotel, a Deep Space can serve as a meeting room, event space

or foyer, while in a science center or museum, it can support specific exhibition objectives. In particular, the cultural diversity of the region has a decisive influence on the use of the Deep Space. One outstanding example is the Deep Space Future at the West Bund Museum in Shanghai, which opened in late December 2023. Designed to be very playful, sessions are dramatically staged and applications accompanied by plays suitable for children. This cultural staging reflects local aesthetics and promotes a deeper understanding of the region's art forms. In the Ars Electronica Center, on the other hand, the focus is on giving visitors the freedom to move through the space and experience the artworks in their own way. Each Deep Space is adapted to the particular cultural requirements and spatial conditions, emphasizing its versatility and adaptability.

Deep Space by Ars Electronica is therefore not only a place of innovation and technology, but also a space that combines cultural diversity and individual design possibilities. It promises unique experiences that inspire and connect the world. This will foster the emergence of a global Deep Space community, offering users around the world the opportunity to exchange ideas and network.

Deep Space Future © IZE



Das Morgen © Florian Voggenseder



Deep Space Future © Ars Electronica / Kati Romics



Deep Space Future © IZE



Deep Space Cubo Negro: Prima Materia by Nohlab © Centro de Ciencias de Sinaloa

PROJECTS

Gasometer Oberhausen—*The Wave*

Since March 15th, 2024, Europe's tallest exhibition hall, the Gasometer Oberhausen, has been captivating visitors with its new permanent exhibition that delves into the captivating depths of the world's oceans. *Planet Ocean* illustrates the beauty and diverse life forms of the ocean through photographs and films. The highlight of this exhibition is *The Wave*: a 1,000 square meter projection featuring lifelike animations from the mysterious world of the sea, brought to life by Ars Electronica Solutions in terms of artistic conceptualization and execution.

The projection surface of *The Wave* consists of two parts: a vertical, 40 meter high wall by AV Stumpfl GmbH and a horizontal, translucent canvas. A total of seven Epson installation projectors operate on this projection surface from various angles, creating a unique visual experience with a resolution of 60 million pixels, depending on the location in the room.

The scenes depicted are exclusively hand-crafted and animated, a result of creative staging. When visitors go under the horizontal canvas ("Gaze"), they are immersed in the underwater world and can even interact with specific content. The artistic direction was carried out by Ars Electronica Solutions in close collaboration with Nils Sparwasser, the advising curator of the exhibition *Planet Ocean*.

In addition to the impressive visual display, the integration of *The Wave* into the industrial architecture of the Gasometer Oberhausen, Europe's tallest exhibition hall, is noteworthy. The installation creates the impression that the surface of the sea seamlessly merges into the ceiling structure of the room. This visual spectacle is accompanied by new compositions by Rupert Huber, creating an immersive sound experience. *Planet Ocean* is a permanent exhibition that can be visited until the end of 2024, at the Gasometer Oberhausen.



Die Weille © Sigma

Deep Space Shanghai

In late 2023, Ars Electronica Solutions opened the groundbreaking Deep Space Future at the West Bund Museum in Shanghai. With this, yet another Deep Space by Ars Electronica has been realized. The interactive experience is located in the region's most prominent cultural center and is the largest facility on the district's new Museum Mile. It offers numerous applications from the fields of media arts, cultural heritage and science communication. By integrating world-leading cultural IPs and various art forms such as digital media, music, theatre and painting, the space is transformed into a captivating "time and space portal". Visitors can freely travel between the past and the future, explore cultural treasures, experience the romance of the universe, appreciate the beauty of matter and engage in playful activities. Deep Space Future offers limitless possibilities as a versatile venue and inspiration center for artists and creators to showcase astronomy, art and culture in the future.



Deep Space Future © JZE

ESA-ESRIN Visitor Center

Dedicated to ESA's Earth observation activities, ESA ESRIN in Frascati near Rome is the European center of excellence for the utilization of Earth observation missions. Ars Electronica Solutions has transformed a former ESA control room into a multimedia center that offers satellite images, real-time data transmission and an impressive Vega-C launch experience. Several interactive installations focus on ESA facilities

and the core activities of ESA ESRIN. Highlights include a model of the VEGA-C rocket simulating a launch and a countdown timer for upcoming ESA missions. A station with Paxi, the educational mascot, introduces children to ESA topics in a playful way. Overall, the Visitor Center provides an opportunity to learn more about ESA ESRIN and its core activities.



