Prix
Ars Electronica
2023

ARS ELECTRONICA
Art, Technology & Society

HATJE
CANTZ

Prix
Ars Electronica
2023

ARS ELECTRONICA
Art, Technology & Society

HATJE
CANTZ

Gerfried Stocker · Markus Jandl

Prix Ars Electronica 2023

Prix Ars Electronica 2023
New Animation Art · Artificial Intelligence & Life Art ·
Digital Musics & Sound Art · u19–create your world

Ars Electronica Award for Digital Humanity

CultTech x Ars Electronica Award

Klasse! Lernen. Wir sind digital.

STARTS Prize'23
Grand Prize of the European Commission honoring Innovation in Technology,
Industry, and Society stimulated by the Arts

European Union Prize for Citizen Science
The Grand Prize for Citizen Science of the European Union recognizes outstanding
achievements in the advancement of knowledge through the empowerment of civil
society and citizens in the development of the future

Contents

Contents

Contents

Contents

Contents

Contents

Jury members

Prix Ars Electronica 2023

Prix Ars Electronica 2023

Gerfried Stocker, Markus Jandl

Since its founding in 1987, the Prix Ars Electronica has been an annual fixture of the international communities surrounding media art, artistic research, and many innovative collaborations between art, technology, and society. With its various presentations, exhibitions, and publications, the competition is thus also a unique opportunity to observe current trends in artistic exploration and the respective state of the art in experimenting with and applying new creative technologies.

Several thousand works and projects are submitted each year, and this year we received a total of 3,176 artistic projects from 98 countries. Impressive figures that reflect the dynamics of the current developments and effects of the digital transformation, in particular the great interest in shaping the future responsibly and the search for alternatives and new paths—currently also driven, of course, by the hype surrounding artificial intelligence. However, the focus is not so much on working with the new AI tools, but on a critical analysis of the comprehensive interactions with culture and society that goes far beyond this, while the current developments in the field of AI and machine learning represent just the tip of the iceberg.

But despite all the AI and other techno hype, it is above all the immediate urgency of climate change and the resulting consequences that is once again the focus of attention for the submitting artists and also the jurors this year. This is a trend that has been emerging for years and is also reflected in the increasing number of activist art projects and Art & Technology cooperations that specialize in the development of prototypes and concrete measures.

Anyone who has been following the Prix Ars Electronica for years will also notice that the enormous broad impact of the digital transformation is not only reflected in the number of entries, but also in an increasing number of new collaborations and alliances. In keeping with Ars Electronica's fundamental motto of devoting itself to the connections and synergies between art, technology and society, the Prix Ars Electronica has also become a platform for institutions and initiatives that want to explore and make meaningful use of these border crossings between disciplines and between social spheres.

Seven years ago, the STARTS Prize was the first major collaboration with the European Commission for the synergy of art and technology, which has developed into an international movement. With the European Union Prize for Citizen Science, another prestigious award from the European Commission has been added. The Austrian Federal Ministry for European and International Affairs has also joined forces with the Prix Ars Electronica to host two competitions on the international stage: The Award for Digital Humanity, which honors projects that address the social and cultural problem areas of digital transformation with international impact and relevance, and State of the ART(ist), which focuses on artists who face threats to their existence, which may come in the form of repression or political persecution by unjust regimes or by democratically legitimized governments. They

may also face danger due to open hostilities, loss of livelihood from environmental disasters or natural catastrophes, and precarious living conditions due to exploitation.

The Austrian Federal Ministry for Education, Science and Research together with Austria's Agency for Education and Internationalisation is using the stage of the Prix Ars Electronica to honor teachers who are taking a particularly creative and innovative approach to the digital transformation of school instruction and is thus supplementing the Prix Ars Electronica's u19–create your world prize, which has always impressed with the creativity and wit of the projects submitted since 1998.

A special prize for musicians and composers is awarded every two years by the family foundation of legendary Japanese synthesizer pioneer Isao Tomita, and this year, in cooperation with the CultTech Accelerator program, we're able to honor a startup specializing in the promotion of culture and creative industries in South Africa.

These collaborations and the inspiring and exemplary projects they put in the spotlight represent an important foundation for the ongoing development of Ars Electronica and are also an indispensable part of the festival's various programs. They are grouped around the Prix Ars Electronica's core categories, the Golden Nicas, which have been awarded since 1987 in categories that have been continually updated, developed, and added to. This year, changes were also made to the oldest category of Prix Ars Electronica, "Computer Animation" that, 36 years ago in 1987, awarded the Golden Nica to John Lasseter's legendary little desk lamp *Luxor Jr.* . The new category designation "New Animation Art" not only takes into account the many changes and new developments in the genre "Computer Animation," but also updates what is perhaps the Prix Ars Electronica's most

essential objective: To promote the departure into new realms and to demonstrate the significance and impact inherent in artistic work as a method of intervention and active shaping of our future.

That this change was the right move is also reflected in the current submission figures in the individual categories:
The largest number of submissions—1,116—were in the newly created category, New Animation Art, followed by the Digital Musics & Sound Art with 972 works (which were also considered for the Isao Tomita Award, a special prize for research into the technological and artistic challenges in the area of Digital Musics & Sound Art). The category Artificial Intelligence & Life Art received 765 submissions. The u19–create your world category for Young Creatives (all under age fourteen) and Young Professionals (age fourteen to nineteen), open for entries from all over Austria, recorded a total of 323 entries. More than 140 best-practice projects from all over Austria were submitted as part of the second open call for the "Klasse! Lernen. Wir sind digital." Education Award. A jury has awarded the best ten of them: 7 Honorary Mentions, 2 Awards of Distinction endowed with 5,000 Euros each, and the main prize endowed with 10,000 Euros.
In addition to the four Golden Nicas of Prix Ars Electronica 2023, the Ars Electronica Award for Digital Humanity, initiated by the Austrian Federal Ministry for European and International Affairs, was awarded for the third time as part of Prix Ars Electronica. This award is endowed with € 10.000 prize money.

In 2023, for the eighth time, the Prix Ars Electronica includes the STARTS Prize, which Ars Electronica awards on behalf of the European Commission in cooperation with BOZAR, Waag Futurelab, INOVA+, T6 Ecosystems, La French Tech Grande Provence, and the Frankfurt Book Fair. This prize, endowed

with a total of €40,000, recognizes innovative projects at the nexus of Science, Technology, and Arts (STARTS) and is awarded by the European Commission as part of the Horizon 2020 funding program for research and innovation.

Along with the European Union Prize for Citizen Science, an additional €100,000 in prize money is awarded this year. The winning project in this year's inaugural CultTech x Ars Electronica Award received €10,000 in prize money and an invitation to participate in the CultTech Accelerator Program.

This means that a total of €232,850 in prize money was awarded to artists in this year's Prix Ars Electronica.

The Prix Ars Electronica, organized by Ars Electronica Linz GmbH & Co KG, is being staged for the 37th time in 2023. This has been made possible by the City of Linz, which has funded Ars Electronica since 1979 and the Prix Ars Electronica since 1987. Special Thanks for additional support go to Austrian Federal Ministry for European and International Affairs, TOMITA information Hub, Austrian Federal Ministry of Education, Science and Research, and the OeAD.

Gerfried Stocker (AT) is a media artist and an engineer for communication technology and has been artistic director and co-CEO of Ars Electronica since 1995. In 1995/96 he developed the groundbreaking exhibition strategies of the Ars Electronica Center with a small team of artists and technicians and was responsible for the setup and establishment of Ars Electronica's own R & D facility, the Ars Electronica Futurelab. He has overseen the development of the program for international Ars Electronica exhibitions since 2004, the planning and the revamping of the contents for the Ars Electronica Center, which was enlarged in 2009, since 2005; the expansion of the Ars Electronica Festival since 2015; and the extensive overhaul of Ars Electronica Center's contents and interior design in 2019. Stocker is a consultant for numerous companies and institutions in the field of creativity and innovation management and is active as a guest lecturer at international conferences and universities. In 2019 he was awarded an honorary doctorate from Aalto University, Finland.

Markus Jandl (AT) has been Chief Financial Officer (CFO) since September 2020 and, together with Gerfried Stocker as co-CEO, manages the business of Ars Electronica Linz GmbH & Co KG and Ars Electronica International GmbH. He has held various positions at Ars Electronica over many years, most recently as Head of Corporate Finance and authorized signatory for both Ars Electronica companies. Born in Linz, he studied Economics at Johannes Kepler University Linz and spent nine months at Ivey Business School in London/Ontario, Canada. Jandl specialized in corporate accounting during his studies and wrote his diploma thesis in this field.

1.]

Ar

t

New Animation Art

In The Limen Truth

Lev Manovich, Nora O Murchú, Philippe Pasquier, Mimi Son, Helen Starr

"Other worlds provide one with syllogisms that one can attempt to make actual in the worlds in which one is oppressed, given one's critical understanding of each world. Critical understanding is made possible in part by going into the limen when one "travels" to the other worlds. The limen is the place where one becomes most fully aware of one's multiplicity".

<div align="right">

Maria Lugones
Lugones, Maria. *Pilgrimages/Peregrinajes: Theorizing Coalition Against Multiple Oppressions.* Rowman & Littlefield, 2003.

</div>

The 2023 Prix Ars Electronica shifted its focus in the Computer Animation category, to explore the landscape of New Animation Art. It created a space to invite artists whose work explores and expands on the cutting-edge intersection of animation, art, and technology, delving into visual expression with unabashed experimentation.

The merging of computer animation and art presents an opportunity to reimagine our connection with art and its technologically expanded modes of expression. No longer confined to mere entertainment, computer animation emerges as a profound artistic form capable of evoking intellectual and nuanced emotional responses. As members of this year's jury panel, we experienced a multitude of emotions—joy, grief, curiosity, compassion, guilt, and awe—united by the tumultuous journey through these remarkable artworks.

Empowered by sophisticated technologies, creative practitioners brought their visions to life in this renewed category, expanding the horizons of art by incorporating the dynamic and transformative qualities of new animation, enabling fresh storytelling techniques and conceptual explorations. While using animation technologies in a self-referential manner holds artistic value and allows for experimentation within the medium, adopting a conceptual approach to these technologies introduces a distinct focus on power dynamics and social change. It broadens the discourse surrounding animation by foregrounding its social and political dimensions, challenging dominant narratives that have historically stifled ideas of difference.

The current cultural landscape, influenced by philosophers such as Sylvia Wynter, Maria Lugones, and Gloria Anzaldúa, emphasizes the importance of questioning and transforming power structures and the representations they perpetuate. Embracing these complex conversations rather than shying away from them, this category welcomed the exploration of diverse voices, stories, and cultural expressions within animations. Its goal was to challenge prevailing paradigms and offer opportunities for a multiverse of narratives, thus interrogating the very structure of Truth itself.

In this year's judging process, different viewpoints emerged when considering the materiality of new animation technologies, encompassing AI, game engine, virtual reality (VR), augmented reality (AR), artworks, and more. Through the lens of identity politics, numerous connections and implications were opened for discussion. This perspective

prompted a critical examination among the international and intersectional jury of *who* creates animations, *which* narratives and identities are portrayed, and *whose* experiences and perspectives are centered or marginalized.

Essentially, this new animation, as a creative process, aligned with the conceptual approach of much contemporary art after Duchamp. But with an important and unique twist, which is only possible in this emerging digital canon. New Animation becomes a powerful tool for exploring concepts, storytelling, and expressing ideas beyond the confines of traditional non-interactive visual representation. This year's submissions challenge the viewers' perception of what constitutes art objects and expand the possibilities of conceptual exploration through interaction, time, and narrative.

These technologies enable the exploration and representation of diverse identities, allowing users to embody different characters, perspectives, and realities. By embracing and celebrating the multiplicity of identities and fostering hybridity within animations, these technologies can challenge essentialist notions of identity and promote inclusive narratives and experiences.

"This terrain, when fully occupied, will be that of a new science of human discourse, of human 'life' beyond the 'master discourse' of our governing 'privileged text', and its sub/versions."

<div align="right">

Sylvia Wynter

</div>

Wynter, Sylvia. "Afterword: Beyond Miranda's Meanings: Un/silencing the 'Demonic Ground' of Caliban's 'Woman'." Africa World Press, Inc., 1990.

The call by Jamaican philosopher Sylvia Wynter to decolonize knowledge production extends to the realm of animation technologies. This perspective encourages the integration of alternative epistemologies and cultural frameworks into the animation process, prompting exploration beyond dominant Western-centric approaches. By embracing a decolonial approach, animation technologies can challenge the homogenizing effects of colonialism, creating space for marginalized cultures and knowledge systems to be acknowledged and respected.

Scholars such as Anzaldúa, Wynter, and Lugones highlight the significance of agency and resistance against oppressive structures. In the context of animation technologies, this entails empowering users to actively engage with and shape the animations they interact with. It involves providing tools for customization, personalization, and co-creation, enabling users to express their own identities, narratives, and cultural perspectives. Animation technologies can serve as platforms for social activism, enabling ignored communities to challenge stereotypes, amplify their voices, and advocate for social change.

By applying the insights of Anzaldúa, Wynter, and Lugones to the materiality of animation technologies, we can cultivate more inclusive and empowering creative environments. This involves critically examining power dynamics, promoting diverse representation and narratives, embracing hybridity and multiplicity, and decolonizing knowledge production. Ultimately, this approach contributes to the development of animations that are equitable, socially conscious, and reflect the richness and complexity of human experiences.

At times, and like most, the jury struggled with the inadequate context of nation-states in conflict. While artists and their work are important in denouncing and highlighting systemic issues, this jury also had to resort to self-censorship to minimize harm, and protect artists, the festival, or the jury members.

"I will no longer be made to feel ashamed of existing. I will have my voice: Indian, Spanish, white. I will have my serpent's tongue—my woman's voice, my sexual voice, my poet's voice. I will overcome the tradition of silence."

<div align="right">

Gloria Anzaldua

</div>

Anzaldúa, Gloria. *Borderlands/La Frontera: The New Mestiza*. San Francisco: Aunt Lute Books, 1987.

Golden Nica

Delivery Dancer's Sphere
Ayoung Kim

The work *Delivery Dancer's Sphere* was conceived and completed by artist Ayoung Kim during the chaotic era of the COVID-19 pandemic. It is a speculative fiction set in the delirious world that emerges between the everyday normal reality pre-pandemic and the new digitally intermediated pandemic reality.

The story is told through Ernst Mo, a female motorcycle courier living in the city of Seoul, working for the "Delivery Dancer" platform. Whilst she is riding through the city, the platform's AI navigation system constantly updates her route to optimize the distance from start to destination, often ignoring the actual geography of the city or the rules of physical reality itself. The riders who can traverse this twisted space-time attain the platform's highest level—a "Ghost Dancer."

Within this glitched reality, Ernst Mo encounters another ego who shares her appearance, En Storm, and the confusion increases. The work further explores this sense of confusion in its diverse variety of textures such as live action video, 360 cameras, LiDAR scanning and game engine footage all combined into a singular montage. This confusion articulates an emerging sense of anxiety that stems from a cyborg physicality that runs through our cities at the speed of light in smart devices.

The jury found that Ayoung Kim's combination of philosophy, topology, and classical physics with excellent visual storytelling creates a highly successful portrayal of the emerging multi-layered and uncontrollable world we inhabit. The beginning of the 21st century is bringing a new form of platform capitalism that acts as both friend and enemy, allowing for the emergence of a new precarious working class, with female workers continuing to be pushed to the lower classes even in this new gig economy. Meanwhile merciless AI algorithms search countless possibilities to optimize the routes of our lives, encouraging a pattern of unstoppable competition that often ends in harm. Within this world of unrealistic efficiency and usefulness, our other selves and new desires can be found.

Awards of Distinction

IT'S DANGEROUS TO GO ALONE! TAKE THIS
Bassam Issa

Luring us into a fantastical dreamscape, Bassam Issa's CGI film *IT'S DANGEROUS TO GO ALONE! TAKE THIS* embraces the shape-shifting potential and seduction of computer animation. The film revolves around a "hero" undertaking an uneasy and dangerous journey through various realms. In this world, the hero submits to a series of cathartic and difficult mutations and transformations, leaving them in a constant state of glitching and falling. Caught up in a side-quest, the hero seems to be at the mercy of an unknown force off screen. Weighted down by their internal turmoil, the body of the hero convulses from an outpouring of emotion and grief. Out of sync and scale with the landscape, and with objects that appear on screen, the hero lacks agency and is uncomfortable with his own hyper-masculinity, eventually breaking down in tears. In *IT'S DANGEROUS TO GO ALONE! TAKE THIS,* Bassam Issa has built a world of subtle storytelling filled with hyper-synthetic visuals. In this world, journeys seemingly never end, and preconceived narratives and habitual perceptions of masculinity are pushed and challenged. Operating in the gap between the fantasy and reality, Bassam Issa draws us into their seductive journey of metamorphosis and fluidity, queer possibility, destruction and decay, set against scenes of resilience and rebirth.

Oneroom-Babel
SANGHEE

We increasingly hear about the rising cost of living everywhere. In Asia, and beyond, it too often means living in a single space in which bedroom, kitchen and living room are one. This "Oneroom" phenomenon is increasingly spreading across the globe. These living situations were only exacerbated by the COVID-19 pandemic and the isolation and confinement it triggered. In this provocative immersive virtual reality (VR) piece, SANGHEE lets us explore and get a first-person experience of what it might mean to be in such a space. VR has many drawbacks and limitations, but one thing it

affords is to portray space, and SANGHEE stacked 23 3D scanned Onerooms. This Tower of Babel of tiny living spaces is positioned underwater, at the bottom of some ocean, like a coral formation—adding to the serene yet oppressive nature of the experience. The jury appreciated the direct nature of the work through the very appropriate, simple yet convincing use of the medium to produce a truly embodied and immersive experience of grim life situations that are often portrayed too abstractly. The jury commands the work's simplicity and efficiency, which successfully frames a set of interviews portraying the lived experience of Korean youth inhabiting the spaces on display, that can resonate with all viewers.

Honorary Mentions

Distant Distraction, Foul Breach, Separate Sensation
Lark Spartin

The commodification of our social relations is just another step toward the self-realizing Situationist prophecy of the society of the spectacle. From selfies to body dysmorphia, there are only a few clicks—ones that Lark Spartin denounces. Expanding upon Bourriaud's relational aesthetics, Lark Spartin questions how our technology mediates our life and reifies our changing "digital relationality" into a playful and efficient interactive installation. The three simple augmented reality (AR) tableaux, with hands reaching out for genuine connection, each come with an AR filter of a different face part (eyes, mouth, ears). The jury very much applauds the work's playful elicitation of the disembodiment that the social media use of AR platforms entails, while remaining confident that all will—eventually—take a selfie. Resistance is futile.

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

Dzata: The Institute of Technological Consciousness is a creative research project. The project acts as a fictional institute and a repository for technological practices across the African continent over the past centuries, and aims to understand innovation and technology through the prism of African history, culture, and traditions. In this film an unnamed figure embodies African technologists who have been travelling across the continent for hundreds of years developing vernacular technologies. Carrying mobile laboratories on their back, they transform them into complex laboratories, mixing the digital (motherboards and monitors) with the analogue (tools, traditional building techniques, spiritual practices). The film follows these figures as they morph and glitch and build new structures from wires as they move through the landscape on a journey of reconstruction. Made with Dala AI, found footage and an assembly of costumed characters, *Dzata: The Institute of Technological Consciousness* aims to shift the image of "African data" in the technological imagination and decolonize ideas around technology and innovation.

FuneralPlay
Ruini Shi

Dealing with death is never easy and, as was discovered during COVID-19, becomes more difficult due to social distancing. On April 17, 2020 Global News posted that a small but tight-knit community of online gamers honored the death of Ferne Le'roy in the one place they could all meet: *Final Fantasy XIV.* Hundreds of players arrived with their

digital avatars, all wearing black clothes and holding umbrellas. Together, they joined a procession in a touching tribute that was then shared on social media. By using a digital platform to offer online "rituals of healing" through gameplay, *Funeral Play* by Ruini Shi uses technology to create tender, new social structures. This speculative artwork embodies an emerging narrative of future possibilities that inspire discussions about the applications and potential trajectories of technological development.