ESA-ESRIN Visitor Center © Ars Electronica / Harald Moser

Space Eye—Visitor Center

Space Eye is a multimedia Visitor Center that communicates current research in space and environmental sciences, offering people of all ages access to Switzerland's largest public telescope and an 8K planetarium. Ars Electronica Solutions designed and developed the interactive and educational experiences in various installations, in part in collaboration with DLR. Visitors embark on a journey through the Observatory's various stations, exploring topics related to satellites and the universe. The Visitor Center covers a range of topics, from the history of space exploration to current celestial observations to scientific discussions on the importance of sustainable practices.



Space Eye © Adrian Moser

KEBA—InnoSpace

Ars Electronica Solutions designed and implemented the “KEBA InnoSpace” for KEBA Group AG at its headquarters in Linz. In this innovative showroom, the latest KEBA innovations are presented using interactive media technologies. Several interlinked stations offer insights into the research and innovation undertaken by the company. Visitors are guided through the showroom supported by sound and light design and surprising scenographic elements such as autonomous guided vehicles (AGVs). The presentation surfaces and a special sound and lighting design create a dramaturgical link to the technical elements and transform the space into an experiential journey into the future of intelligent technologies.



KEBA InnoSpace © KEBA



Voestalpine Böhler Event © Isabel Schölmbauer



Voestalpine Böhler Event © Isabel Schölmbauer

Voestalpine Böhler—Opening Show

Ars Electronica Solutions staged the spectacular opening event with a customized show concept in the most modern steelworks of voestalpine Böhler. The 600 guests were captivated by the rich history of BÖHLER Kapfenberg with a production in the factory hall, a range of visualizations and atmospheric sound design. In addition to impressive stage technology, visuals, a dancing industrial robot and a top-class live music ensemble, the integration of voestalpine Böhler employees into their performances added authenticity to the event. The BÖHLER works band Kapfenberg was an integral part of the opening show. The musical journey through the company's milestones, composed by Rupert Huber, was also a special experience. Ars Electronica Solutions involved locals, combining contemporary media arts into a stylish and harmonious event.

Dachstein-Planai-Hochwurzen-Gletscherbahnen

In the newly opened Visitor Center of the Dachstein Glacier, interested visitors are made aware of the causes and dramatic effects of global warming. The newly opened Visitor Center vividly illustrates the significant retreat of glaciers at Dachstein over the past 100 years. Ars Electronica Solutions' interactive stations explain the causes and impacts of global, regional and local climate change. These include an atmospheric globe in the valley station depicting global climate phenomena, a touchscreen displaying enhanced climate data from the *APPtauen Dachsteingletscher* app, funded by the State of Upper Austria, and a digital telescope showing real-time glacier melting. The renovation of the mountain station features sustainable technologies like a photovoltaic system, emphasizing commitment to environmental stewardship and education.

WKOÖ—House of Economy

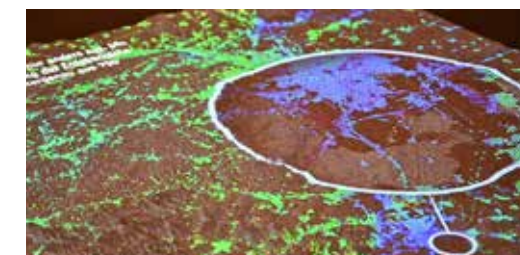
The Austrian Federal Economic Chamber (WKOÖ) celebrated the reopening of its “House of Economy” in downtown Linz. The highlight of the renovated building is the Innovation Hub, which consists of a spacious foyer and the Julius Raab Hall, the latter designed primarily by Ars Electronica Solutions. The exterior of the hall features mirrored glass and 40 integrated screens that show visitors a variety of visualizations. The WKOÖ's global network of more than 170 branches worldwide is displayed on an interactive world map that reacts in real time to the visitor's position. This is supplemented by dynamic diagrams of local business startups and consulting services. The building promotes openness and transparency by integrating visitors into the WKOÖ network. Digital storefronts and an interactive tree on a touch screen enhance the experience and vividly present WKOÖ projects and issues.



Julius Raab Band © Andreas Röbl

Vienna Museum of Science and Technology

With the opening of the *Climate.Knowledge.Action!* exhibition at the Vienna Museum of Science and Technology, Ars Electronica Solutions, in cooperation with ESA and DLR, is focusing on three elements: climate change, space research and Earth observation. Interactive installations allow visitors to navigate and compare satellite images. An elevation model developed specifically for Vienna visualizes data on remote sensing, land use, traffic and air quality, intriguing visitors with research in the form of visual data and satellite images. Immersive design and playful applications transform complex research data into fascinating scientific explorations, linking local and global climate data. The exhibition shows the causes and interconnections of the climate crisis from multiple perspectives, encouraging visitors to make connections between local and global developments.



Elevation Model © Hannah Bachl

Upcoming Projects

BOKE Group—Game Art Museum

BOKE Group is a leading online game developer and service provider based in Shanghai. Under the design leadership of Tadao Ando, the company is currently developing and building an entirely new headquarter, including an R&D center and an associated game and art museum. Construction is underway with the opening currently scheduled for the first quarter of 2026. Ars Electronica Solutions is the collaborative partner in the conception, design, consulting and realization of the new and unique experience, leveraging our experience in immersive experience spaces and its own museum.

Arcotel—Themed Room

A so-called Themed Room is to be created for a new hotel project in Linz, the ARCOTEL Tabakfabrik, that reflects the connection to Linz. The themed room of an Arcotel in Linz's new Quadrill Tower will focus on the materials used. Ars Electronica Solutions has developed the “Mindful Space” concept, which addresses the area of *Organoid Intelligence—The Fusion of Biological and Artificial Materials* and will be realized in cooperation with Grand Garage.

ARS ELECTRONICA EXPORT 2024

Export ensures that the Ars Electronica expertise and knowledge travels the world through exhibitions and residencies, mentoring, workshops and talks.

Four decades working at the intersection of art and science have enabled us to build a wide network of brilliant minds in the fields of art, technology and society. This network supports us today in critically analyzing current challenges and anticipating future trends. Our Export partners include cultural practitioners, businesses and universities, with whom we collaborate worldwide on a range of interventions and projects.

Through Ars Electronica Export, we are keen to offer our insights and leverage our network's expertise to address your inquiries and ideas. Whether consulting, conceptualizing or producing exhibitions, screenings, performances, new residency formats or developing innovative new formats in general, we are committed to sharing our experiences and fostering creative collaborations on a global scale.



Catalyst Lab—The Making of Tomorrow

Ars Electronica exhibition at European Patent Office Munich

To celebrate the 50th anniversary of the European Patent Convention, Ars Electronica and the European Patent Office (EPO) have collaborated to curate a unique exhibition at a distinctive venue. The repurposed space, which once served as the registry for patent granting applications, retains the essence of the original avatar while also providing an ideal venue for contemporary art. The exhibition, titled *Catalyst Lab—The Making of Tomorrow* features a selection of visionary media arts projects and two newly commissioned works. It aims to explore the intersection of art and science, particularly how their synergy can address and offer insights into contemporary global challenges. Through this exhibition, Ars Electronica and the EPO highlight how interdisciplinary collaboration can solve today's most pressing issues. The show illustrates how blending artistic vision and scientific inquiry can fuel positive change.

Participating artists: Dorotea Dolinšek (SI), Robertina Šebjanič (SL) & Gjino Šutić (HR), Tega Brain (AU) & Sam Lavigne (US), Shape Lab Research Group at the Institute of Architecture and Media at Graz University of Technology (AT), Laokoon (FR/DE), Naifactory Lab (ES), Anna Ridler (UK), Louis-Philippe Rondeau (CA), Diana Scherer (DE/NL), Youyang Song (CN/DE), Quayola (IT), Quadrature (DE)



Catalyst Lab—The Making of Tomorrow / Exhibition View at EPO Munich, Catalyst Lab © Wolfgang Stahl

From the Past We Love, to the Future We Need

Ars Electronica exhibition at X Festival Dubai

The exhibition *From the Past We Love, to the Future We Need* presents 12 artist positions addressing major challenging questions of our time and offering alternative, prototypical solutions beyond mere criticism. Sustainability, coexistence and collaborative more-than-human futures will provide the framework for defining concepts. The role that we as humans may assume versus the role we may wish to assign to technology will also be compared and considered.