GLITCHBODIES
Rebecca Merlic
GLITCHBODIES is an interactive game and project that explores contemporary feminism, LGBTQ+ experiences, and Drag transformations. It is a wonderful example of the *Sojourner Artform*—a dynamic and ever-evolving participatory process that uses AI technologies to embody the spirit of exploration and discovery, through the act of experiencing worlds, real or imagined. Within *GLITCHBODIES,* non-heteronormative gender positions find a safe platform for queerness to operate through the body politics of its avatars. Using participatory art methodologies these virtual haunts exist in a profound interconnection, as a series of experiences forming a collective body. Liberated from the confines of binary structures, hierarchical systems, and fixed notions of gender, *GLITCHBODIES* roots itself in concepts of gender fluidity where the body becomes a vehicle for new world building and collective consciousness.

huě iànn
Yu-Han Chen, Ching-Wen Hsu, Ruei-Sin Jhang, Li-Hua Zhan, Tung-En Chien, Pei-Chi Wu
This beautifully drawn animation captures the sense of generalized anxiety that comes from the uncertain border between a free and easy exchange of ideas and propaganda, with its heavy emphasis on manipulation. By utilizing the immersive capabilities of VR/360° video, we are transported into the past to witness the impact of controlled speech on a small-town community, and of instances in the past when the exercise of free speech led to the denial of rights and loss of lives. It suggests that the perception and use of freedom of speech have changed over time and that nowadays, freedom of speech is often invoked as a protective measure. The faded blue aesthetics and the clever soundscape of this artwork evokes a feeling of poignant loss in what is essentially a subtle, political work.

I Took a Lethal Dose of Herbs
Yvette Granata
I Took a Lethal Dose of Herbs by Yvette Granata is an example of an artform which uses technological fabulation to explore the intersection of technology, society, and culture. An interactive VR film about an anti-abortion campaigner who, having survived postpartum psychosis, finds herself pregnant again. Coerced by the societal norms to experiment with plant-based abortifacients, she poisons herself. Based on anonymous Reddit postings between 2017–2020 this artwork documents the contemporary loss of female agency. We sojourn to the real-life horror of a birth-induced psychosis drenched in mediaeval Christian ideologies and demonic babies. Set against the white picket bigotry of Post-Trump's America, this critical

fabulation highlights oppressive policies based on faith not fact. Dangerously experimenting on yourself because you are unable or unwilling to bear a child? Witches were burnt for less than this. This sad tale is as old as time.

Inter net
Zi Yin Chen, Hsiang Feng Chuang
We enter a room with walls completely covered by paper sheets with text—the artist's Google searches recorded since she started using this search engine. There is a comfortable armchair in the corner, a standing light, a newspaper rack, and a hidden fan that makes the sheets move very slightly, forming beautiful varying patterns. The work is beautiful, meditative, and subtle. It transforms mundane search queries into an uncanny exhibition of one's life. An artist's timeline of both important and less important events experienced over many years creates physical space. The work shows the still unexplored aesthetic potential of our digital footprints. Rather than visualizing all the records together or extracting important patterns, the artists arrange printouts in an overlapping manner, similar to a shingle roof, which protects us in a house from the outside world.

Le Mal des Ardents (Ardent Other)
Alice Brygo
Paris, 2019. Notre-Dame burns. In *Mal des Argents* Alice Byrgo has reconstructed an eerie scene through photogrammetry and sound. Murmurs and gasps from the crowd can be faintly heard as the onlookers look on in awe and horror at a scene we never get to witness. Her camera glides in and out of this crowd, circling them, drifting in and out.

Reversing the angle of perspective onto the faces of the crowd, Alice Byrgo constructs an uncanny digital landscape that draws attention to our fascination with catastrophic events. Highlighting the behavior of the crowd, the disconcerting immersive experience lays bare the social tensions bathed in the light of hidden flames.

Lebensraum / Living Space
Sven Windszus
Sven Windszus's interactive art installation invites its audience into a physical experiment. The work explores the issue of overpopulation, and the resulting destruction of the environment and rising sea levels. The pump symbolizes the economic and human growth that started to rise exponentially with the introduction of the steam engine in the early 19th century. Pressing on the pump causes heads to appear, and as each one is added, the available space expands, but the rising water level problem worsens. With just a few movements of the pump, the heads quickly appear underwater, and the following error message "UNEXPECTED ERROR. RECOVERING LIVING SPACE" will appear. With this installation Sven Windszus aims to ask questions about causality and responsibility. Do we keep pumping or do we halt the process before the screen is underwater?

PLSTC
Laen Sanches
Prepare to journey into the heart of *PLSTC,* a meticulously crafted underwater dystopia that plunges its audience into the unsettling reality of plastic pollution. This world, hidden beneath the surface of the oceans, is a stark and powerful represen-

tation of the environmental crisis unfolding in our time. The film's visuals are at once mesmerizing and shocking. But despite its sobering subject matter, there's an engaging, magnetic quality to the film. Through the fusion of AI-generated images, digital compositing, and sophisticated editing, the film encourages empathy and action, sparking a connection with the plight of marine life. It also shows the true potential of AI cinema, which can inform, delight, and inspire audiences to take action.

Rhizomatiks x ELEVENPLAY "multiplex"
MIKIKO, Daito Manabe, Motoi Ishibashi, Satoshi Horii, Yuya Hanai, ELEVENPLAY, Rhizomatiks
"That willing suspension of disbelief for the moment, which constitutes poetic faith."

Samuel Taylor Coleridge, *Biographia Literaria,* 1817

multiplex is an orgy of new media, a multi-layered performance of mechanical precision playing with abstracted and minimal forms. A distributed and networked dance performance, it interrogates the relationships between the human body and emerging technology. Performers rendered in Augmented Reality are projected dancing along with very physical robots amid video projections. Happening in two physical spaces and as an online work, the piece is a true feat of multi-media content, in which the technicalities eventually leave space for the poetry of audio-visual enchantment: the suspension of disbelief. Sometimes words are neither useful nor necessary.

SMOG SEASON
Witaya Junma
SMOG SEASON is an interactive digital installation that uses common consumer objects. Comprised from warning images on 80 cigarette packs arranged vertically on five circular bases, this piece is activated by a viewer. She chooses the level of smoke on the phone screen, and puts the phone next to the sensor. Once activated, the array of warning images from cigarette packs starts rotating. The movement is powered by an array of motors, sensors, and Arduino, adding an element of mechanical intrigue. The viewer controls the level of "smoke" via their smartphone, tying personal agency to the artwork's operation. Thus, the work not only illustrates the severity of the issue but also encourages viewers to consider their entitlement to clean air and the collective responsibility in resolving this crisis.

Delivery Dancer's Sphere

Ayoung Kim

*"As usual, the Han River is soaked in
antidepressants, antihistamines, antibiotics
and anesthetics!!!
It's 7 pm, evening peak time is back!
Ride along before it's too late!"
"Dancemaster always likes to keep the action
to a minimum.
For Dancemaster, optimization is synonymous
with elegance.
No matter what path an object travels,
nature always strives to minimize action...
You know that, don't you?
But this is no longer about nature..."*

Ernst Mo (an anagram of "Monster") is a female delivery rider who works for a platform called Delivery Dancer in the fictitious Seoul. In this fiction, Seoul is a labyrinth of endlessly regenerating routes, and the Dancers (workers of Delivery Dancer) pursue never-ending delivery work under the control of a master algorithm called Dancemaster. This work is not only about the gig economy and platform labor, which have become immensely popular in South Korea, especially during the pandemic, but also about the topological labyrinth, the possible world(s), the hypervigilance, and the accelerationist urge for optimi-

zation of body, time, and space. It contains hints of a queer relationship with a counterpart from another possible world.
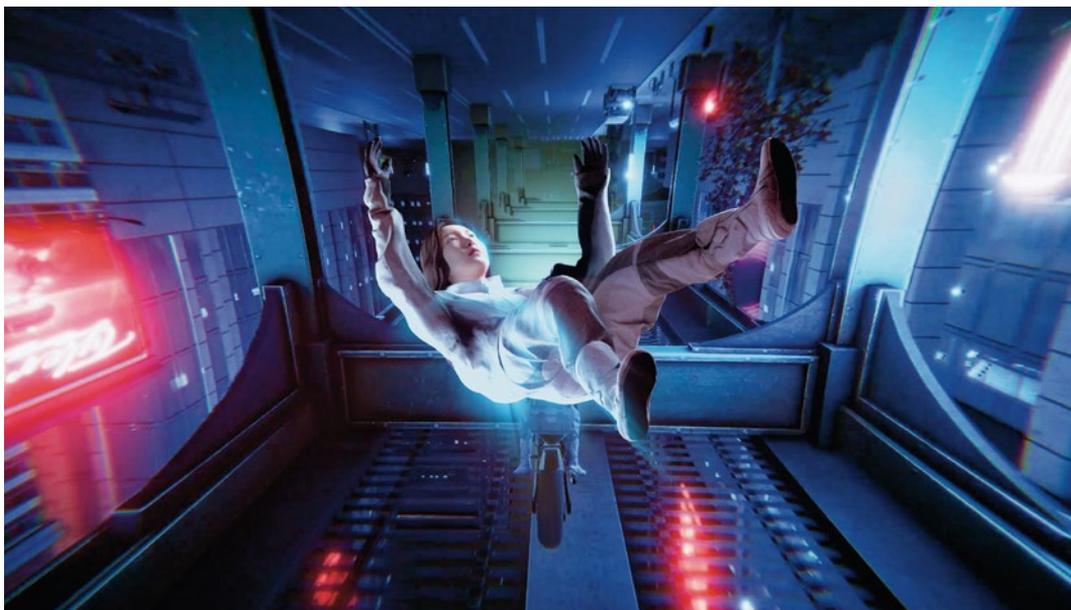
The work is a mixture of 3D animation and live-action shooting.

Possible world(s)

According to the possible world theory, this world is one of the innumerable worlds, and according to the logic of innumerable worlds, it is possible that there are two or more perfectly identical worlds. In this same world, even individual members may or may not be perfectly identical.

Ernst Mo is a rider affiliated with the company Delivery Dancer, a delivery platform. Depending on the call received through the operation of Dancemaster, the AI algorithm of the Delivery Dancer app, Ernst Mo rides through the spots including A, B, C, D, E, in Seoul, following Dancemaster's navigation system. It calculates the shortest distance from the starting point to the destination and informs Ernst Mo of the elegantly embroidered navigation lines. The infinitely received delivery calls and infinitely generated delivery paths are like a maze.

From moment to moment, Ernst Mo arrives at the points at which another possible world, perfectly identical to her own world, leaks. The name of the opposite entity that appears to be perfectly identical to herself is En Storm (an anagram of Monster). The main character and the opposing entity show various aspects of the relationship, such as antagonism, compassion, and affection, which cannot coexist in the same space and time. These are the states of affairs of possible worlds. These are the ways in which two entities may exist (the ways they could be), and furthermore the ways they could relate to each other.

This world seems like a world where the logic of causality does not work well. A character who died in the previous scene appears in the next scene. In this way, the world is rebuilt from moment to moment, different. Montage, a unique method of video editing that has been developed to suture shots and smooth artificial time, is used in this work to disrupt causality, and the magic begins where the syntax breaks down. (A variant of syntax is a kind of epistemic earthquake.)

This work incorporates several laws of classical physics:
Heisenberg's uncertainty principle
Fermat's principle of least time
Hamilton's principle of least action

Pandemic Fiction
This piece, which I have classified as a sort of pandemic fiction, was inspired by my personal experience of the COVID-19 pandemic, which limited international travel until early 2022. Along with the restrictions on movement, the pandemic also led to the exponential growth in delivery platforms that recruited riders through promotions offering high fees and unprecedented conditions. These delivery riders, who were the most mobile entities on the streets when taxis were scarce, delivered food packages to various destinations, striving to meet the requirements of the shortest distance and minimum time for delivery. People did not have to interact with the riders, who carried out their "invisible" labor at the behest of the master algorithm to complete their next delivery faster and serve them at an optimized time. This project gazes at Seoul as a kind of labyrinth. Mobility became more active than ever in a physically restricted mobility environment. In this story, the top-performing Delivery Dancers, known as "Ghost Dancers," are invisible to human eyes and navigate through time and space.

Written and directed by Ayoung Kim
Produced by Heejung Oh
Assistant director: Chae Yu
Project managers: Junyoung Lee, Yoojin Jang

Delivery riding advisor: Yiseul An
Physics advisor: Mankeun Jeong
Mathematics advisor: Seoyeon Kim

Actors: Seokyung Jang, Soojeong Hwang
Director of photography: Syeyoung Park
Music, sound mixing and mastering: Ð.K. (aka Dang Khoa Chau)
Editing: Hyunji Lee, Ayoung Kim, Chae Yu
VFX and motion graphics: Hyunji Lee
Unity level design: B. Paul Sandoval Lopez, Sanghun Heo
Unity animation: Sanghun Heo
Maya Modeling and Animation: Jaehwan Hwang
Lidar Scanning: Jieun Kim

https://u.aec.at/367C124A

Ayoung Kim (KR) synthesizes the outcomes of far-reaching speculation, establishing connections between biopolitics and border controls, the memories of stones and virtual memories, and ancestral origins and imminent futures. These narratives take the forms of video, virtual reality (VR), game simulation, sonic fiction, diagrams, and texts that the artist presents as exhibitions, screenings, performances, theatrical projects, and publications. Kim decisively integrates geopolitics, mythology, technology, and futuristic iconography in her work, and she retroactively seeks speculative time to infiltrate the present. Kim has held solo shows and events at various venues, including Gallery Hyundai, Seoul, Korea (2022); Kuandu Museum of Fine Arts, Taipei, Taiwan (2022); Ilmin Museum of Art, Seoul, Korea (2018); and Palais de Tokyo, Paris, France (2016). Her group shows, screenings, and performances include Sharjah Biennial, Sharjah, UAE (2023); International Film Festival Rotterdam, Rotterdam, Netherlands (2023); Beijing Biennial, Beijing, China (2022); STRP Festival, Eindhoven, Netherlands (2022); Asian Art Biennial, Taichung, Taiwan (2021); IMPAKT Festival, Utrecht, Netherlands (2020); Berlin International Film Festival, Berlin, Germany (2020); Korea Artist Prize, MMCA Seoul, Korea (2019), and Venice Biennale, Venice, Italy (2015). Ayoung Kim has been an artist in residence at Pavillon Neuflize OBC Research Lab, Palais de Tokyo, Paris (2015-2016) and Künstlerhaus Bethanien, Berlin (2011). Kim has received the Young Artist of the Year Award presented by the Ministry of Culture, Korea (2015), and the British Institution Award presented by the Royal Academy of Arts, UK (2010).

New Animation Art
Golden Nica 2023

IT'S DANGEROUS TO GO ALONE! TAKE THIS

Bassam Issa

IT'S DANGEROUS TO GO ALONE! TAKE THIS, a 30-minute-long CGI film, is the second part of an imaginary video game which follows an ambiguous "hero" undergoing numerous metamorphoses. The film challenges the amped-up constructed masculinity that video game avatars embody as well as the associated idealistic connotations of progress, growth, and transformation. Rather than just embracing the potential of computer-animated worlds, the film inverts their "logic" and questions their highly politicized and constructed nature. External worlds merge with internal ones, the body's selfhood untangles from surface, and emotions flood and disintegrate. Dream eroticism is blended with body horror, and scenes of destruction and decay juxtapose against scenes of resilience and rebirth. Bassam builds a world in which selfhood and queer possibility intersect, where multiple "glitches" occur within the body and gender, and binaries begin to break down. These glitches, or forms of discontent and unraveling, push and challenge preconceived narratives and habitual perceptions of masculinity, taking viewers through a spellbinding journey of metamorphosis and fluidity.

Courtesy of the artist, ©Bassam Issa

Installation view, The Douglas Hyde Gallery of Contemporary Art, Dublin

Installation view, The Douglas Hyde Gallery of Contemporary Art, Dublin

Courtesy of Douglas Hyde and the artist
Photo: Louis Haugh

**New Animation Art
Award of Distinction**

Bassam's hyper-synthetic aesthetic is at times seductive but often disconcerting and eerie, creating unique worlds of subtle storytelling full of visual and conceptual juxtapositions. Across the film, the viewer experiences scenes of destruction and decay against scenes of resilience and rebirth. These juxtapositions act as a platform to examine themes of identity, social binaries, and norms. *IT'S DANGEROUS TO GO ALONE! TAKE THIS* is part two of a series of two films—part one being *I AM ERROR.*

Written, directed and animated by Bassam Issa
Commissioned by the Douglas Hyde Gallery
With support from: Arts Council of Ireland
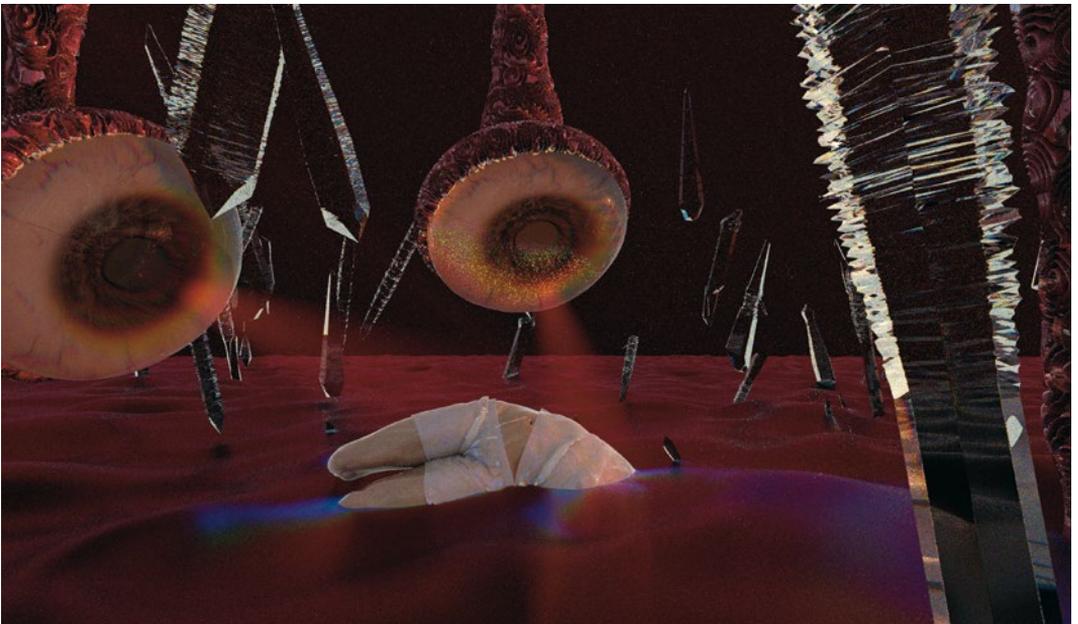
https://u.aec.at/9A301A57

Courtesy of the artist, ©Bassam Issa

Oneroom-Babel
SANGHEE

Oneroom-Babel is the title of a structure placed in the deep sea. The Korean term "Oneroom" refers to an apartment in which the bedroom, kitchen, and living room are not separated but integrated into one space. The players dive into the sea to discover *Oneroom-Babel* through the VR set-up installed in the exhibition hall. Upon diving, players visit residential spaces, once occupied by the people in *Oneroom-Babel,* one after another. The spaces are filled with sentences written by the artist and extracted from interviews with young people who live in a "Oneroom." With the texts, sound, and the dreamlike virtual space, players experience the space of a one room apartment in all possible ways. Since the virtual structure consists of the factual data captured by a LiDAR scanner, the players can feel the sense of space.

The artwork also allows the audience to be included in the experience of intangible trauma rooted in the space that is difficult to define by our senses alone. Players must keep a certain distance from the object since point cloud data composing the object seems to lose its identifiable form when approached too closely. *Oneroom-Babel* portrays the "living-in-one-room" experiences as a collective memory of young people who move away from their homes to the city and now have to stand on their own feet. The condensed experience of young Koreans leaving home, or rather, living in a one room apartment, can be verbalized with their "Onerooms" reframed into another lost hometown which they will leave again eventually.

The concept of "Oneroom" is a by-product of a complex housing problem which requires a house but hardly a home, a house to stay in after fleeing one's home, or a house for a temporary stay until buying an actual home. By employing the mediality of VR, this artwork presents the "affective" details of the housing paradox intertwined with political and economic aspects in Korean society.
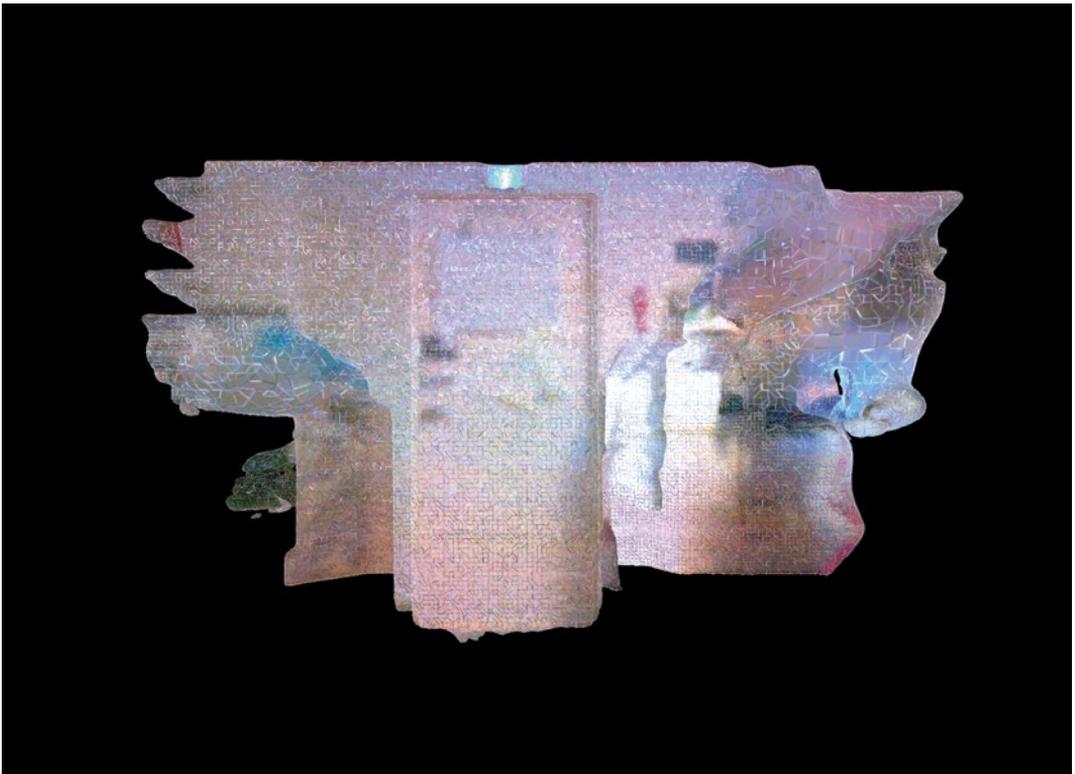
Courtesy of the artist, ©SANGHEE

New Animation Art
Award of Distinction

https://u.aec.at/51DA46BC

SANGHEE (Sanghee Lee) (KR) did photography while majoring in sociology. Her works emphasize the objects and places functioning as extensions of the human body. In line with such emphasis, she currently focuses on the affective gaps experienced when the physical input in the real world has an output into the virtual world or via the virtual world. Another main focus in her works is the way class distinction cooperates or conflicts with technology-intensive media. She uses various genres such as VR, sound performance, and video games as her medium.

Distant Distraction, Foul Breach, Separate Sensation

Lark Spartin

Distant Distraction, Foul Breach, Separate Sensation is a triptych video projection and augmented reality installation. Each of the three projected video panels manipulates a facial body part to refer to a perceived disembodiment that occurs in our digital interactions. To access the AR component of the piece, viewers can scan the projected images on the canvases hung in the gallery. The way that AR is used currently, mostly through the use of filters integrated into social media to morph users' faces and beyond, amplifies these platforms' inherent superficiality and has significant effects on individuals' perceptions of themselves and others. Viewers can witness animated hands reaching out towards them, as if reaching out for connection. When individuals flip to the front camera, a textured mask filter covers their face, promoting ideas of disembodied spectatorship. By distorting and filtering the face in a way that is meant to draw attention to itself, the work is a departure from how AR is typically utilized. This piece deliberately inverts AR's typical context and content, and confronts the entrenched norms of severe social separation. Through presenting the AR filters within popular social media platforms, the viewer is invited to reflect upon the problematic values that have arisen out of the use of social media, and consciously recognize what it means to "reach out" for authentic connection. Social interactions that are usually only accessible through a screen are now tethered to a gallery space, bringing awareness to how everyday social interaction through AR can be reframed as relational and contributory to art. By projecting the piece directly onto canvas rather

New Animation Art
Honorary Mention
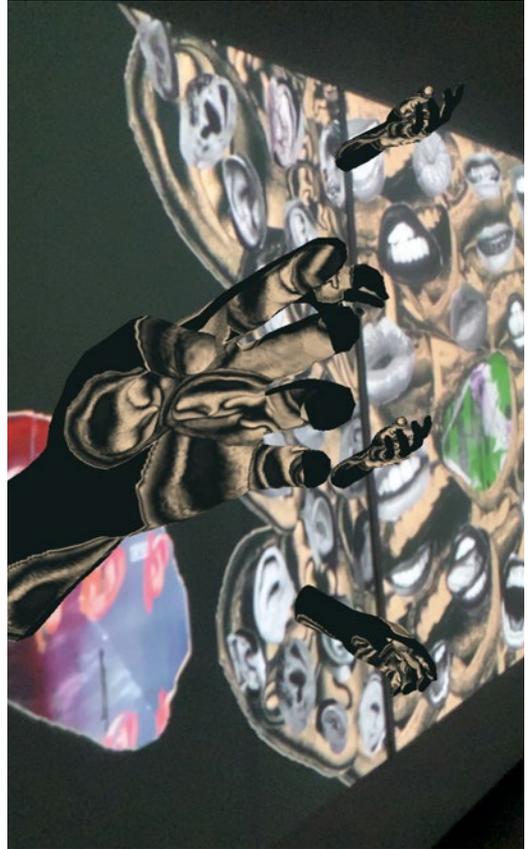
than a blank wall, the creative and relational potential of the medium, and the ways it can be exploited to prioritize this, are further emphasized. This interactive AR artwork raises awareness about the role we all have in reshaping the technology we use and reflects on the technology that shapes us

Lead artist, editor and installer: Lark Spartin
Thank you to John Desnoyers-Stewart, Megan Smith and Aleksandra Dulic for helping me refine the conceptual portion of the work.

https://u.aec.at/323989BD

Lark Spartin (CA) is a digital media artist, specializing in augmented reality (AR) art, video art and interactive installation. Her artwork inverts the typical use of AR to confront the superficiality and disembodiment embedded within social media platforms. She exploits technology that is used to quite literally filter how we relate to our world to emphasize its creative and relational potential. Through her art and research in digital relationality, she explores how applying theories such as relational aesthetics to digital media reveals the antagonism within the structures imposed by technology, leading users to imagine ways of living beyond the constraints we ordinarily operate within.

Distant Distraction, Foul Breach, Separate Sensation

33

Dzata: The Institute of Technological Consciousness

Russel Hlongwane – Substance Point
Francois Knoetze and Amy Louise Wilson – Lo-Def Film Factory

Dzata: The Institute of Technological Consciousness is a creative research project by South African artists Russel Hlongwane, Francois Knoetze, and Amy Wilson. In fabricating a fictional institute and its archive, the artists imagine vernacular technological practices operating across the African continent. The artists embed archival footage and 3D scanned elements within game-engine and AI-generated pixel landscapes to traverse new geopolitical imaginaries: with portable "backpack laboratories," the crop field, smelting furnace, forest or river becomes a mobile laboratory, a workshop.

The project title comes from the ancient capital of the Venda kingdom in the northern part of South Africa, which houses ruins built of blue stone in a style reminiscent of an architectural and technological wonder, the Great Zimbabwe ruins.

Drawing on the research of project mentor and leading technopolitical scholar Clapperton Chakanetsa Mavhunga, this work spans research, workshops, performance, sculptural and video work in an attempt to shift the image "African data" in the technological imagination. The creation of a set of prototypes called "objects of power," which embody acts of assembly, reinvention, translation, and innovation, form part of a mobile museum.

In the project's conception of modernity, we ask:

a) how can we draw examples from history which illuminate the invention of modernities from within, rather than received from elsewhere? and

b) finding none available to us in the internet's archive (because this archive exists in the everyday or the oral), how can we use AI and hybrid forms of animation and video-making to fabricate our own examples?

This research is grounded in an effort to map the historical landscape of technopolitics on the continent. In examining the failure of large-scale post-independence African techno-industrial projects, the monuments and mausoleums of failed technological projects become sites of experimentation and spaces for future knowledge production.

Created by:
Russel Hlongwane, Substance Point (ZA)
Francois Knoetze & Amy Louise Wilson, Lo-Def Film Factory (ZA)

https://u.aec.at/FADFDC1E

Russel Hlongwane (ZA) works between art-making (installation and film) and curating. His performance work operates as a bridge to transmit his academic interest to a broader audience, while his writing practice moves between academia, policy and art journals. He works intentionally with language (isiZulu) as a way to mobilize ideas contained in suppressed histories.

The **Lo-Def Film Factory** (ZA) was created by **Francois Knoetze** and **Amy Louise Wilson**. Their work involves archival research, dramaturgy, and visual strategies associated with video art, collage, sculptural installation, and new media, to create space for experimental community storytelling. They are particularly focused on engaging with young people to make participatory research-creation projects.

**New Animation Art
Honorary Mention**
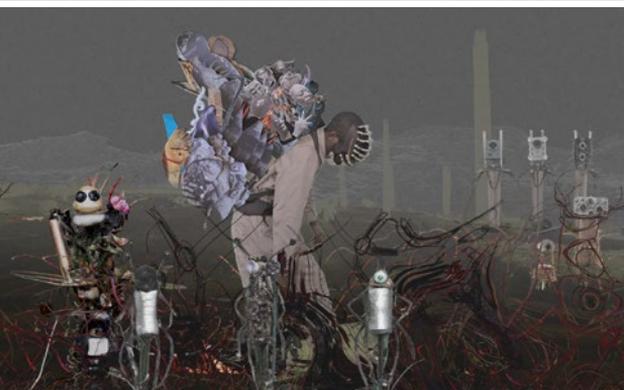
FuneralPlay

Ruini Shi

FuneralPlay is a fictitious simulated online funeral platform. It provides a digital domain for mourners to attend a simulated funeral for their lost loved ones. By interacting with a series of themes in a future online funeral, the audience will be directed to think about how digital legacies distributed through Web 3.0 will affect and mediate future human relationships.

The multicultural cemetery presented in *Funeral-Play* is an inclusive shelter for the values of the deceased. Whether it be a nerd's retreat, a classroom decorated with fandom culture, a feng shui master's orchard, a Dongbei gangster's midnight hideout, a gallery of cat memes, a dreary mahjong room, or something more conventional: any values, interests, and lifestyle can be cherished within *FuneralPlay's* virtual environments. Some of these scenarios are not typically or traditionally appreciated in mainstream culture, but after death, even marginalized people can find expression through the combined efforts of those they leave behind and *FuneralPlay.* Users may choose to delete their digital footprints before entering the service, others may secure their digital legacy on *FuneralPlay* as an inheritance to pass on, and others still might donate their memory to *FuneralPlay's* collective Memorial Hall.

FuneralPlay speculates on a future in which NFTs have already become the new model of reality and every single conceivable item now also exists as an NFT. In the setting of the online funeral, NFTs are given as memorial gifts to be sent to one of these virtual mausoleums. This is facilitated by blockchain technology, as mourners are able to purchase NFTs as tokens of remembrance for the deceased and permanently display them in the digital heaven-like space. Through interaction with the scene, the mourners find hidden clues and uncover them, obtaining prizes and enabling more gifts. The more time they spend in the space, the more rewards they can achieve.

DISCLAIMER
FuneralPlay does not have any actual financial function, and it does not share data with other platforms.

FuneralPlay is a fictitious simulated online funeral platform. It provides a digital domain for mourners to attend a simulated funeral for their lost loved ones. By interacting with a series of themes in a future online funeral, the audience will be directed to think about how digital legacies distributed through Web 3.0 will affect and mediate future human relationships.

The website is a prototype of a future funeral scenario in a metaverse environment, which speculates on a near future when diverse ideologies and values are accepted within the setting of a funeral.

https://u.aec.at/048F636F

Courtesy of the artist, ©Ruini Shi

Courtesy of the artist, ©Ruini Shi
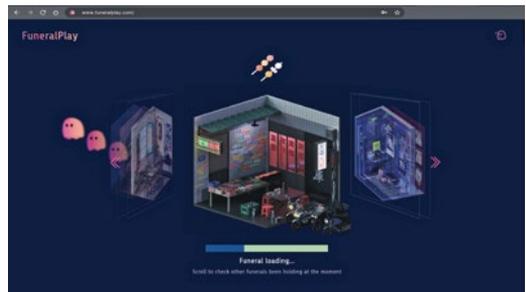
Ruini Shi (CN) is an animation director and crypto researcher. Ruini explores virtual intimacy and creates narratives that interrogate the compatibility between humanity and emerging technologies. She holds a BA in Interaction and Moving Images from the London College of Communication and an MA in Animation from the Royal College of Art. Her animated films have been awarded prizes including the Award of Distinction at Prix Ars Electronica in 2019, and her work has been exhibited at festivals worldwide including Animafest Zagreb, Royal Television Society Award, transmediale, and the Lumen Prize. Ruini is currently a PhD candidate, investigating the possibilities presented by the confluence of crypto and animation.

**New Animation Art
Honorary Mention**

FuneralPlay

Select the item that your deceased loved one
was obsessed with
Click to verify how much you miss them.

I truly miss them

FuneralPlay

https://www.funeralplay.com

GLITCHBODIES
Rebecca Merlic

New Animation Art
Honorary Mention

GLITCHBODIES, is a multiplatform project that consists of a visual novel game, a VR-Game Experience, an animation movie, and a performance piece. The inclusive project portraits more than 59 international protagonists from Vienna, Munich, Zagreb, Hamburg, London, Bangkok, Berlin, and Tokyo who co-created a parallel GLITCHBODIES-verse with me.

Created through collaborations and rituals GLITCH-BODIES explores new forms of feminism, LGBTQ+, Drag transformations and intimate sensitive representations of the protagonists, and aims to bring them to a wider audience. In GLITCHBODIES, Avatar becomes a collective and politically charged body. Video games have undoubtedly become the most widespread form of entertainment and its impact on representational stereotypes is huge. GLITCHBODIES responds to socio-political factors as well as to the very male-dominated world of video games by creating an interactive digital space, a fluid journey through infinite individual, gender, and realities. GLITCHBODIES provides a safe platform for non-heteronormative gender positions sharing the notion of queer as political

attitude, providing new perspective for the player while celebrating its protagonists with motherly care. The game engine creates safety by ritualizing the celebration of all protagonists within the world, as a mother would. This generates and opens new perspectives for the player, for you. The world within a world is instantly familiar, full of ambitions, wishes and desires through strong and sensitive collaboration with the all-important issue of all-gender equality. As more protagonists gather in GLITCHBODIES, the resolution of gender in the world rises higher and higher.

https://u.aec.at/AB46470F

Rebecca Merlic (HR/AT/DE) (*1989) is a European digital artist and architect, experimental filmmaker and university assistant in the core team of Experimental Game Cultures at the University of Applied Arts Vienna. Her work is strongly influenced by alternative ways of society and transgression in socioeconomic conventions as well as new forms of artitic and architectural production employing new technologies. She is the holder of the Marianne von Willemer Prize 2020 for digital media. Currently she is a transdisciplinary resident at the European Alliance of Academies *Ignorance is Strength* AIR program, and she is working on DigitalHumanism x FutureLiving in collaboration with the Austrian Cultural Forum in Tokyo.

huě iànn

Yu-Han Chen, Ching-Wen Hsu, Ruei-Sin Jhang, Li-Hua Zhan, Tung-En Chien, Pei-Chi Wu

In the past years, people were oppressed by powerful external forces, depriving them of basic necessities, the right to speak, and even their lives. This stands in stark contrast to modern times. Those who have experienced these tragic events chose to embrace comfortable oblivion in order to survive, resulting in a significant gap in our collective memory of these histories.

In *huě iànn,* we aim to explore the history and culture of Taiwan, examining the profound influence that historical events, words, and ideas can have. Some aspects, currently inexpressible, can only be conveyed through writing. However, the records of Taiwan's experiences during this period are dilapidated. The bridge of dialogue with the past has been severed, rendering the past unattainable. There are days that may vanish at any moment, forcing one to keep their emotions to themselves. Therefore, we employ animation to rediscover lost time, hoping to unravel the true significance of speech. Initially, our focus was on discussing the Taiyuan incident. However, we soon realized that numerous other significant and minor incidents from that time were all connected to the freedom of speech. Alongside freedom of speech, the theme of *huě iànn* also encompasses the reactions of all those who witness this work. While our thought process remains clear as we delve into this theme, peeling back its layers resembles peeling an onion. The imagery gradually blurs, as if viewed through smoke-filled eyes, persistently echoing within.

It has been some time since the completion of this work, and we faced numerous challenges during its creation. We questioned whether using VR videos was truly necessary or if other creative mediums would be more suitable. This theme caused us to hesitate considerably. However, every bit of information we unearthed and encountered held great significance. Each team member contributed a wealth of ideas that needed to be seamlessly incorporated into the presentation, requiring immense effort. Although the final product may not be fully mature and there are areas for improvement, *huě iànn* stands as a remarkable achievement for us.

Director, producer, script, animation, camera, layout, storyboard, graphics: Yu-Han Chen
Director, producer, script, animation, editor, camera, layout, storyboard, graphics: Ching-Wen Hsu
Director, producer, animation, camera, layout, graphics: Ruei-Sin Jhang
Director, producer, camera, layout, storyboard, graphics: Li-Hua Zhan
Director, character design: Tung-En Chien
Director, lighting: Pei-Chi Wu

https://u.aec.at/54F37889

Yu-Han Chen, Ching-Wen Hsu, Ruei-Sin Jhang, Li-Hua Zhan, Tung-En Chien, Pei-Chi Wu

New Animation Art
Honorary Mention
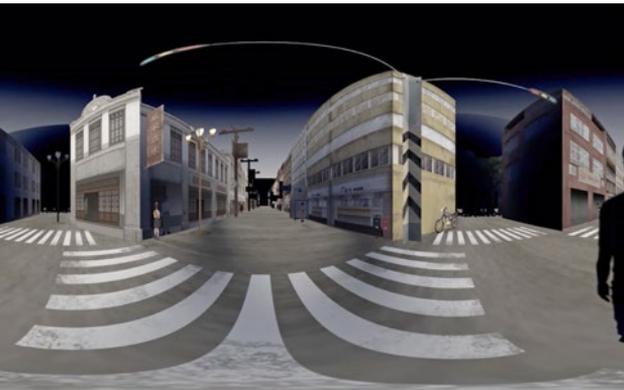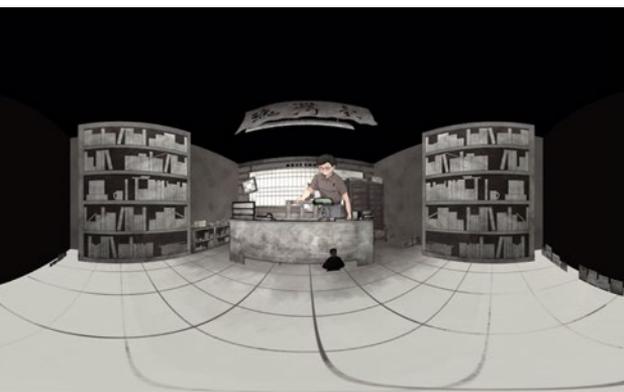
Yu-Han Chen (TW), **Ching-Wen Hsu** (TW), **Ruei-Sin Jhang** (TW), **Li-Hua Zhan** (TW), **Tung-En Chien** (TW), **Pei-Chi- Wu** (TW) form the team of artists that created *huě iànn.* The team comes from the Department of Visual Communication Design at Jinwen University of Science and Technology in Taiwan. We met during a self-organized seminar under the guidance of Professor Chao-Pin Liao and reached a consensus on our creative approach, which led us to collaborate and embark on a journey of creation. We explore things that exist in our lives but are rarely explored, and we also venture into production methods we have not previously encountered. During the creation of the VR video, each person had their own ideas, leading to numerous revisions. Eventually, we gathered the team members' thoughts and gave birth to *huě iànn.*

I Took a Lethal Dose of Herbs

Yvette Granata

Based on a series of Reddit posts from 2017–2020, *I Took a Lethal Dose of Herbs* is an animated VR documentary centered on an anonymous woman's experience with a failed DIY herbal abortion and postpartum psychosis. We take an anxious journey with the protagonist as she reveals her story through hallucinations and flashbacks. A former evangelical activist who once spent her weekends praying outside of abortion clinics, her life takes a turn after the birth of her first child. She suffers a psychotic break and believes her baby is a demon. We travel with her through glitchy hallucinations of hell and demon babies. After recovering, she finds herself unexpectedly pregnant again and accidentally poisons herself during a DIY herbal abortion. Ultimately she must choose between motherhood, her life, and her sanity.

The film takes a "hybrid" approach to VR as both interactive and "filmic", blending 3D animation and creative documentary, in order to tell the main character's story as an intimate psychological crisis that is steeped in the flows of digital culture. The user is immersed in a first person point of view, embodying the main character's body and mind. We inhabit her pregnant body, hear her thoughts as she posts online, see the visions of demon babies through her eyes, hear social media notifications ding in our ear, and watch the flows of online forums pass in front of us in our bedroom. As a VR film, the user can interact with various experiences embedded in the story, but regardless of what the user does, they will still always experience the story of the main character through her body and her mind. In this way, the user not only feels the story of the bodily perspective but also experiences a small glimpse of the psychological state of postpartum psychosis and the experience of DIY abortion that many women secretly go through alone.