Participating artists: Memo Akten (TR), Finnbogi Pétursson (IS), Thijs Biersteker (NL), Ralf Baecker (DE), David Bowen (US), Sabrina Ratté (CA), Ivan Henriques (BR), Rocio Berenguer (ES), Atsushi Kobayashi (JP), Sahar Homami (IR/CA), Shift + Space Design & Research, Amir Bastan (AT)



© Festival X at Alserkal

RE COGNITION: WHAT IS REAL?

Ars Electronica exhibition at Çubuklu Silolar Culture Center Istanbul

Following a restoration project initiated by the Metropolitan Municipality of Istanbul, the once derelict post-industrial site of Çubuklu Silos has become a vibrant cultural center dedicated to the digital arts. Ars Electronica, in collaboration with Píksel Creative Solutions, curated the museum's inaugural exhibition *RE COGNITION: WHAT IS REAL?* The collaboration merges Ars Electronica's extensive exploration of technology's impact on

society through art with Píksel's dedication to local media arts initiatives, fostering community engagement. *RE COGNITION: WHAT IS REAL?* offers new perspectives on the notion of reality through the transformative lense of media arts.

Participating artists: Atif Akin (TK), ha:ar (TK), Alexandra Daisy Ginsberg (GB), nohlab (TK), Quadrature (DE), Shinseungback Kimyonghun (KR), Theresa Reiwer (DE), Universal Everything (UK), Yatreda (ET)



© Göktuğ Guntav / Píksel. Creative Solutions

You know me so well by Martina Menegon

Ars Electronica exhibition at Galeria 17, Pristina

Martina Menegon's solo show is part of a multi-year collaboration between Ars Electronica and the Kosovar foundation Shtatëmbëdhjetë (17). *you know me so well* explores the intricate relationships between tangible and digital self-bodies, breaking the boundaries between physical and virtual existence and unraveling the complexities of our contemporary and resilient hybrid selves. Intimate and complex assemblages of interactive, virtual and extended self-portraits inhabit the exhibition space. Biometric data intertwines with AI generated avatars, prompting reflections on self-care extending beyond the boundaries of the tangible body—while also hinting at the effect of privacy and data-surveillance on women's bodies.



you know me so well / Martina Menegon (AT/IT) © Majilinda Hoxha

Ars Electronica Animation Festival on Tour 2023

Animation Film Program for Cultural Partners worldwide

The 2023 Ars Electronica Animation Festival On Tour is a diverse showcase that invites spectators to discover current artistic productions in the field of digital animation. The selection has been compiled from submissions to the Prix Ars Electronica 2023, which shifted its focus from Computer Animation to New Animation Art. Several exciting programs bear witness to the diversity of this renewed category, not only in terms of storytelling techniques, conceptual explorations and technological innovation, but also with regard to their commitment to social change and new political imaginaries. Supported by the Austrian Federal Ministry for European and International Affairs, the program is presented worldwide by cultural partners. In 2023, there are five screening packages, each containing 5 to 7 video works: Electronic Theatre, Data Bodies Space, AI&Human, Austrian Panorama and Young Animations.



Ars Electronica Animation Festival on Tour 2023

Synthetic Messenger by Tega Brain and Sam Lavigne

Ars Electronica participation at TaxT, Taoyuan Art x Technology Festival Taiwan

In 2023, TaxT and Ars Electronica partner for the first time to present the project *Synthetic Messenger* by Tega Brain and Sam Lavigne. This project involves a botnet designed to artificially inflate the perceived value of climate change news by clicking on ads. The bots scour the internet for climate change articles, with each bot visiting and clicking on every ad it encounters.

In today's algorithm-driven media landscape, engagement metrics determine the value of news, influencing future coverage and public discourse on climate change. *Synthetic Messenger* aims to disrupt these systems, which are often manipulated by economic interests, including the

fossil fuel industry, shaping the narrative around climate issues.



© TaxT

TAICCA x Ars Electronica

Art Thinking Program and Co-commissioned Artwork by Dimension Plus

Ars Electronica collaborates with the Taiwan Creative Content Agency (TAICCA) to jointly organize an Art Thinking program throughout 2024. The initiative supports creative makers through training and mentoring, helping them develop prototypes for immersive experiences, performances or installations. Participants were invited via an open call to submit proposals, leading to an intensive Art Thinking Workshop held in Taipei. One project titled *AI Unmasked* by the artist collective Dimension Plus was selected as the winner. The project is currently undergoing further refinement to prepare for public production and presentation at Ars Electronica Festival and TAICCA's Taiwan Creative Content Fest. *AI Bias Unmasked* utilizes a straightforward,

yet captivating approach centered around the Taiwanese delicacy known as Pig Blood Cake. This seemingly innocuous food item serves as a poignant example of how AI can misrepresent cultural artifacts.



© Dimension Plus

Interact with AI through an arcade game, a workshop and a rapid-response presentation

Ars Electronica participation at KI Festival Heilbronn

Between the 29th and 30th of June, the KI Festival Heilbronn invites attendees to engage with speeches and Q&A sessions from AI experts and participate in hands-on workshops where they can experiment with the latest AI technologies. This year, Ars Electronica is joining the adventure with several captivating program points: an arcade game, a workshop and a rapid-response presentation. Sebastian Schmiege's *Prompt Battle Training Station* offers participants the chance to practice and demonstrate their prompting skills in a competitive game format. Sabine Leidlmeier and Thomas Viehböck's interactive workshop introduces the basics of machine learning, providing a playful insight into current creative and practical applications of AI. Laura Welzenbach's

rapid-response presentation will exemplify the use of AI in healthcare through an exciting collaborative project between artist Špela Petrič and the Bonn Sustainable AI Lab.



Prompt Battle Training Station by Sebastian Schmiege @ KI Festival 2024 © Jana Guist

New Aesthetics in the Age of Automation

K-Arts Ars Electronica Academy

Established in 2021, the K-Arts Ars Electronica Academy at K-Arts Seoul hosts hackathons, guest lectures and online workshops led by Ars Electronica experts. This collaborative initiative with the Korean National University of Arts (K-ARTS) enriches the university's curriculum through inspirational talks and mentoring sessions tailored to emerging artists. A notable highlight is the annual student presentation at the Ars Electronica Festival, part of the Ars Electronica Campus program. Ars Electronica contributed three talks featuring distinguished speakers: Martin Honzik, former Chief Curatorial Officer of Ars Electronica; Peter Freudling, Lead Designer & Artist at Ars Electronica Futurelab; and Daito Manabe, co-founder of Rhizomatiks.



Seeds of Hope

Ars Electronica Futurelab x Matsudo International Science and Art Festival

The Matsudo International Science Art Festival is a yearly celebration that takes place in the beautiful city of Matsudo, Japan. In 2023, the festival theme was Seeds of Hope. Embracing the theme of “play,” symbolizing creativity and empowerment, the festival aimed to cultivate hope in the soil of tradition cultivated by the predecessors in Matsudo City, turning it into

a creative playground for innovation, thereby planting seeds of hope for the future of society. During the festival, there were special exhibitions, talks and workshops throughout the entire city. Ars Electronica has participated in the conceptualization, curation and implementation of the festival since its inception in 2018.

NTMoFA x Ars Electronica

A Co-commissioned Artwork by Simple Noodle Art

The National Taiwan Museum of Fine Arts (NTMoFA) and Ars Electronica collaborate for the first time in 2024 to jointly commission an interactive video installation by Taiwanese duo Simple Noodle Art. The installation, presented both at Ars Electronica Festival and the NTMoFA Techno Exhibition, explores AI-driven narratives and personalized content for social media. Formed in 2019 by Chen Zi-Yin and Chuang Hsiang-Feng, Simple Noodle Art uses diverse media to explore the interaction between technological products and humans, especially how such interactions alter and impact our lifestyles.



© Simple Noodle Art

The work is co-produced by the National Taiwan Museum of Fine Arts & Ars Electronica with support from the Ministry of Culture (Taiwan), R.O.C., under the Technology Art Venues Innovation Project and the Taiwan Content Plan.



Matsudo International Science Art Festival 2023—Seeds of Hope / Unerasable Characters Series by Winnie Soon © Ayami Kawashima

HOPE

who will turn the tide

Believing in the possibility of change is the prerequisite for bringing about positive change, especially when all signs point to the fact that the paths we are currently taking are often dead ends. But belief alone will not be enough; it requires a combination of belief, vision, cooperation and a willingness to take concrete action. Ars Electronica 2024 shows that there are many reasons for such hope—people, many people, who have started working to bring about change with their ideas, projects, actions and attitudes.

This catalog documents the contributions of artists, thinkers, creators, philosophers, activists and many other critical citizens who presented their visions at the Ars Electronica Festival 2024.

ars.electronica.art/hope

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