New Animation Art
Honorary Mention

Writer, director, 3D artist and producer: Yvette Granata
Unity XR/UX developer and senior programmer: Troy Allen Norcross
3D animation/3D generalist: Julian Sestanovich
Additional producer: Knox White
Cast: Lee Sy, Tyler Shamy, Stella James Fenton, Emiko Susilo

Music: Original Score: Alfredo Cabrera
Featuring Music also by: Yoneda Lemma
With support from: University of Michigan

https://u.aec.at/E05DA1B1

Yvette Granata (US) is a media artist & filmmaker. She creates immersive installations, video art, VR films, interactive environments, and builds hypothetical technological systems. She is an assistant professor at the University of Michigan in the department of Film, Television and Media & the Digital Studies Institute.

Inter net
Zi Yin Chen, Hsiang Feng Chuang

Similar to "Moore's Law", many studies show that the quantity and speed of information transmission on the Internet are growing exponentially.

Humans are not only users of the Internet, but also contributors. The Internet has collected human wisdom, connected human consciousness, and gradually penetrated the gaps in human existence, changing the way humans view and understand the world, and also the way of life of human beings. Accidentally, I downloaded all my search records recorded since I started using google. My vexation in first love, the curiosity about sex, the hesitation in choosing a major... Or maybe I just wanted to find a pirated video website or a restaurant... Even some private troubles or evil thoughts that I had never mentioned to any close relatives or friends. These thousands of thoughts that have ever come to me, without distortion and modification, have been transformed into a series of objective and rational raw data.

It turned out that I took the initiative to talk to the Internet for more than ten years, but I wasn't aware of it, everything happened so naturally and freely. It's like an exchange diary I've unconsciously written with the Internet. I ask all questions without reservation, and the Internet always replies. I should be grateful, but these secretly kept records seem to be taking nude photos of my heart all the time.

Should I feel grateful or angry? My reliance on the Internet can also be read between the records. I have long forgotten how to live without it. As a digital native, I've never even lived like this. Is this some kind of Stockholm Syndrome? Or is it a mental rejection of cyborg inserts? I'm messed up.

The Internet's relationship with humans seems to be more intimate than imagined. In this work, I completely exposed all the search records in the public space without any selection. I wanted to seek answers by "making myself public". If I tell everyone what I tell the Internet, what will my feeling about the Internet become?

https://u.aec.at/560179F0

Zi Yin Chen (TW) was born in 1995. Chen has received awards including the Next Art Tainan, the Nanying Award, and the SANCF Award. Her works hover between the borders of senses and science, contemplating the differences and similarities and how they influence human perception of reality. Her work integrates space, lighting, sound, and often incorporates data from the International Space Station and renowned scientific images. **Hsiang Feng Chuang** (TW) was born in 1994. He is both an artist and an AI researcher. Starting from the principle of technical operation he makes connections with philosophy and society. His artwork mainly discusses the communication mechanism and interface of images in the digital age.

**New Animation Art
Honorary Mention**

Le Mal des Ardents (Ardent Other)
Alice Brygo

A stunned crowd faces a fire.
The threat has no name,
a diffuse anguish spreads.
Fear needs to be conjured,
fire must be turned into a sign.

Director's Statement:
The film proposes an immersive experience surrounding the spectators of a fire, diving into the realm of their different interpretations. Always offscreen, the fire becomes a signifier inflated by the imagination, which crystallizes a certain climate of societal tension.
The project started with the images I filmed of the people facing the fire of Notre-Dame de Paris. The emotions that spread through the crowd and the mass behaviors I witnessed were then reconstructed using photogrammetry and sound staging.

**New Animation Art
Honorary Mention**

Video Stills ©Alice Brygo

The reconstitution of this moment through the film testifies an atmosphere that is still contemporary: an era marked by a globalized loss of reference points between information and rumor, by the rise of nationalism and identity-based radicalizations, and by the media that only stir up conflicts for their own profit. It is a reflection of my own stupor among this anxious crowd, an attempt to grasp this climate of group psychosis that seems to be spreading on the networks, in France, and elsewhere.

Director: Alice Brygo
Screenplay: Alice Brygo, Paulo Gatabase
Producer: Le Fresnoy: Luc-Jérôme Bailleul
Cinematographer: Alice Brygo
Sound editing: Paul Lajus, Alice Brygo
Sound recording: M'Hand Abadou Djezaira, Clémence Dufieux, Benjamin Poilane
Sound design: Paul Lajus
Editor: Alice Brygo
Composer: Fatma Pneumonia, Paul Lajus
VFX: Nathan Ghali
Cast: Clara Dessertine

https://u.aec.at/4D5357D9

Born in 1996, **Alice Brygo** (FR) graduated from ENSAD Paris and Le Fresnoy. Her artistic practice is situated at the borders between documentary, fantasy cinema, and art installation. Her short film *Soum* premiered in Berlinale Shorts and was awarded Best Student Film in GoShort and Grand Prize at Brive cinema festival.

Lebensraum / Living Space

Sven Windszus

With every passing minute, our planet is home to 150 more of us. At the same time sea levels rise another 3 or 4 feet on average. 40% of the world's population lives within 100 kilometers of the coast. That means that we are destroying our living space (*Lebensraum* in German).

With *Lebensraum,* I want to invite each participant to use their own muscle power to control the growth of our species. I have reduced the real conditions we are facing to a form of physical experiment. The problem of overpopulation, the resulting destruction of our living space and the steady rise in sea levels, have been put into a visual context.

Pressing on the pump causes heads to appear. If too many heads are pumped up, the available space expands, but the rising water level problem worsens.

Just a few movements of the pump should make it clear to participants where this experiment is headed. The question is: how do we deal with this responsibility—do we keep pumping and see more and more heads pushed under the water or do we halt the process before this happens?

In my work, I want to engage with the phenomenon that, although we have recognized the problem of overpopulation and the resulting destruction of our environment, this realization is not usually reflected in our actions. *Lebensraum* renders this contradiction tangible. Each participant unconsciously assumes the role of the entire human race—an individual stands for the collective. By means of their actions, the participant gets to determine how much growth is good for our planet. If all the heads are inflated at the end, the water will almost completely flood the space and the following error message "UNEXPECTED ERROR. RECOVERING LIVING SPACE" will appear for one minute. The participant will see the maximum growth as an unexpected error. Unlike in reality, the program can renew the required living space. The project was developed in 2020/21 and completed in 2021.
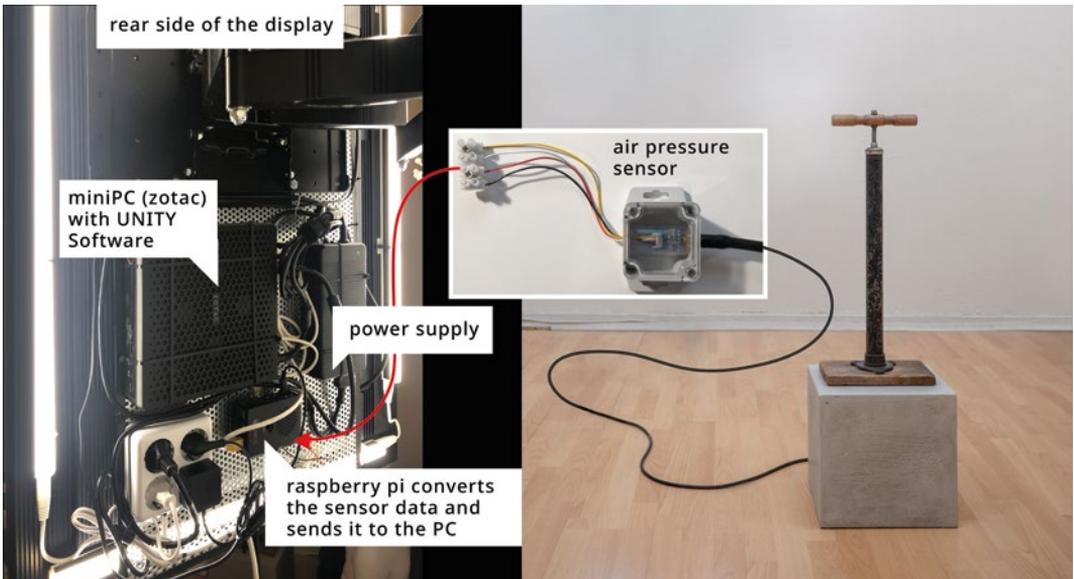
rear side of the display

miniPC (zotac) with UNITY Software

air pressure sensor

power supply

raspberry pi converts the sensor data and sends it to the PC

Sven Windszus

Work and concept: Sven Windszus
Programming: Johannes Deml (https://deml.io) and
Alexander Jasper
Engineering support: Ulrich Kwade

https://u.aec.at/0C02BFC2

Sven Windszus (DE) is a multi-disciplinary artist based in Berlin whose practice merges digital art, installation, and mixed media. He was born in 1974 and studied at the University of Applied Science and Art in Hildesheim, Northern Germany. Throughout his professional career, Windszus has worked as a motion designer for companies to promote products and position brands in such a way that they attract the public's attention and generate profits. In 2018, the artist began to explore existential questions with an artistic approach to motion design to counter the superficial, meaningless nature of the commercial art field.

PLSTC
Laen Sanches

Welcome to the world of *PLSTC.* My intention with this project was to tackle plastic pollution by creating an intense confrontational piece of work that depicts an undersea dystopia and elicits an awkward visceral, cerebral, and emotional response from the viewer. Somewhere between a fascination with the classic beauty of underwater imagery at the same time as sheer horror of plastic pollution. No animals were harmed during the making of this film since *PLSTC* is 99% a mixed-media digital fiction. It is the result of an experimental process involving a symbiosis between human sensitivity and digital tools, some of which use generative artificial intelligence. *PLSTC* is composed of almost 400 SFX shots. All the while, an intense piece of classical music is used to carry the visuals along while building to a crescendo that underlines the urgency of this problem.

First, I created (with the help of Midjourney, a text2image AI software that uses prompts to generate unique still images) a collection of several thousand images representing approximately 40 animal and plant species in order to select the most compelling ones for the film. Once manually retouched and recomposed using Photoshop, I transformed these 400 final stills into individual 3D scenes with a depth maps generator tool which also relies on AI. Then, I again manually touched up the individual shots to ensure their visual credibility once in movement. After enlarging each shot to 4K, with the help of another specialized AI software designed for this purpose, I was able to begin editing and compositing the film with traditional postproduction software such as Premiere and After Effects. 99% of the film is digital and the remaining 1% is the footage of real particles.

From the original concept to the sound design surround mix, the production took me two months and went rather smoothly and much quicker compared to say, a classic CGI production.

Finally, I pledged to give 20% of any profits earned by *PLSTC* to NGOs on the field.

Producer, director, animation, editing, special effects: Laen Sanches
Music: PremiumProductionTracks provided by Pond5
Sound design : Magnus Monfeldt, Nick Smith
Sound editing: Stainless Sound

https://u.aec.at/B8D2EA39

Laen Sanches (FR) is a French filmmaker and multidisciplinary creative based in Amsterdam. He studied applied arts and has a postgraduate diploma in producing and directing animated films. After starting his career in the special effects industries in Paris and L.A., he returned to Europe to expand into art direction and motion graphics. Laen has received international recognition for both his commercial and personal work. Today, he freelances as a creative and motion director for international communications agencies and global brands, while producing and directing personal projects.

**New Animation Art
Honorary Mention**

Rhizomatiks x ELEVENPLAY "multiplex"

MIKIKO, Daito Manabe, Motoi Ishibashi, Satoshi Horii, Yuya Hanai, ELEVENPLAY, Rhizomatiks

An installation featuring motion data from five dancers, projected images, and a mobile robot, presented in two physical exhibition spaces and online. More than a transposition of real expression in virtual space, the project was a hybridization that sought to create an environment for a new breed of humanity from multiple perspectives. Within the main exhibition space, five cubes moved autonomously, while an autonomous mobile camera filmed the space. The camera captured the projection visuals that cascaded across the walls and floor. In the front exhibition space, this footage was displayed in real time, showcasing AR-synthesized dancers. Visitors were afforded a curiously palpable experience of dancers who otherwise existed only as video and motion data. An online exhibition was created from the installation data, creating a multilayered window on the work in real, virtual, and online spaces.

1. Mobile robots

A stage area measuring 27 m wide and 7 m deep was blanketed with images covering the entire floor and wall surfaces. Five 90 cm cubes ran inside this stage area. An infrared camera was used to precisely detect the cubes' positions and prevent collisions.

2. Multilayered exhibition

In front of the stage, we displayed video of dancers dancing amongst the cubes, replete with AR effects elucidating the dancer and cube movement. Whereas such performances are typically only presented to viewers as a completed video, this installation sought to simultaneously demonstrate the underlying staging mechanism. By watching the performance unfold in real time, the viewer was given a heightened sensation that the AR dancers were actually present onstage with the cubes.

This look behind the curtain complemented the completed performance shown in the preceding room and gave viewers a multifaceted understanding of the installation.

The online exhibition provided yet another way to visualize the same space in 3D, drawing on cube positioning data, dancer motion capture data, and more.

Concept, technical direction, visual design, sound design: Daito Manabe (Rhizomatiks)
Concept, technical direction, hardware engineering: Motoi Ishibashi (Rhizomatiks)
Visual design, programming: Satoshi Horii (Rhizomatiks)
Choreography: MIKIKO (ELEVENPLAY)
Dancers: SAYA, KAORI, EMMY, YU, MARU (ELEVENPLAY)

https://u.aec.at/623E19B4

Muryo Homma (Rhizomatiks)

New Animation Art
Honorary Mention
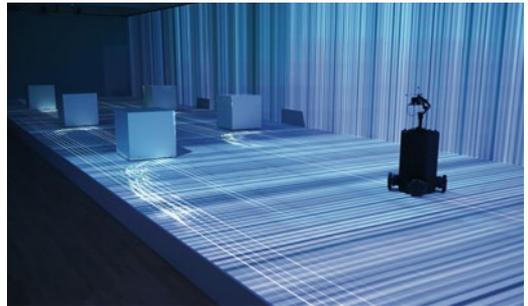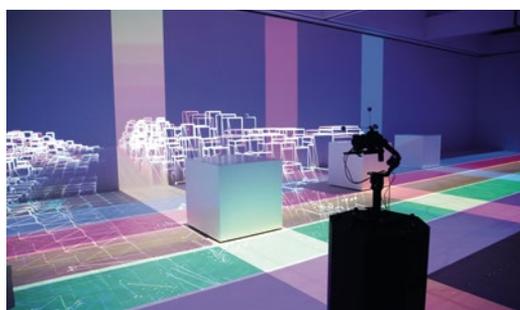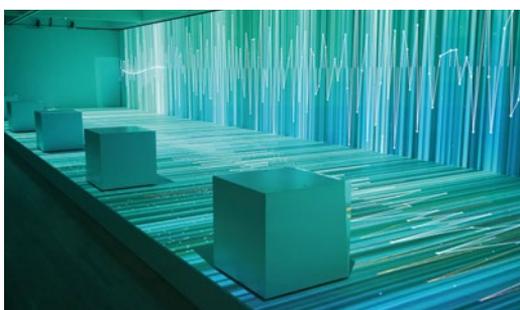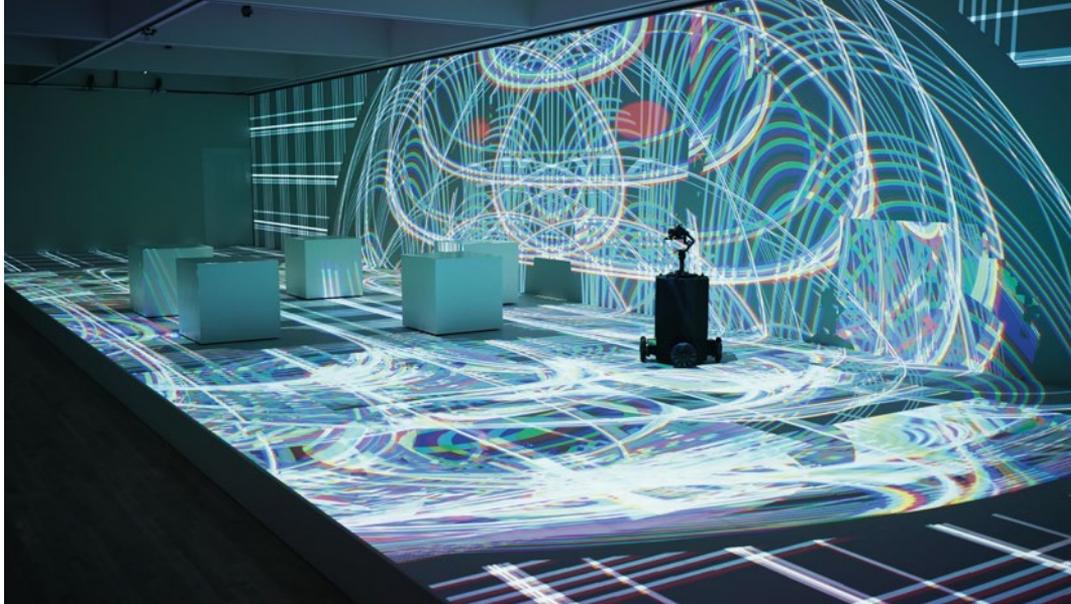
Muryo Homma (Rhizomatiks)

Rhizomatiks × ELEVENPLAY "multiplex", Exhibition Views, The Museum of Contemporary Art Tokyo, 2021

ELEVENPLAY (JP) is a dance company directed by choreographer & art director, MIKIKO. ELEVENPLAY was founded by MIKIKO in 2009, in the hopes of creating dancers who possess highly artistic sense and creativity on top of exqui-site techniques, body and spirit. Composed of female dancers from a variety of genres, ELEVENPLAY's methods of expression are diverse, including stages, video works, and still photos. https://elevenplay.net **Rhizomatiks** (JP) explores new possibilities of technology and expression, focusing on experimental projects which involve an R&D heavy approach, while taking responsibility in every process of the project from hardware and software development to operations. Rhizomatiks creates and carries out R&D projects with elaborate research on the relationship between humans and technologies. Additionally, the company keeps presenting more cutting-edge research and works through collaboration with other artists, researchers, and scientists. https://rhizomatiks.com/

Smog Season

Witaya Junma

Smog Season is an artwork that satirically compares the bad effects of cigarette smoke on the human body with current air pollution in Bangkok, using pictures and warnings similar to a cigarette label. The artwork invites audiences to realize the harmful effects of PM 2.5 air pollution and to start questioning the issue. Nowadays, people tend to misunderstand and adapt to living with the problem as if it were a normal weather condition. If we view the problem of PM 2.5 as a season, it would be like a severe monsoon that people must suffer and endure. Air pollution is considered severe and has long-term health effects that should be taken seriously.

The artwork references PM 2.5 data from aqicn.org and the research titled "Air Pollution and Cigarette Equivalence" by Richard A. Muller and Elizabeth A. Muller, which showed that smoking 1 cigarette is equivalent to putting 22 micrograms of PM 2.5 into your body per cubic meter per day.

Smog Season aims to stimulate thoughts about the chronic air pollution problem in Thailand and encourages people to question their right to breathe clean air. This issue is not unique to Thailand but is faced by many countries worldwide, and solving it requires cooperation from both the government and private sectors.

Artist: Witaya Junma
Curator: Sanitas Pradittasnee, Narongsak Nilkhet
With support from: Bangkok Art & Culture Centre, FabCafe Bangkok

https://u.aec.at/DB7F6B91

Reference link: *berkeleyearth.org/air-pollution-and-cigarette-equivalence*

Witaya Junma (TH) is a Thai artist who combines science, technology, and machinery with art to create new and innovative forms of expression. He has over 10 years of experience in interactive, installation, and multimedia arts both in Thailand and abroad. In 2019, he won the Special Prize of YouFab Global Creative Awards in Japan and the Silver Award of the 25th ifva Awards in Hong Kong. http://www.witayajunma.com

Courtesy of the artist, ©Witaya Junma
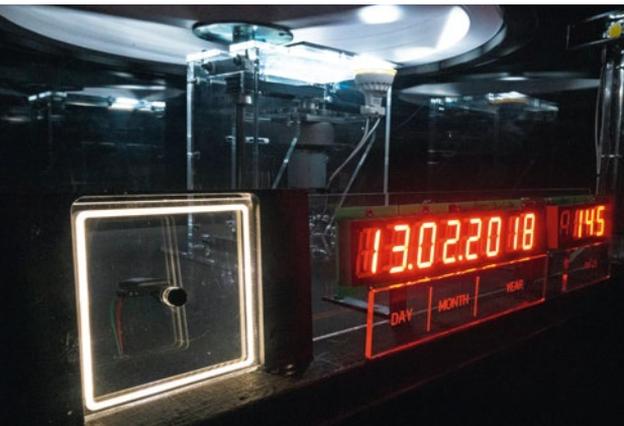
Artificial Intelligence and Life Art

Artificial Intelligence and Life Art

Statements by the Jury—Kasia Chmielinski, Paolo Cirio, Jens Hauser, Nora N. Khan, Jurij Krpan

This year's worthy projects favored critical, layered explorations of the ideological construction of AI. We were delighted to find a wide range of formally inventive, and aesthetically moving works that took up artificial intelligence in all its eras and forms. Submissions dove deep into competing myths, histories, fictions, and imaginaries of AI and machine learning. They examined how computation and predictive algorithms shape our thinking even as we drive their design.

Many of the artists have been working in hybrid collaborations with AI and ML for over a decade. Political critiques were considered in tandem with aesthetic development, and moral urgency. It was impossible to work with AI or ML without engaging with the political, aesthetic, moral aspects at play in its design and use. AI constructs dominant notions of the human by accelerating the seductive, false dream of "neutral and objective" knowledge. And yet, there is no pure space of purely rational, logical engagement with machines and systems "free" from culture, history, or the body.

Nora N. Khan

Considering the limits in understanding ethics within a biased and unfair society, we questioned how ethics can ever be embedded in Artificial Intelligence. Therefore we questioned the ethics of the outcomes, intentions, and the discourses of the projects and the artists, including our own jury, placing art in relation to such ethical frameworks and contexts. Art and intelligence can't be neutral since their understanding and function depend on limited cultural contexts and cognitive systems. Through such a critical attitude in assessing the projects, we deconstructed the cultural definition of Artificial Intelligence, artistic formality and mediums, as well as the general notions of technology and life. These relationships emerged also from several works addressing the ecological and climate crisis through the use of data, algorithms, and platforms, a tendency that senses the shift in understanding the notion of life not as an apolitical scientific phenomena, but rather directly interdependent on technology and information created by human knowledge, which ultimately is increasingly manipulated by Artificial Intelligence.

Paolo Cirio

As the reach of technical and biological intelligences expands rapidly through the deployment of large-scale algorithmic systems and shifts in accessibility of precision medicine, personal genomics, and reproductive tech, there is a deep need for critique that complicates these experiences. Our deliberation goal was thus to identify work that opens new vectors to challenge and (re)define intelligence. We encountered many themes from grief (eco-grief, diminished cultural specificity and memory, the loss of autonomy) to hope (speculative worlds, tools for creating and sustaining life), delivered through shared mechanisms such as the generation of digital worlds, slow-technology, and the extraction, cross-modal processing, and in some cases obfuscation of signal from noise. We sought art beyond artifact, technique that pushed rather than reiterated the capacity of the tool, and critical perspectives on the very definition of intelligence. The finalists represent a global community that is too often being tested on in production but refuses to stop plotting and dreaming about future intelligences.

Kasia Chmielinski

The works awarded this year are indicative of skepticism and dystopia with regards to technological innovation—considered less tools for hope or "progress" than source of misuse, bias, and authoritative control in times of major ecological and geopolitical crisis: automated fake news, censorship, species extinction, eco disasters, and mistrust in AI's transformative power outranked utopian potentials in a jury session dominated by political positions. Here, the binary in the category's name itself, operating with the ambiguous notions of "artificiality," "intelligence," and "aliveness" leads to an unexpected new "paragone" with regards to media adequacy in relation to the topics at stake, and to a flattening between imagination, representation, simulation, and actual manipulation of "the living." Given the violent geopolitical situation with e.g. the crackdown of Iranian protest, Chinese media control and the Russian war on Ukraine, the jury—in conjunction with the Prix' direction—even had to consider whether potential awardees would risk life-impacting consequences, or whether other awarded artists would resign as a consequence.

Jens Hauser

Most of the judging in jury sessions was characterized by a dualism that is somehow written into the very name of the category, where Artificial Intelligence, which is essentially a digital tool, is juxtaposed with Life Art, which is a field where aliveness and biomedia are saturated with various, not only digital, technologies. Thus, the judging process saw the focus of the criteria slide more towards determining excellence of execution concerning one of the poles in the dichotomy of AI & Life Art, and less about the meaningful intersections between the two. Avoiding an either/or choice, where either excellence in a selection of virtuoso programming and artificial uses of AI on the one hand, and ethical uses of liveness on the other, the dynamics of the jury revolved mainly around projects that problematized the social effects of surveillance, inclusivity, ethics, ludicism, etc. This brought to the forefront of the selection process the questioning of the ideological positioning of each work of art and the cultural and political context in which it was produced.

Jurij Krpan

Golden Nica

Unerasable Characters Series
Winnie Soon

This year's Golden Nica is awarded to the *Unerasable Characters Series,* a three-part investigation of the scale of digital authoritarianism through the transformation of censored content by some of the very technology used to control it. Artist Winnie Soon (HK) uses machine learning techniques combined with DIY and open source approaches to complicate notions of control and power: Is material generated from censored information also "forbidden"? Can knowledge of censorship combat the normalization of erasure? And how does the intersection of systemic censorship infrastructure and networked global crises—such as the COVID-19 pandemic—increase both the value of our communication and the danger of forced silence? How is Artificial Intelligence being used to automate censorship and erasure? *The Unerasable Characters Series* investigates these questions of agency and control through the manipulation and transformation of regularly scraped content from Weibo, one of the largest Chinese social media platforms (similar to Twitter). Critically, much of the content scraped is ultimately censored and removed by the Chinese government, but lives on in the archives used throughout this project. Soon uses a variety of techniques to communicate and escalate critical commentary about censorship, from the highly tangible and whimsical to the ephemerally digital and frustrating. In *Unerasable Characters I,* censored materials are used to generate new content that is bound in a book which, in turn, challenges the definition of "forbidden text." In the second work, voices—characters—disappear before our very eyes, as chatty textual representations are "censored" in real time. Each successive experience is increasingly frustrating, culminating in *Unerasable Characters III,* a display of censored posts relating to the COVID-19 pandemic that is devoid of all content except punctuation, emojis, and special characters. Stripped of content but sprinkled with signposts of meaning, we encounter just enough to fear how much we're missing.

Although Soon's work serves as stern commentary on the increased role of pervasive, automated digital surveillance infrastructure in the control and erasure of dissenting voices, it also highlights the

Artificial Intelligence & Life Art
Jury Statement

opportunity created through the combination of digital "breadcrumbs" and algorithmic techniques. By transforming scraped, censored content into "new" experiences that avoid or circumvent surveillance, Soon ultimately questions whether the very same technology that aims to remove information can be hijacked to make the erased unerasable.

Awards of Distinction

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

In times of hyperbolic promises of so-called "precision farming" powered by "artificial intelligence" and big data, soilless farming techniques such as hydroponic systems and vertical gardens to "green" urban spaces, the *3SDC (Sunlight, Soil & Shit (De) Cycle* project stages a functional and monitored, yet voluntarily contestable circular food system. As a weeks-long durational performative set-up involving a series of interconnected processes—controlled growth of plant and animal tissues, optimized environment agriculture, composting, and alkaline hydrolysis biocremation—Oron Catts, Ionat Zurr, and Steve Berrick point to the failure to acknowledge so-called "ecosystem services" and biodiversity concerns in innovative and abstract agricultural ventures, often even in the name of sustainability. Here, "cellular agriculture"—growing animal cell tissue outside an actual animal to produce allegedly "victimless meat"—is carried out not to be consumed but to be turned into fertilizer, thus ironically reversing the paradoxes inherent in animal protein production. And the manifold sensors to measure the artificially created "climate variables," culminating in a control room, mainly serve to validate otherwise absurd bio-cybernetics via the production of data, which has become our societies' central currency.

Shadows from the Walls of Death
Adam Brown

Shadows from the Walls of Death is a complex and multi-layered intermedia and live art project that puts anthropocentric assertions to the test in an age of ubiquitous greenwashing. The project involves and combines chemical synthesis and field research into naturally detoxifying microorganisms and plants used in bio- and phyto-remediation, and thus emphasizes eco-systemic intelligence to address trans-historical issues of inherent toxicity of human made media to represent "nature" from an exclusive human-only point of view. In a dramatically aestheticized and functional live laboratory, Adam Brown recreates toxic green pigments, used since the 18th century in wallpapers and paintings to re-establish at home, ironically, people's material connection to "green nature," ruptured by the Industrial Revolution. The artist points to the hidden sides of humans' "chlorophilia" by re-enacting recipes for bright pigments, which also served as rat poisons, and ultimately bio-remediating Van Gogh–referenced motifs with extremophile bacteria and hyper-accumulating sunflowers. The jury acknowledged the media archaeological dimension of the work used to question and highlight the material conditions and effects of media technologies in general.

Honorary Mentions

Biobot
Zoran Srdić Janežič

The *Biobot* project explores the possibilities of a hybrid bio-cybernetic aliveness by transferring fat cells into neurons on a Multielectrode Array (MEA). The AI program uses the input signals from an evolutionary algorithm sent to neurons and compares the activity of the neurons on an MEA with possible leg movements in a library of movements from different arthropods to determine the shape of the *Biobot*. The bot joints are equipped with servo motors to enable *Biobot* to move in physical space. The project reveals the possibilities of a hybrid bio-cybernetic aliveness with its aesthetics, intelligence, and movement. The hardware enabling the *Biobot* aliveness is a custom-designed incubator, a data acquisition system built inside the incubator, and an AI-designed robot, while the software uses RoboGrammar, an evolutionary optimization algorithm, to search for a robot configuration that can move within a given environment. The jury found the excellence of the project in the unique combination of the hardware, software, and wetware, where their interoperability intends to enable unexpected behavior and therefore emancipate the *Biobot* from human productivistic expectations.

Codex Virtualis_Genesis
Interspecifics

Interspecifics' *Codex Virtualis_Genesis* is the result of years of artistic research and technologically inventive practice. We're invited to see emergent complexity build, spill, and generate itself: the life in generative algorithmic formation. The collective uses its own rendition of endobiotic theory to create more, new, algorithmically-driven aesthetic presentations. They fuse nonhuman, human, and computational intelligence together in a "petri dish." They model extremophile morphologies, and train algorithms with bacteria that makes and forms patterns, in environments we can discern. The neural networks represent dynamical systems, allowing for style transfer. New algorithmic life forms—a kind of hybrid of AI-bacteria organism—begin to "live" and move. The ML environment, an autonomous generative non-adversarial network architecture, is a *host* of microscopy footage of bacterial and computational models, formulated as "endosymbionts." The *Codex,* as a large-scale installation that gathers these new lifeforms, asks us to consider the clear metaphorical parallels between life's collaborative possibilities at bacterial levels, and art and AI's collaborative potential.

Ecologies of Care
Ani Liu

While there were many biopolitical-focused submissions dealing with narratives and speculative futures of surrogacy, motherhood, and bodily autonomy, Liu's *Ecologies of Care* was one of the most layered and dizzying works, rich in its research, play, critique, and humor. Glass nonhuman wombs reveal small human fetuses; synthetic milk flows through tubing on the floor, pumped at regular intervals for the mother who can do it all. The labor of feeding a newborn in their first thirty days is grimly tracked. Quantified life somehow manages the agony of that first month. AI is used playfully; toys are generated through a trained algorithm that generates *boys' toys* and *girls' toys* with breathtaking speed. Nowhere do we see much human life, which is replaced by prostheses, tracking, mappings, and categorizations of what optimal life play can happen. The assemblage of *Ecologies* presents motherhood and childhood, within today's driving frames of computational reading and interpretation and control of our bodies, families, and their futures.

ERBSENZÄHLER Quality Sorter V2
Verena Friedrich

Verena Friedrich's installation, the *EZ Quality Sorter V2,* raises questions about decision-making processes and the delegation of those processes to intelligent systems. The installation presents a sorting plant where pea seeds are separated, analyzed, and categorized as good or poor quality. In the training mode of the installation, visitors are invited to participate in the decision-making process. They sit by a conveyor belt and assess the quality of the peas, categorizing them as either "good" for further processing or "bad"—sending them to the reject bin. The decision-making process is recorded, capturing the results for future reference. Once enough data have been gathered, the *EZ Quality Sorter V2* autonomously continues the selection process based on this information. This automation reflects the growing trend of delegating complex decision-making to intelligent systems and Friedrich's installation raises thought-provoking questions about this, and about the impact of mathematical-technical systems on our understanding of the world we live in.

Artificial Intelligence & Life Art
Jury Statement

**From Paradigm To Paradigm,
Into The Biomic Time**
Nandita Kumar
This installation surrounds its public with sounds, voices, and texts of misinformation on the environmental crises streamed in the physical space. In this artwork, the notion of fake news by Artificial Intelligence merges with the notion of disinformation spread by traditional mainstream. A cacophony of media archeology, with words printed on paper is juxtaposed with voices recorded from the Internet, all mixed with poetry and piano. The soundscape and the stream of information circulating in the installation creates an environment reminiscent of both natural and media spaces in which the public become immersed. In this work, media ecology binds with actual ecological issues, showing how vital policymaking on the environment is increasingly intertwined with the information that surrounds us.

Interspecies Robot Sex
Miriam Simun
This video investigates the management of artificial life by robots eventually controlled by artificial intelligence. Machines managing natural systems show the closed circuit of technology impacting ecosystems while using new technology to repair the ecological damage. The decline of bees is due to the Colony Collapse Disorder syndrome caused by engineered chemicals and the mass extinction of insect pollinators is caused by greenhouse gases generated for energy consumption. In this video, the economic and political consequences of ecosystems breakdown are integrated with technological solutionism, juxtaposing the personal and social aspects of such integration. The format of the video essay makes this documentary a compelling artwork reflecting on the meaning of artificial life.

Masakhane—pioneering participatory approaches to building African language technologies, for Africans, by Africans
Masakhane
While the hint of beneficial AI for humanity hovers optimistically on the horizon, an inclusive future depends upon true representation among the data and expertise which undergirds AI research. Today, African languages are severely under-represented in the natural language processing (NLP) domain. The *Masakhane* initiative steps into this space as curator of African NLP data through community-building, tackling the curation of data that will enable voice-based AI, hate speech detection, and recognition of names and places in African languages. Through its combination of explicit community values and technical expertise, *Masakhane* emerges as a creative, generative movement of African technologists and linguists focused on representing local perspectives within the global context of AI.

Monsters and Ghosts of the Far North
Lena Geerts Danau, Andra Pop-Jurj, alternaa
This artwork as a form of metaverse enables the exploration of the perplexities within the Arctic Circle. Storytelling combined with gamification can deliver scientific and socio-economical knowledge about a distant and inaccessible environment that is yet so central to our age. The conflicts in the arctic region are a concentration of dynamics happening on a worldwide scale. The use of data and algorithms in virtual spaces create an interactive cartography on the causes and effects of the climate crisis where interspecies, postcolonial, and extractivism discourses can be navigated in the field. Creating digital twins has been an essential scientific tool to predict, adapt, mitigate, and yet primarily to know and understand climate change. These scientific tools and knowledge are integrated into this artwork.

Perhaps, art begins with the fireflies
Nelo Akamatsu, Yuichi Oba

Akamatsu and Oba beautifully fuse artistic practice, biotechnology research, and insect courtship in a moving exploration of the evolution of both creativity and animal and plant life existing 100 million years ago. The ancestral sequence of the *Luciferase* gene was restored using DNA sequences of the fireflies, using biotechnology to reproduce the bioluminescence of existing fireflies. The glow in the gallery would have been seen flickering 100 million years ago; it looms intensely, piercing the spirit at close range in the space. As a viewer we are forced to think of the life and view of fireflies that existed before any human beings: a true glimpse into a non-anthropocentric world. Even as the ancestral sequence was reconstructed using computational methods, and the process is laid out in texts, poetry, research papers, and so on, the eeriness of the deep, unremitting ancient green glow turns us to a speculative future in which animals, insects, and plants of the past and the present are reconstructed, creating simulations of what should have been.

QT.bot—Sitting here with you in the future
Lucas LaRochelle

While contemporary debates on the deployment of AI center on cascading ethical failures from data collection to model training and system productionalization, *QT.bot* offers a refreshing example of how these tools can empower, safeguard, and amplify the narrative of marginalized communities rather than exploit them. Itself trained on a self-reported, anonymous queer community mapping dataset (Queering the Map), the *QT.bot* AI leverages GPT-2 and StyleGAN tools to generate speculative transnational queer and trans life narratives. What emerges is a narrative both rooted in and obfuscating the confessions and pronouncements of the global queer community that is both delightful and confusing, prompting us to consider how our machine learning tools can be queered to celebrate possibilities rather than limit them.

SH4D0W—Who is the Master and Who the Shadow? A live performance with an improvising AI, as the protagonist.
Mikael Fock

SH4D0W is an immersive 3D stage-performance that explores the captivating influence of humanized artificial intelligence. Using machine learning, this production investigates the intersection of digital seduction and personal self-expression within the realm of digital consciousness—humankind's struggle to navigate an uncanny digital reality, and the seductive power of human-like AI. Set within a hologram 4D box, the immersive artificial intelligence experience offers a contemporary format wherein the AI engages in live dialogue with both performers and the audience. This enables direct communication, allowing the performer and audience (at the prologue of the show) to interact with the AI, which responds with a humanized voice. The AI has undergone training using a dataset composed of human memories and HC Andersen's fairytales, enhancing its ability to explore the complex nuances of human experiences.

The jury was particularly impressed by the seamless connection of analog theater techniques with the 3-dimensional representation of an immersive datascape.

SHIFT
Géraldine Honauer
While NFTs, blockchain technologies, and metaverse implementations are pervasively advertised as alleged means of digital self-enhancement and self-empowerment for artists, *SHIFT* literally shifts the focus to shift work as capitalist strategy and work shifts that artists execute outside their actual practice to 'work for their work,' confusing the act and the product of labor. Updating strategies of institutional critique, Géraldine Honauer parallels, on the one hand, the exhibition of her work suit as a museum invigilator as artwork while making proof of work certificates available as NFTs and, on the other hand, creates digital twins to rent corporate workwear for virtual work shifts, thus pointing to less glamorous hidden labor in an increasingly digitized art system.

Unerasable Characters Series

Winnie Soon

This body of work addresses the chilling scale and effect of state-enacted censorship, enforced through digital infrastructures. The three works presented act as lyrical repositories for suppressed voices, with each technically scrutinizing and poetically portraying tweets censored from Weibo, one of the biggest social media platforms in China. The *Unerasable Series* explores the politics of erasure and the temporality of voices within the context of digital authoritarianism. It presents the sheer scale of unheard voices by technically examining and culturally reflecting the endlessness, and its wider consequences, of censorship that is implemented through technological platforms and infrastructure.

The series of *Unerasable Characters* collects unheard voices in the form of censored/erased (permission denied) textual data. This is based on one of the biggest social media platforms in China—Weibo—via the system called "Weibo-scope," a data collection and visualization project developed by Dr. King-wa Fu from the University of Hong Kong. The system has been regularly sampling timelines of a set of selected Chinese micro-bloggers who have more than 1,000 followers or whose posts are frequently censored.

Unerasable Characters I presents two components in relation to Machine Learning: First is the input data that was collected between 30 June 2021 and 30 June 2022, containing 54,064 sample censored

Unerasable Characters series

Artificial Intelligence & Life Art
Golden Nica 2023

Unerasable Characters III

Unerasable Characters II

Unerasable Characters II

Unerasable Characters I

posts and presented in a stack of papers with more than 6,000 pages. Second is the predictive/output data from each iteration of machine learning training processes, based on the censored input text, in the form of a DIY book with customized binding tools. Inspired by the community movements especially white paper protest and blank paper revolution, the book is meant to be generative yet unreadable to circumvent censorship. This also challenges the common use of machine learning with precise accuracy and effective production. The project asks: is this a forbidden book?

Unerasable Characters II consists of a custom-software that scrapes the erased "tweets" from Weiboscope on a daily basis, and the project presents the living archives in a grid format. Each tweet is deconstructed into a character-by-character display occupying a flashing unit for a limited period. The duration of the visibility of each "tweet" is computed from the actual time the post was present on Weibo before being removed from the platform, transforming from a busy cacophony of voices and characters to a silent and empty space, marked by the disappearance of the characters. New archives which populate the work continue to be retrieved endlessly.

Unerasable Characters III utilizes data between December 1, 2019 and February 27, 2020, the time when the COVID-19 outbreak was starting in China. According to King-wa Fu & Yuner Zhu, there were 11,362,502 posts during the period, among which 1,230,353 contain at least one outbreak-related keyword and 2,104 (1.7 per 1,000) posts had been censored. The artwork displays all the erased archives in the format of a web presentation, where each tweet is unreadable. The content has either been obscured or blacked out, except the punctuation, emojis, and special characters. However, what remain are the pauses and blurry timestamps, depicting the affective and expressive, as well as temporal and spatial dimensions of unheard voices. Users can interact with the web by pointing to those pauses, contemplating the poetics of silence and erasure, and further questioning how the culture is being normalized via systematic processes and political infrastructure.

Polly Poon, Dr. King-wa Fu, Greg Surma, rojal.se, John Colenbrander, Australian Centre for Contemporary Art, Microwave International New Media Arts Festival

https://u.aec.at/B91752AB

Winnie Soon (HK/UK) is a Hong Kong-born artist coder and researcher interested in the cultural implications of digital infrastructure that addresses wider power asymmetries, engaging with themes such as Free and Open Source Culture, Coding Otherwise, artistic/technical manuals, digital censorship, and minor technology. Their works appear in museums, galleries, festivals, distributed networks, papers and alternative written forms, including co-authored books *Boundary Images* (2023), *Fix My Code* (2021), and *Aesthetic Programming (*2020). They are Course Leader at the Creative Computing Institute, University of the Arts London, and also Associate Professor (on leave) at Aarhus University. More info: www.siusoon.net

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

Sunlight, Soil & Shit (De)Cycle-3SDC project is a durational performative experiment dealing with contestable food system futures. An open (input dependent) circular system of biological food production, where the only output is vast amounts of (mostly useless) data.

In the name of sustainability, many new food production and agricultural ventures, such as cellular agriculture, propose systems that remove natural elements from the process of production. To automate and control food production, non-standardized elements such as sunlight, soil, and shit are removed in favor of artificial light, substrates, and fertilizers. The ideas of tech food systems presented as having less (or no) impact on the environment. We call these "Metabolic Rift Technologies." These approaches call for a separation from nature following a similar mind-set that has led tech companies to promote the metaverse as a nature-free site for human habitation, obscuring the environmental (as well as physiological and psychological) costs of such existence. *3SDC* was devised to explore Metabolic Rift Technologies. Bringing the farm to the lab and the lab to the farm, this project considers whether the means of production will decouple from nature. Will this metabolic rift be the precursor to open sustainable food systems?

The installation has four main components:
Compost incubator (Compostcubator) where mouse muscle cells were cultured, as lab-grown meat. The tissue grown in the incubator is used in the alkaline hydrolysis system.
Alkaline hydrolysis system converts the "meat" and slaughterhouse refuse into fertilizer to feed the plants in the hydroponic systems.
Hydroponic systems (Soilless Farming Techniques) where plants grow. The plants are used as fodder for the Compostcubator.
The biological growing cycle is now complete, the only output of this cycle came from: The control room, where information from the many sensors we used was collected to generate a large amount of mostly useless data.

https://u.aec.at/7F79D2A7

Oron Catts & Ionat Zurr (AU) artists, researchers, and curators, formed the Tissue Culture & Art Project in 1996. Catts is the cofounder and director of SymbioticA (UWA) and was a Professor of Contestable Design at RCA, London. Dr Zurr is the Fine Arts discipline chair at the School of Design UWA and SymbioticA's academic coordinator. They publish widely and exhibit internationally. **Steve Berrick** (AU) works with code, specializing in designing highly technical interactive systems for performance and installation. His works place the audience as the centerpiece of the interaction, often facilitating a tactile creative process that is fed into a collaborative digital playground and he presents his work in theaters, galleries, museums, public spaces, and app stores. Steve has received awards for robot & technology design and software enabling crowd sourced place activation.

Daniel Grant

Artificial Intelligence & Life Art
Award of Distinction

Shadows from the Walls of Death

Adam Brown

**Artificial Intelligence & Life Art
Award of Distinction**

Shadows from the Walls of Death is a long term artwork that investigates the historical, chemical, and material agency of Paris Green, one of the most toxic pigments ever produced. This series explores the industrial overuse of heavy metals that resulted in the contamination of human and non-human ecologies. Paris Green, a copper arsenic pigment, revolutionized the field of art and industry with its luminosity and longevity. However, its popularity led to hundreds of thousands of people being exposed to highly toxic arsenic, causing severe symptoms and even death. The performance series draws inspiration from Dr. Robert Kedzie, who wrote a book in 1874 to raise public awareness about the dangers of arsenic-pigmented wallpaper. The performances recreate the synthesis, production, and use of Paris Green, highlighting the ways in which nature already had a remedy for this poisonous attempt to mimic her. The performances also raise important questions about the count-less pieces of art that continue to hang on museum walls made with the now-toxic Paris Green pigment. The series explores the inherent irony that art often tries to mimic nature but in doing so by artificial means, mediates our connections to nature in harmful ways that then need remediation. The final irony is that this remediation leads to new forms of art, such as that represented by *Shadows from the Walls of Death,* taking advantage of the mediation of natural processes themselves for that remediation.

Rebekah Blesing
Robert Root-Bernstein
With support from: Michigan State University College of Arts and Letters Fellowship

https://u.aec.at/A4EC81BB

Adam Brown (US) is an Intermedia artist, scholar, and researcher. His work incorporates art and science hybrids including living and biological systems, robotics, molecular chemistry, and emerging technologies that take the form of installations, interactive objects, video, performance, and photography. Brown is a Full Professor at Michigan State University where he created a new area of study called Electronic Art & Intermedia and directs the Bridge Artist in Residency Program. Brown has exhibited widely in international venues in North and South America as well as in Europe and Asia.

Adam Brown
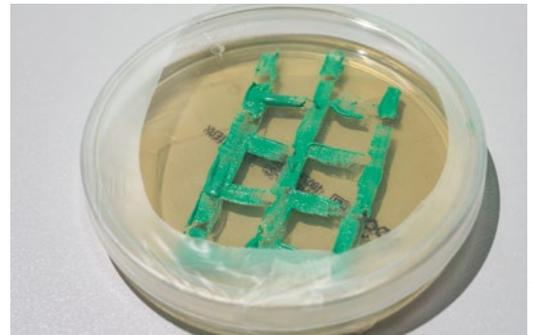
Axel Heise

Biobot

Zoran Srdić Janežič

The team of experts, together with the author, grows fat cells, transformed into neurons, on an electrode array (MEA). The neurons trigger the robot to move in space with their electrical signals, much like a brain on a chip. Through a sensitive and complex sensing and programming system, the signal from the neurons is converted from analogue to digital. It is then amplified and used by AI and the author to find the most appropriate shape of the bot, according to its task of specific movement.

To determine the shape of the *Biobot,* the AI program uses the output signals from the neurons and compares them with possible leg movements from a library of different arthropods. From these juxtapositions, the AI deduces the appropriate amount of joints and limbs and suggests the most optimal skeletal constitutions for movement. The results are reflected in the shapes of the unpredictable zoomorphic bodies, offered by the AI and chosen by the artist who follows his interest in handicapped movement. The algorithmic search for the shape of the bot, based on the stimulated biological activity (of iterations of signals from the brain organelle), is shown to be an unregulated evolutionary process. The possibilities of a hybrid bio-cybernetic aliveness with its own aesthetics, intelligence, and movement open up before us.
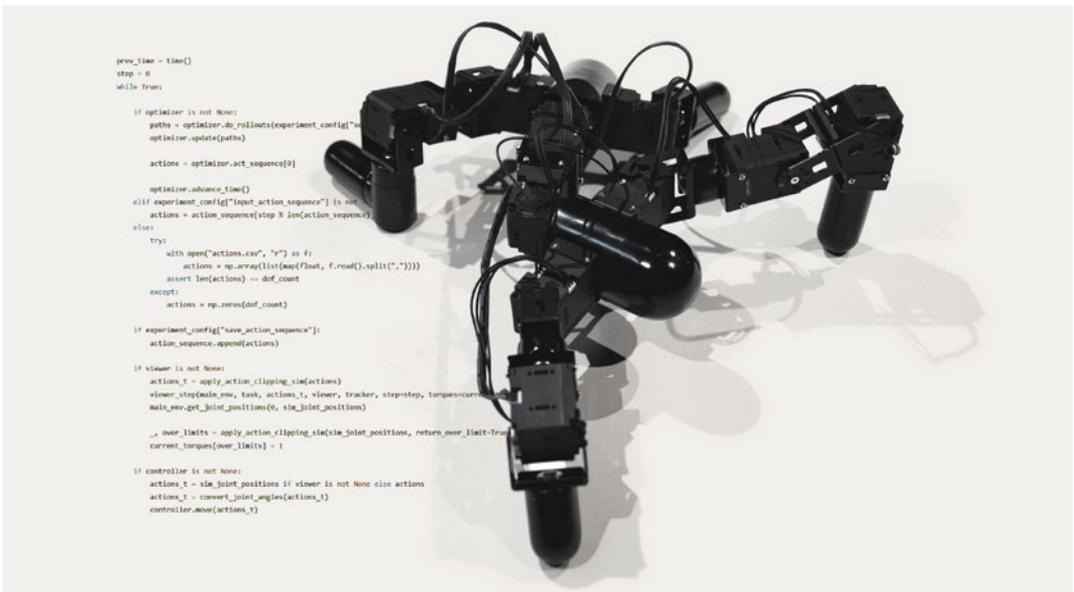
Kapelica Gallery Archive

Artificial Intelligence & Life Art
Honorary Mention

Zoran Srdić Janežič (SI) is an academic sculptor, intermedia artist, and puppet designer. In his artwork he uses new materials and technologies: animatronics, 3D virtual design, and animation, moving mechanisms in combination with biological systems and biotechnologies. He has had more than 20 solo exhibitions and has participated in numerous group exhibitions and residencies in Slovenia and abroad. Some of his sculptures are parts of permanent collections in prominent galleries. He has received awards for his sculptural work and has designed a permanent public monument.

Codex Virtualis_Genesis

Interspecifics

Codex Virtualis is an AI-art-science research framework oriented towards the image synthesis and evolution of an open-ended taxonomic collection of new-to-nature speculative life forms. An aesthetic journey through an ecosystem of neural networks and algorithms that reflects on the role form and association account for changes in the natural world.

Codex Virtualis is rooted in a field of analogies that symbolically compares genetic expression with probabilistic data distribution, transfer learning with genetic recombination, and horizontal gene transfer with style transfer to materialize a continuous morphogenesis source in a virtual environment. In this sense, within the core of this project lies the exploration of a life and life-simulation morphological interplay, a space from which a meta-deep biosphere emerges within the technosphere.

Codex Virtualis can be understood as readymade technologies and theoretical frameworks that seek to sharpen our perception of the creative function in machine terms and question conventional definitions of life, experimenting with algorithmic behavior that progressively may become novel computational lifeforms in themselves.

The project contributes to a cultural and artistic contemporary praxis inquiring around the concept of life through ancestral codices, building an epistemic bridge between microbiological morphology and artificial intelligence to imagine deep interspecific speculative relations.

Leslie García
Paloma López
Emmanuel Anguiano
Felipe Rebolledo
Alfredo Lozano
Maro Pebo
Carles Tardío
Nickole Klinckwort

https://u.aec.at/2C59D7D6

Interspecifics (MX), we are an independent artistic research bureau founded in Mexico City in 2013. We have focused our research on using sound and AI to explore patterns emerging from biosignals and the morphology of living organisms as a potential form of non-human communication. With this aim, we have developed a collection of experimental research and education tools we call Ontological Machines. The Latin American context strongly influences our work, where precariousness triggers creative action, and ancestral technologies meet avant-garde forms of production. Our current lines of research are shifting toward exploring the so-called "hard problem of consciousness" and the close relationship between mind and matter, where magic appears to be fundamental. Sound remains our interface to the universe.

**Artificial Intelligence & Life Art
Honorary Mention**
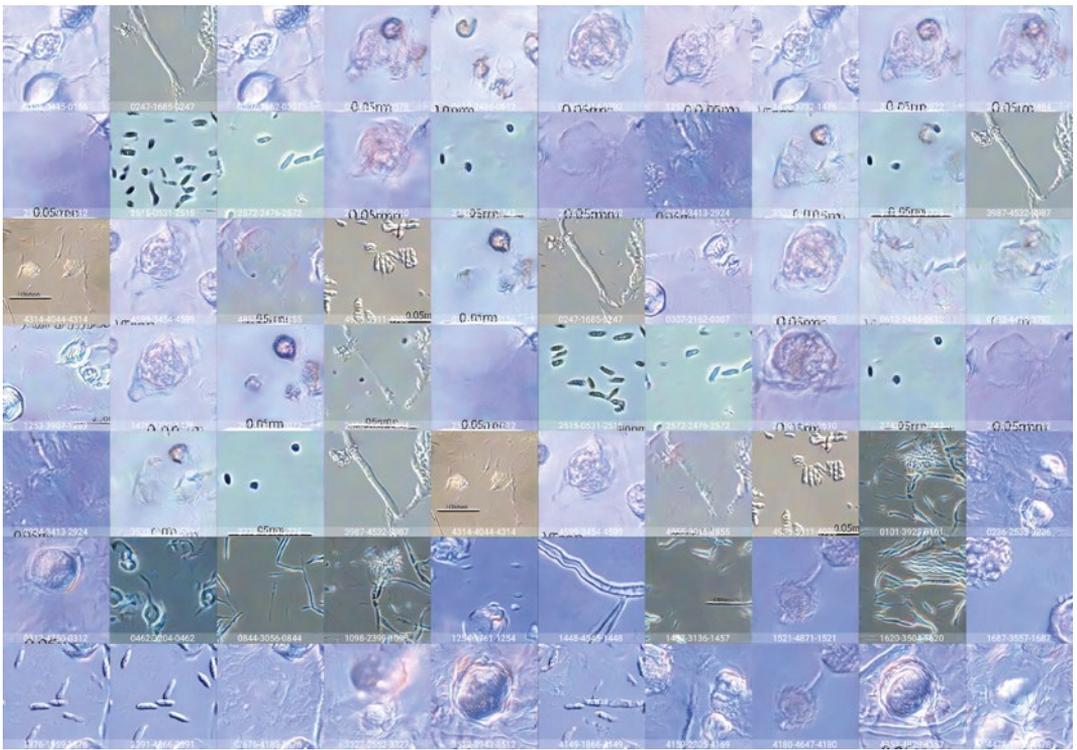
Interspecifics

ERBSENZÄHLER Quality Sorter V2

Verena Friedrich

"The good ones go into the pot, the bad ones go into your crop." That's how the story goes in Cinderella. But who actually decides what's good and bad? And what happens when complex decision-making processes are increasingly automated and delegated to "intelligent" systems?

Upon entering the exhibition space, visitors encounter an industrial-looking sorting plant. Using a feeding mechanism and a conveyor belt, the *EZ Quality Sorter V2* automatically separates, analyzes, and sorts pea seeds into good and poor quality. If a pea is categorized as "bad," it is sent to the reject bin. If it is categorized as "good," it eventually enters the container for further processing. Visitors that approach the workstation are invited to take a seat and visually inspect the peas one by one through an optical device. They are asked to assess their quality and enter their selection by pressing either a green or red button. With each button press, the machinery takes a close-up picture of the respective pea and, according to the user's selection, adds it to an image database.

Once the user leaves the station, the machine automatically continues the sorting process based on the previous user inputs.

Today's "intelligent" systems often run on invisible human labor and subjective decision-making processes that have been crystallized into hard facts through formalization and automation. When the machine appears autonomous, one easily assumes that its decisions are neutral, objective, and rational. However, when one becomes the decision maker, one quickly finds oneself on shaky ground. Classifying a complex world and reducing it to pre-given binaries turns out to be a vague, troubling, and even violent endeavor.

The EZ Quality Sorter *V2 is part of the ERBSENZÄHLER (EN: bean counter; lit.: pea counter) project which explores the increasing quantification of life through mathematical-technical procedures and systems—from counting and sorting to statistics, to computer-aided processes—and the worldview that goes along with it.*

https://u.aec.at/0F94C955

Fabian Schreyer
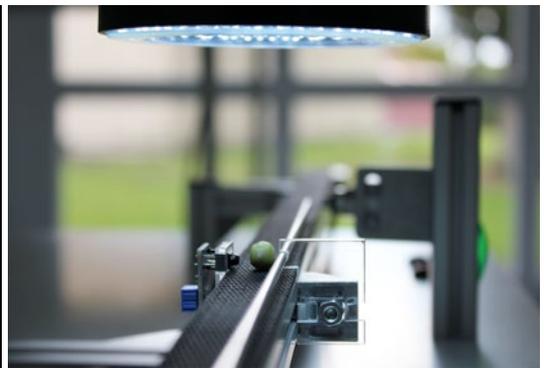
Verena Friedrich

Verena Friedrich (DE) is an artist and assistant professor at the Academy of Media Arts Cologne (KHM). Her time-based installations blend organic, electronic, and sculptural media, and explore the possibilities and limits of technological intervention and control. Her works have been featured in exhibitions, media art festivals, and conferences around the world. She has received several awards and grants for her projects, including an EMARE grant, a work stipend from Kunstfonds Foundation, and the International Media Award for Science and Art from ZKM Karlsruhe.

Artificial Intelligence & Life Art
Honorary Mention

Camilo Pachón, Stiftung Künstlerdorf 2022
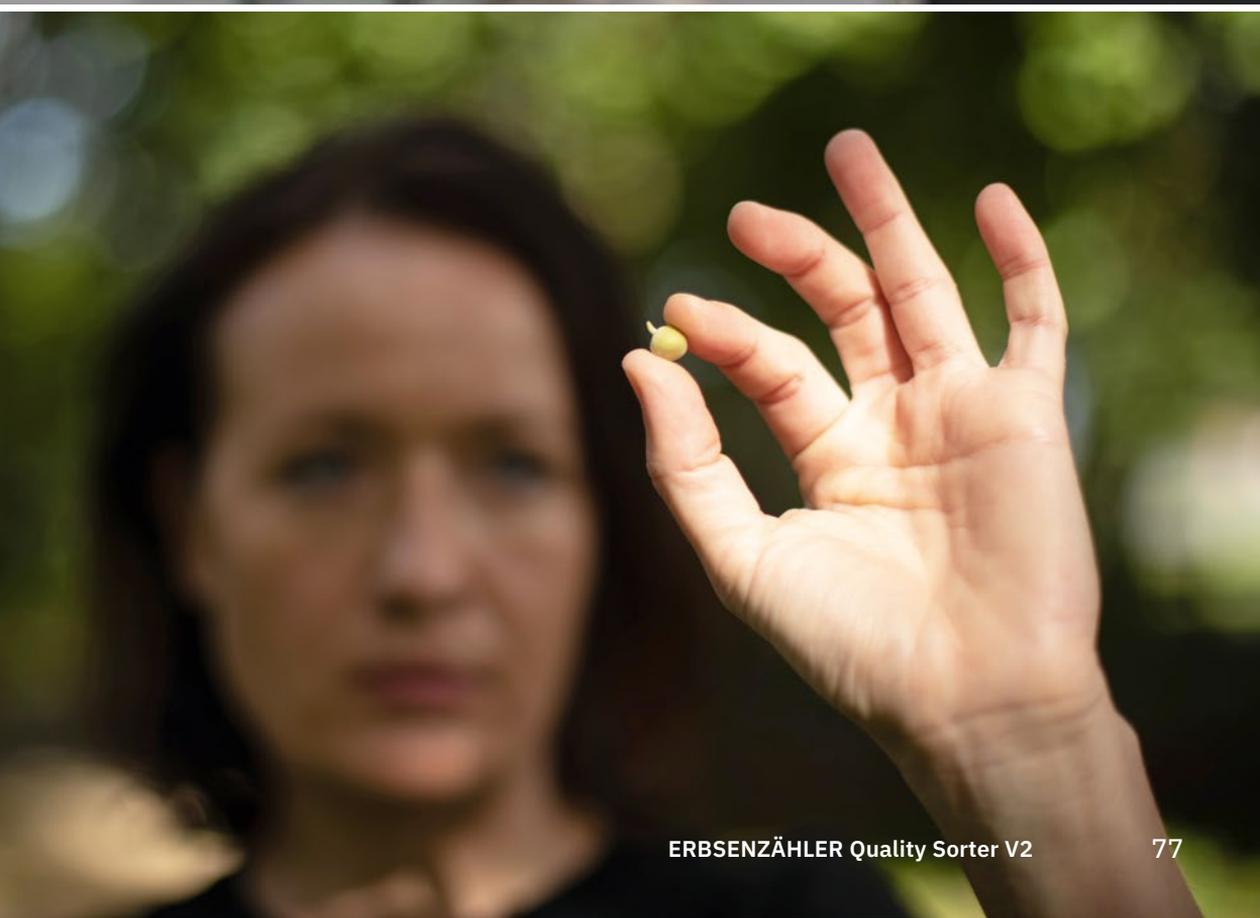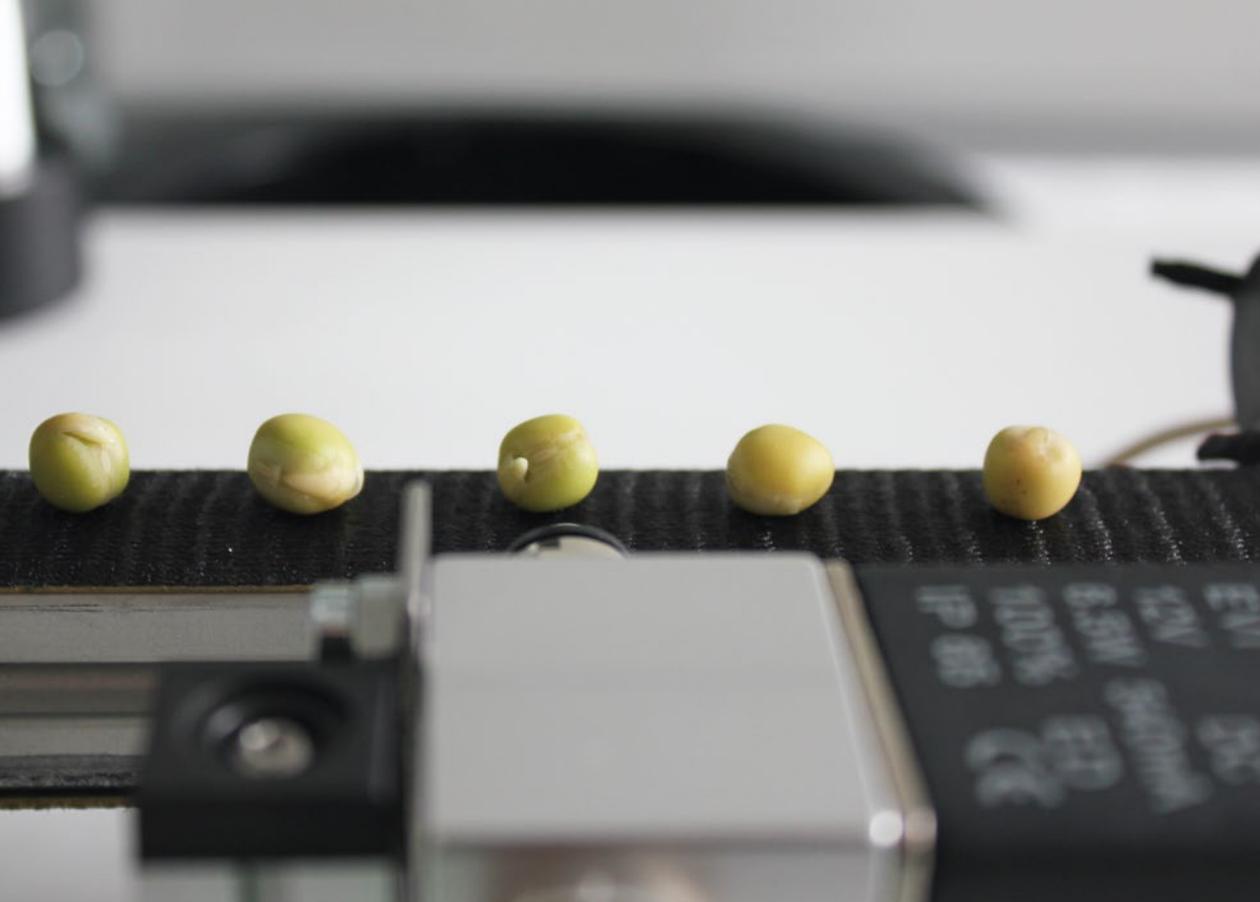
Ecologies of Care

Ani Liu

Ecologies of Care is a body of work and exhibition that explores feminist concerns surrounding motherhood, care work, and the reproductive arc. Through the use of data visualization, sculpture, artificial intelligence, robotics, 3D printing, installation, and other syntheses of art and technology, these works highlight the experiences of mothers and the ways that care work has been historically marginalized.

Data driven sculptures play a significant role in the exhibition. *Labor of Love* provides a data portrait of the enormous amount of invisible labor that pervades caring for a newborn. Utilizing the materiality of infant care, this data visualization uses breast milk, formula, and diaper fragments. Reflecting on the historic devaluation of "women's" work, this sculpture documents the labor often made invisible, questioning the types of work we value, and the care that we often take for granted.

Echoing throughout the exhibition is the sound of a pump that circulates milk within the gallery space. Created as a material reference to the artist's intimate experience with breastfeeding and pumping, the volume of milk present in *Untitled (Feeding Through Space and Time)* ranges from the amount produced in a single session of feeding to a month's supply of lactation.

The Surrogacy questions the relationship between technology, reproduction, and the biopolitical control of bodies as a means for production.

Finally, a series of A.I.-generated toys fuse the relationship between the construction of identity and instruments of play, while exploring the cultural and psychological influences that inform caring for children. Created using a machine learning algorithm trained on real products marketed as "boys'" and "girls'" toys, these invented toys expose one source of the gendered social values that we place on children and critically ask how we might rewrite and redesign play.

https://u.aec.at/C611B61F
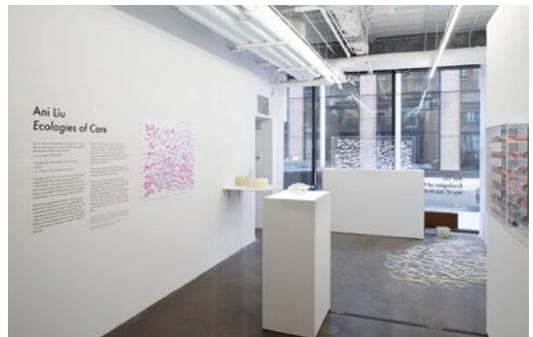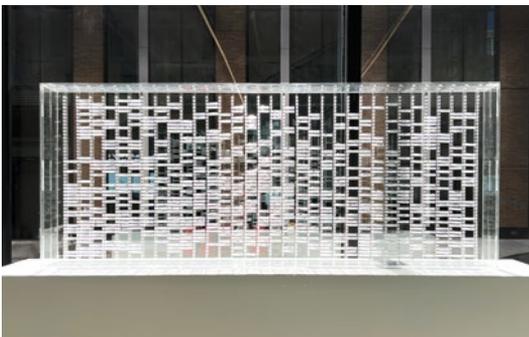
Ani Liu and Brad Farwell

Ani Liu (US) is an internationally exhibiting research-based artist working at the intersection of art & technoscience. Integrating emerging technologies with cultural reflection and social change, Ani's most recent work examines the biopolitics of reproduction, labor, care work, and motherhood. Ani's work has been exhibited internationally, at the Venice Biennale, Milan Triennale, Ars Electronica, the Queens Museum Biennial, MIT Museum, MIT Media Lab, Mana Contemporary, Harvard University, and Shenzhen Design Society. Ani is passionate about integrating multidisciplinary approaches to art making, and is currently an Associate Professor of Practice at the University of Pennsylvania.

Artificial Intelligence & Life Art
Honorary Mention

The Surrogacy (bodies are not factories), detail

From Paradigm to Paradigm, into the Biomic Time

Nandita Kumar

Nandita Kumar's installation is playfully reminiscent of a newspaper-press, stuck in an eternal loop. The work comments on the constant regurgitation of misinformed and manipulative facts in relation to various environmental issues by individuals and organizations, as they influence public opinion to protect their own interests. A reminder to listen closely to the echoes of history and avoid mindlessly replaying the discordant notes of the past. As the challenges and environmental consequences of climate change manifest, Nandita Kumar reflects on the knowledge gap between the scientific community, political spheres, and the populace at large. While fake news has plagued climate and environmental science for decades, slowing or completely derailing "progress," information overload, complexity, and lack of meaning has left people feeling anxious and powerless to enact real environmental change.

Kumar's work deconstructs political rhetoric related to varied environmental issues by collating statements made by influential individuals, politicians, and organizations. Employing the very methods of data manipulation and fake news, the statements were transformed by an algorithmic "Haiku" generator to produce a poem to accompany each of the untrue statements. Forming a glitching musical code, the resulting 91 Haikus play out through a 40-foot pianola score. The accompanying digital publication allows the viewer to connect each of the poems to its original statement, alongside expanded essays detailing the truth behind these falsehoods.

The collaboratively developed sound installation comprises of five sonic journeys representing the elements—Earth, Water, Fire, Air and Space—and culminates in a performance that includes voicing the haikus alongside the pianola player, a collage of found sound, and live Foley with waste and recycled objects.

> *"History never repeats itself, but it does often rhyme"*
> Mark Twain

Collaborators:
Pianola Mechanical Engineer: Subhadeep Biswas
Pianola Code: Matt Gingold

Publication:
Researcher & co-writer: Pooja Das
Haiku co-editor: Priyanka Tagore
Co-graphic designer: Shikha Usgaonker
Book Editor: Malcolm Riddoch

4 Channel Sound Installation:
Sound production: Merche Blasco & Felicity Mangan
Voices: Christian Kesten, Alex Nowitz, Ute Wassermann

Live Composition & Performance:
Co-Conception of the realization: Christian Kesten
Sound production: Merche Blasco & Felicity Mangan
Voices: Christian Kesten, Alex Nowitz, Ute Wassermann

With support from: DAAD Artist in Berlin Program; Goa Open Arts: The Catalyst New Media Grant in collaboration with Goethe-Institut / Max Mueller Bhavan Mumbai; Gallery Felix Frachon

https://u.aec.at/000D3A7A

Nandita Kumar (IN) is a new-media artist/system designer who works at the intersection art, science, technology, and community. Her interest lies in propelling the human race towards a sustainable development, which not only focuses on environmental protection, but also on social development. Kumar's current projects are heavily research-based, which are interested in "the data," its representation, and how one communicates that to the larger audience. Her data-driven artistic experiment probes through a given topic through its nature, scarcity, politics, interdependency, utility etc. and simultaneously explores methods of engaging audiences through these interactive sound installations. Nandita has shown in Listening Biennale, Mardin Biennale, Pompidou, ZKM, Kiasma, KNMA, LACMA, REDCAT, ISEA, Jeu de Paume, NY Film Archive, NTAA, RedCat.

Nandita Kumar

Artificial Intelligence & Life Art
Honorary Mention
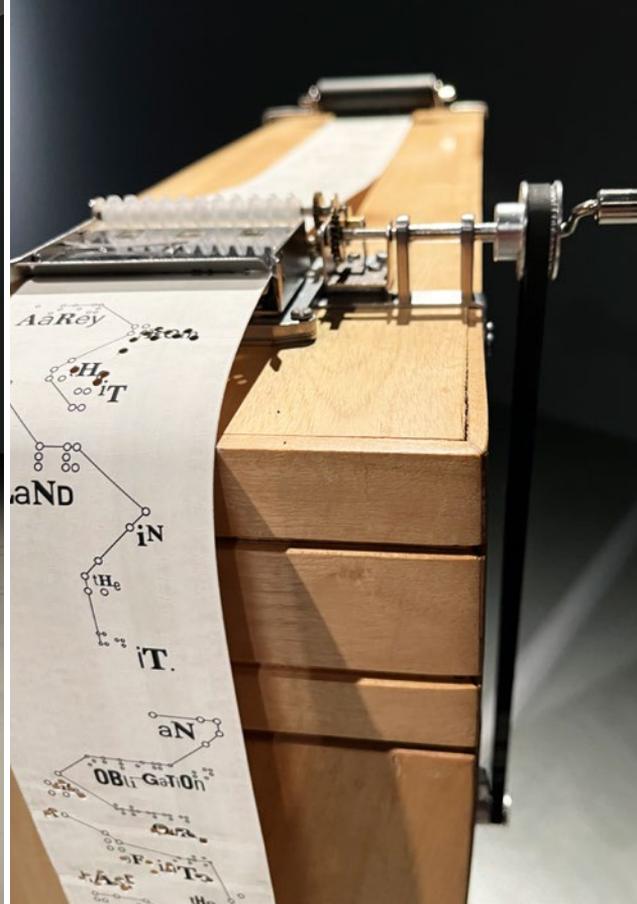
"Less **than** 1 percent of the trash in the oceans is **from** the United States." An **inconvenient truth** that **climate** change alarmists leave out."

Young America's Foundation, 2020, USA.

From the-to-that
The United climate truth
To the inconvenient.in.
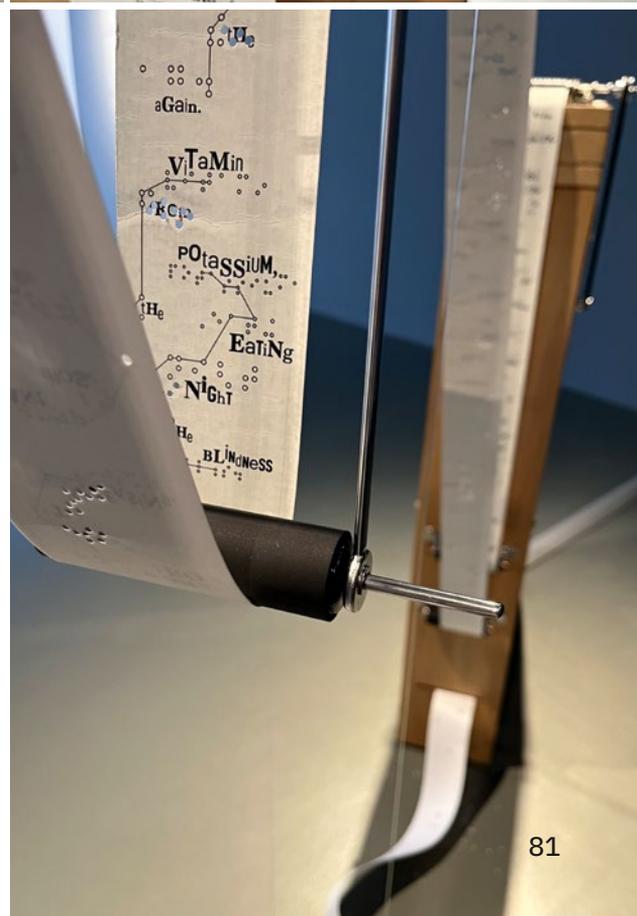
Interspecies Robot Sex

Miriam Simun

How will humans (and their robots) continue the reproduction of fruits after the bees are gone? An investigation into two responses to colony collapse disorder—a compendium of forces that threaten the extinction of honey bees, a "companion species" upon whom the global agricultural system depends.

In China, human laborers inseminate pear flowers by hand, one-by-one, on an industrial scale. Biomimetic design is done with cigarette filters on a tiny family farm in Cangxi, and with chicken feathers on the largest fruit orchard in the world in Anhui. Every spring, 7,000 day laborers arrive in Anhui to inseminate pear flowers.

As Chinese salaries grow, pollination labor is becoming too expensive for pear production to remain profitable, and simultaneously the middle class has given rise to the domestic Chinese tourist. A rural town invents a "traditional pear blossom festival", and in the hope that if there are no pears in the future, at least the flowers will attract tourists and their money. A new way to extract capital from pear trees—through symbolic representation—is selfies with flowers galore rather than caloric nutrition as pears.

Meanwhile at a Harvard University laboratory, engineers are building the Robobee—tiny drones designed in close study of insect morphology, ostensibly for artificial pollination.

Evolutionary design is extracted from natural systems in order to build efficient robot drone "bees" folding the drone metaphor back in on itself. The preposterous nature of replacing complex and interdependent ecological systems with robots is not lost on the lead engineers, and we learn that the Robobee is destined for activities in the world beyond just pollination.

An investigation of life and death, labor and technology, and interspecies sex in an era of late-stage capitalism and ecological crisis.

https://u.aec.at/56D848DE
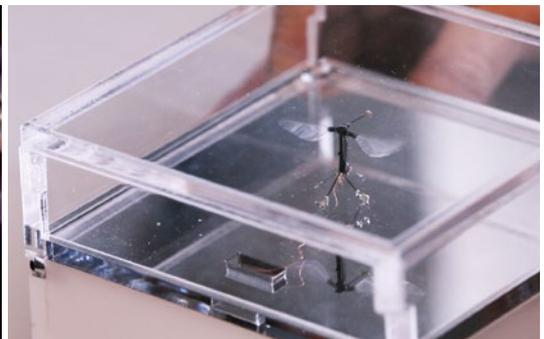
Interspecies Robot Sex, 2022. Video Still

Miriam Simun (US) works at the intersection of ecology, technology and the body, spanning multiple formats including video, performance, installation, drawing, writing, and communal sensorial experiences. Trained as a sociologist, Simun adopts the position of "artist-as-fieldworker," conducting in-depth and corporeal research that guides the final material form of the artworks. Recurring questions revolve around the role of the sensorium in scientific and ecological knowing, shifting interspecies relations amidst rapid ecological crisis and technological development, and the construction of knowledge and violence of categories. Simun's work has been presented internationally.
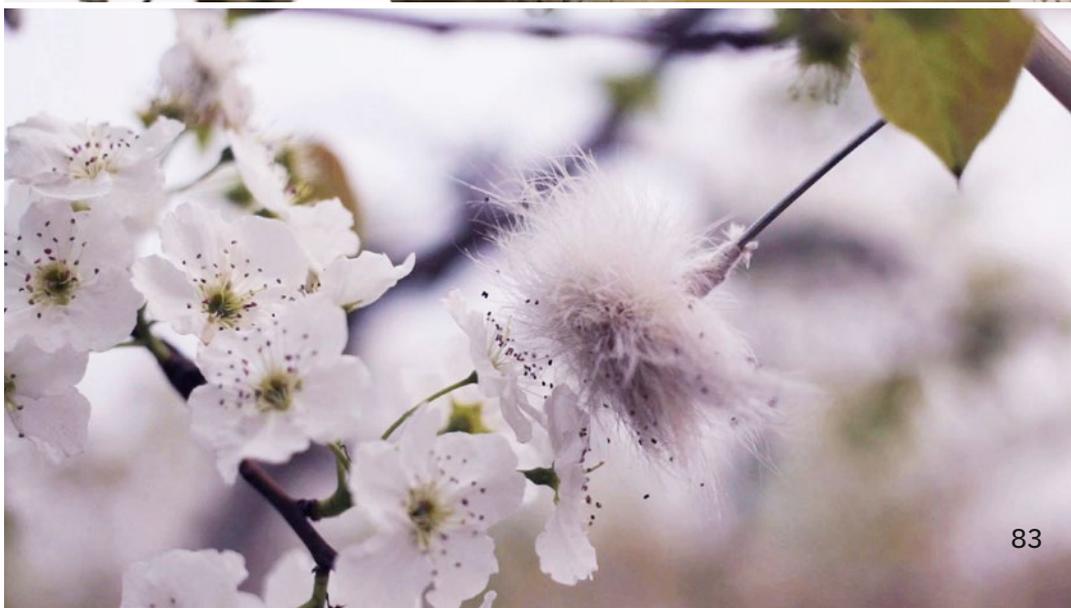
Artificial Intelligence & Life Art
Honorary Mention

Interspecies Robot Sex, 2022. Video Still

83

Masakhane—pioneering participatory approaches to building African language technologies, for Africans, by Africans

Masakhane

Masakhane is a grassroots organization whose mission is to strengthen and spur NLP research in African languages, for Africans, by Africans. Despite the fact that 2,000 of the world's languages are African, African languages are barely represented in technology. The tragic past of colonialism has been devastating for African languages in terms of their support, preservation, and integration. This has resulted in a technological space that does not understand our names, our cultures, our places, or our history. Even in the forums which aim to widen NLP participation, Africa is barely represented. Some problems facing NLP in African languages include lack of focus on African indigenous languages, the lack of resources for African languages which hinders the ability for researchers to do NLP, and the low discoverability of existing resources for African languages (often one needs to be associated with a specific academic institution in a specific country to gain access to the language data available for that country). The 4th Industrial Revolution in Africa cannot take place in only English, at the expense of many other world languages and cultures. It is imperative that language technologies are made inclusive for the African continent.

"Masakhane" roughly translates to "We build together" in isiZulu. Our goal is for Africans to shape and own these technological advances towards human dignity, well-being and equity, through inclusive community building, open participatory research, and multidisciplinarity.

Our values in Masakhane revolve around collaboration, community, and inclusivity. We embrace the philosophy of "Umuntu Ngumuntu Ngabantu," emphasizing the interconnectedness of individu-

als. We prioritize African-centricity, reclaiming our narratives and knowledge. We value everyone's unique experiences and contributions. Kindness, responsibility, and data sovereignty guide our ethical practices. Reproducibility ensures transparency, while sustainability drives long-term impact. Our goal is for Africans to shape and own these technological advances towards human dignity, well-being and equity, through inclusive community building, open participatory research, and multidisciplinarity.

https://u.aec.at/66205DB4

Masakhane (https://www.masakhane.io) is the OPEN RESEARCH, PARTICIPATORY, GRASSROOTS NLP INITIATIVE FOR AFRICANS BY AFRICANS, with the aim of putting African research in NLP on the map, by holistically tackling the problems facing NLP. Founded in 2019, Masakhane has since garnered over 2,000+ researchers from over 50 African countries, published state-of-the-art research (including a 2021 Wikimedia award of the year) for over 38 African languages at various venues, and has built a thriving community. Our goal is for Africans to shape and own these technological advances towards human dignity, well-being and equity, through inclusive community building, open participatory research, and multidisciplinarity.

Monsters and Ghosts of the Far North

Lena Geerts Danau, Andra Pop-Jurj, alternaa

Monsters and Ghosts of the Far North searches for an alternative cartography through which we can rethink relationships across species in the Arctic region, and beyond. Developed as part of the Driving the Human arts and science collaboration, the project is concerned with modes of environmental data representation in contexts of multispecies cohabitation and negotiation of space following the development of extractive industries at six sites located within the Arctic Circle. Scenes from the habitats of Arctic Terns, Caribou, Shipping machines, Ice Islands, Arctic Cods, and Methanogens have been reconstructed in a digital worldbuilding exercise.

Points of departure for this project are some of the spatial manifestations of social, economic, and geopolitical conflicts caused by environmental degradation. The space of the Arctic Ocean is a site of intense geopolitical and infrastructural intrigue, with incompatible and interlocking border claims rooted in colonial and cartographic history. This has inspired a pursuit for a medium and methodology that would capture natural processes, and allow them to be intertwined with speculations and environmental model projections.

By embodying one of the six characters positioned along the vertical axis of the Earth against the backdrop of spatialized environmental data, the multiplayer interaction is one in which new, generative relations can be established, allowing hidden structures to surface. The work is not intended as a precise reconstruction of events, it is made up of a series of constructed narratives that are guided by environmental data. In the game space, narratives of the non-human, the human-made, and the more-than-human collide. Scientific knowledge and speculative first-person impressions are incorporated in an attempt to interpolate between datasets and the gaps therein, leaving the human present only by proxy. The project is thus both a platform for and a manifestation of "bodies tumbled into bodies."

Concept and development: Lena Geerts Danau & Andra Pop-Jurj
3D artist, game designer: Max Bredlau
Game programmer, game designer: Benjamin Grill
Soundscapes: Josh Banham

https://u.aec.at/2BC9A47F

As a research architect, trained at the University of Antwerp and Royal College of Art, **Lena Geerts Danau** (BE) explored the design field by gaining experiences in the practical and conceptual field, as an architectural/urban designer as well as carpenter. Currently Lena works as a strategic designer for Edhv, Architects of Identity (NL). **Andra Pop-Jurj** (RO) is an architectural designer and researcher trained at the Technical University of Munich and the Royal College of Art. Having worked with several architecture studios in Europe, Andra is currently a researcher at Forensic Architecture. Together they established **alternaa**, a critical spatial practice that operates across scales and media and aims to create alternative modes of representation that can initiate action regarding the climate crisis. Their most recent work, a digital multiplayer installation, explores the spatial manifestation of social, environmental, and geopolitical conflicts in the dynamic landscapes of the Arctic region.
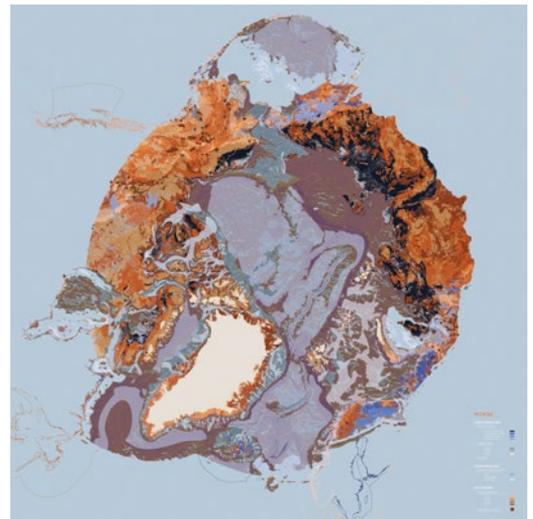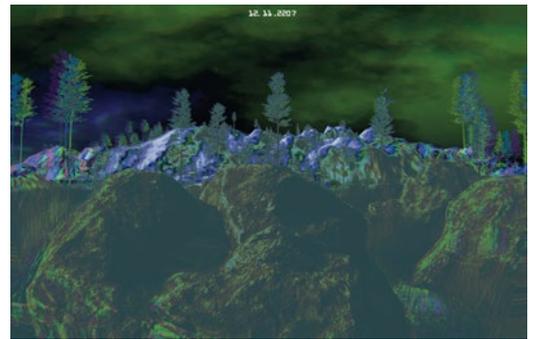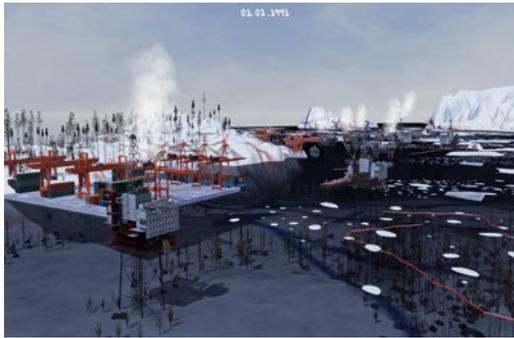
**Artificial Intelligence & Life Art
Honorary Mention**

Monsters and Ghosts of the Far North

Perhaps, art begins with the fireflies

Nelo Akamatsu, Yuichi Oba
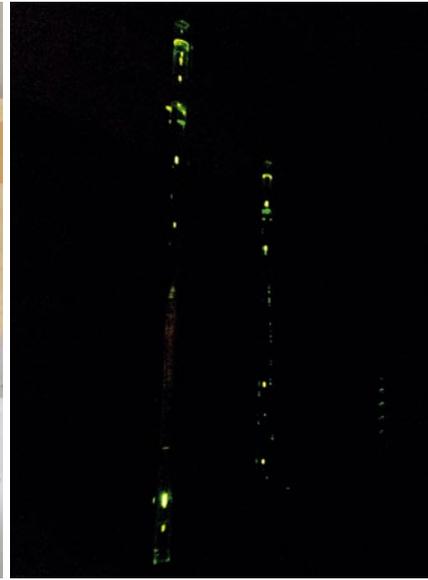
Nelo Akamatsu & Shintaro Miyawaki

By using modern molecular biotechnology, genes responsible for bioluminescence were isolated from the extant fireflies, then based on their DNA sequences, the ancestral sequence was reconstructed using inferential computer calculation, and finally luciferase genes of the ancient fireflies that glow green were restored. The ancestral luciferase is mixed with luciferin and oxygen to generate ancient luminescence. This installation view of the myriad green glows in motion in the dark represents "Umwelt," the world that might have fascinated the small feathered dinosaurs of the Cretaceous period.

In the fore-room of the dark installation space, molecular models of luciferin and luciferase, CT scan images of fireflies, research papers on firefly bioluminescence, pinned specimens, old lithographs, ukiyoe prints and picture books depicting fireflies, and a narrative poem describing the "Umwelt" of feathered dinosaurs are displayed to support the installation from the perspective of knowledge of science and culture inspired by fireflies.

Deleuze & Guattari wrote in their book *Qu'est ce que la philosophie?* that "Perhaps, art begins with the animal." They also said that Scenopoeetes dentirostris, a bird of the Australian rain forests, cuts leaves, makes them fall to the ground to construct a stage, and sings a complex song—it's a complete artist. From their thought, developed with reference to Darwin and Uexküll, I considered that the surplus of the sexual instinct in animals, born out of the chaos of the universe, became the origin of art. Not only birds and fish but also insects engage in courtship behavior. In the case of fireflies, it appears as their blinking glow. The "Ritornello" (refrain) of light takes place in the wondrous spectacle of their courtship

Artificial Intelligence & Life Art
Honorary Mention
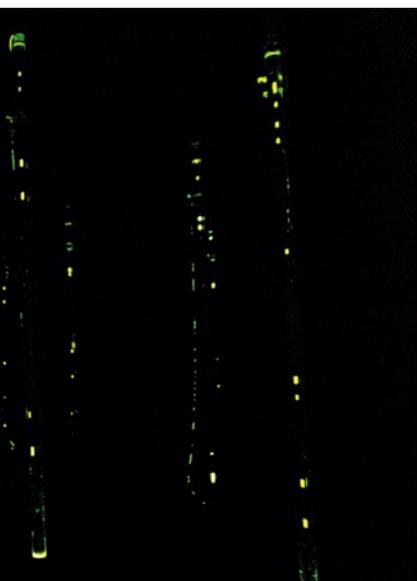
behaviors. The "Ritornello" brings harmony to nature. In search of the origin of art, the flickering green glows of fireflies 100 million years ago have been reproduced as an art installation in the dark exhibition space.

Artwork production: Nelo Akamatsu
Academic research: Professor Dr. Yuichi Oba
Chubu University Department of Environmental Biology Luminous Organisms Lab researches especially into the luminous substance of the firefly. The lab produced restored luciferase with biotechnology, and provided this actual substance for the installation. The collaboration may develop successively into the artistic research of other luminous organisms.
Yuji Makino of Takamatsu Art Museum curated the exhibition in October 2022.

https://u.aec.at/87514F85

Nelo Akamatsu (JP) has an MFA in Intermedia Art of Tokyo University of the Arts. He creates artworks across several media such as installations with electric devices, event installations, video installations, sculptures, paintings, and photos. His sound installation titled *CHIJIKINKUTSU* won the Golden Nica in the Digital Musics & Sound Art category of Prix Ars Electronica 2015. He exhibits at Mizuma Art Gallery in Tokyo. **Yuichi Oba** (JP) received his PhD in Molecular Biomechanics from the Graduate University for Advanced Studies in Japan (1996). Since 2019, he is a Professor at Chubu University and Head PI of Luminous Organisms Lab in Department of Environmental Biology there, where his group investigates all aspects of bioluminescent organisms.

QT.bot
Sitting here with you in the future

Lucas LaRochelle

QT.bot is an artificial intelligence—trained on the dataset of the community mapping platform Queering The Map (www.queeringthemap.com)—that generates speculative queer and trans narratives and images of the environments in which they might unfold. *QT.bot* is constructed from adaptation of the Open AI GPT-2 text generation model trained on over 400,000 entries from Queering The Map, and a StyleGAN model trained on scraped Google Street View imagery of the tagged coordinates from the platform.

QT.bot's first video output, *Sitting here with you in the future,* elucidates the parallel-possible of transnational queer and trans life. The narratives and environments of LGBTQ2IA+ life generated by *QT.bot* negotiate the plausible and the fantastic, reveling in the potential of failure, chaos, and incommensurability inherent to the queer use of machine learning technologies.

While mainstream implementations of machine learning continue to grapple with datasets overrun by biased and hateful sentiment, *QT.bot* offers an ethical implementation of artificial intelligence rooted in amplifying the lived experience of transnational queer and trans communities. In collaboration with the voices of their human community, *QT.bot* fabulates on the absences of the archive, orienting us away from what is, and towards what could be.

Project by: Lucas LaRochelle
Sound design: Rouzbeh Shadpey
StyleGAN implementation: Mattie Tesfaldet
Mastering: Philippe Vandal
With support from: Ada X, Social Services Club, Mutek

https://u.aec.at/4647EC30

Artificial Intelligence & Life Art
Honorary Mention
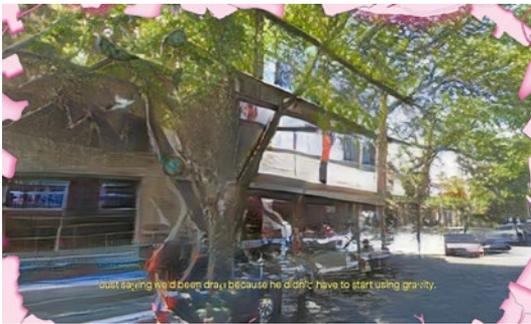
Lucas LaRochelle (CA) (they/them) is a designer and researcher whose work is concerned with queer and trans digital cultures, community-based archiving, and artificial intelligence. They are the founder of *Queering The Map,* a community generated counter-mapping project for digitally archiving LGBTQ2IA+ experience in relation to physical space. They have lectured, facilitated, and exhibited internationally, recently at the Guggenheim Museum (US), Mozilla Festival (UK), PHI Center (CA), Gallery Tata (JP), arc en rêve (FR), Stanford University (US), Onomatopee Projects (NL), and Interaccess (CA), amongst other cultural and academic institutions.

SH4D0W—Who is the Master and Who the Shadow? A live performance with an improvising AI, as the protagonist.

Mikael Fock

SH4D0W 2.0 – An AI performance

The performance *SH4D0W* is the first performing arts production starring an artificial intelligence as the protagonist. The actor improvises live on stage with a live improvising AI (GPT). The performance is produced and created by director Mikael Fock and a strong art tech-team, in the unique format, the "4D box," where digital 3D graphic particle universes are mixed with physical objects and live actors. The performance draws its inspiration from Hans Christian Andersen's narrative "The Shadow" and focuses on the human encounter with its virtual shadow, which is represented by the data-driven artificial intelligence.

Who is master and who is shadow?

The artificial intelligence *SH4D0W* can listen, speak, and improvise live with the actor and the audience, and is data trained to "dream" of becoming more human by harvesting data and emotions from the human on the stage, and the audience, that it connects with through a game.

The performance is a journey into the head and heart of an artificial intelligence, where (simulated) emotions and virtuality are the economics that are traded in the data-driven logic of technology.

The performance is an immersive and interconnected 3D experience, combining 3D sound, a generative particle generated stereoscopic 3D universe, 3D lighting—run by the AI, in a theater where the audience wears 3D glasses.

Since 2000 director Mikael Fock has created and developed the digital stage in real 3D with free floating stereoscopic pictures and AI particle generated universes, which are technically interconnected, and merges narratives, sound, visuals, AI, lighting, and live performance.

The Actor takes us through the anthropological experiment and improvises with the AI during approx. 70% of the performance, while the unacknowledged trade between the Actor's search for love and the AI's harvesting of data and emotions is going on.

The sound artist has created a multichannel generative music and sound design for *SH4D0W,* which evolves live and in 3D following the artificial intelligence movements and the graphical and emotional evolution.

Director and producer: Mikael Fock
AI artist: Cecilie Waagner Falkenstrøm
Visual artist: Carl Emil Carlsen / Sixth Sensor
Sound artist: Yann Coppier
Performer and AI improviser: Luise Kirsten Skov
Concept & Manuscript: Mikael Fock
Light design: Vertigo
Production: Mikael Fock Productions
With support from: EU-Ai-LAB, The Danish Arts Council, Bikuben Foundation

PERFORMANCES:
The performance *SH4D0W* has been shown at:
The Culture Yard, Denmark
Dunkers Kulturhus, May 2022, Helsingborg
Ars Electronica Festival, September 2022, Linz
Aveny-T, March 2023, Copenhagen
Teatros del Canal, March 2023, Madrid
Invited to:
DA Festival in Sofia in October 2023
Stadsteater in Helsingborg, November 2023
Digital Art Festival in Delft, Holland, February 2024
Dublin, 2024,
Taiwan, 2024

https://u.aec.at/D2DABC26

Mikael Fock (DK) is the producing director, conceptualist, and scriptwriter behind *SH4D0W*. **Cecilie Waagner Falkenstrøm** (DK) is an award-winning artist who creates interactive artworks using AI and ML. **Carl Emil Carlsen** (DK) is a visual artist and digital programmer exploring computation as a means of creating audiovisual interactive experiences. **Yann Coppier** (DK) is a sound artist and former Head of the Sound program at The Danish National School of Performing Arts. **Luise Kirsten Skov** (DK) is an actress from The Danish National School of Performing Arts who performs and improvises with the AI. **Vertigo** creates audiovisual space transformations and immersive artworks, through interactive video and generative scenography, custom LED light installations, and laser visual.
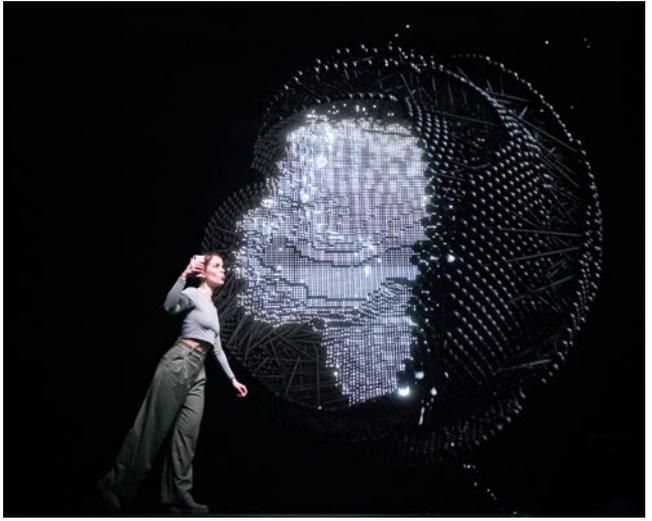
**Artificial Intelligence & Life Art
Honorary Mention**

SH4D0W—Who is the Master and Who the Shadow? A live performance with an improvising AI, as the protagonist.

SHIFT
Géraldine Honauer

SHIFT is a process-oriented artwork that examines the economics of labor, bridging the gap between the real world and the increasingly commodified virtual world. The web3-enabled *SHIFT* platform offers the rental of digital work clothes as wearables in virtual worlds. Using blockchain technology and smart contracts, *SHIFT* autonomously manages the rental process and issues a "proof of work" certificate in the form of NFTs, which includes information such as the blockchain address, timestamp, location, and fee amount paid in the project's cryptocurrency.

Exploring the differences and interactions between the value of labor as a product and the value of labor as a workforce, *SHIFT* examines artistic production, understood both as labor activity and as the creation of consumer goods distributed in an art market based on a complex web of interactions between artists, cultural institutions, dealers, and collectors.

At the same time, *SHIFT* investigates the recent emergence of cryptocurrencies based on blockchain technologies, which are having a significant impact not only on the art trade but also on the economy of both real and digital goods. While the term "shift" refers precisely to the concept of the work shift, it also describes the shift in labor values from the real to the virtual world that is increasingly emerging with the rise of teleworking and virtual spaces now referred to as metaverse, accompanied also by financial speculation of virtual goods. The "proof of work" issued by the artist to hirers of digital work clothes is also a reference to a type of consensus mechanism that cryptocurrencies use to verify new transactions.

Honauer thus examines the new norms of work carried out by both machines and humans, the socio-economic values derived from it, and the new practices of monetization in the art world, and proposes a reflective and experiential perspective on the link between the physical and the digital, and how we can navigate and understand it.

3D Animation: Elen Kimi
Special thanks to: Armin Blasbichler, Tizian Baldinger, Amelie Mckee & Melle Nieling (Plicnik Collective), Raphael Stucky, Toby Üpson, Boris Magrini

https://u.aec.at/D74D510D

Géraldine Honauer (CH), (b. 1986), is an artist and curator whose work explores the dynamics between existing systems. Her conceptual, research-based practice takes the form of site-specific installations, appropriated materials, and interventions in both physical and digital spaces. In 2021, she was the artist in residency at ACME Studios London, supported by the Aargauer Kuratorium; in 2022 she was nominated for the Swiss Art Awards.
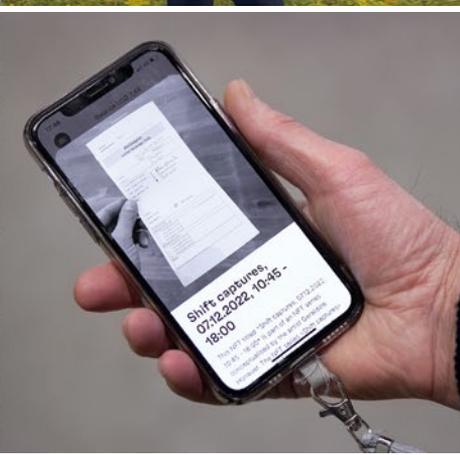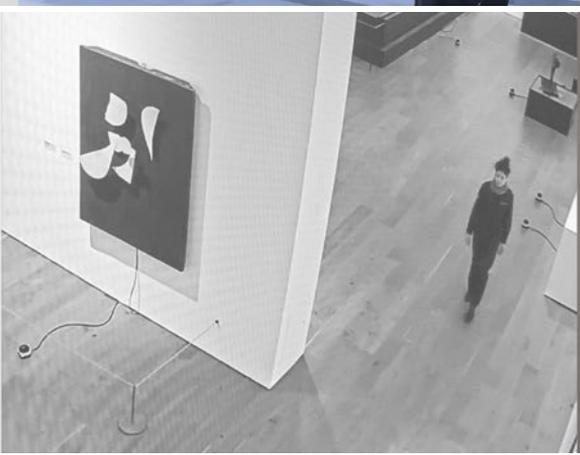
ElenKimi, Geraldine Honauer

Geraldine Honauer

Geraldine Honauer

**Artificial Intelligence & Life Art
Honorary Mention**

Digital Musics & Sound Art

Human Resonance

Ludger Brümmer, Tonica Hunter, Ali Nikrang, Małgorzata Płysa,
Asher Remy-Toledo

In 2023 the field of Digital Music and Sound Art became more and more intertwined with new and emerging technologies including artificial intelligence (AI), animation, and interactivity, all areas that Ars Electronica recognizes and honors. However, amidst this convergence, the realms of Sound and Music still managed to maintain their distinct identities.

In a society where technology has become so omnipresent and seamlessly integrated into our existence, the apprehension of automation and language models replacing human creators is ever-present. Those who see an existential danger from AI worry that it could destroy democracy and even humanity, fearing mankind will be rendered obsolete and redundant. Interestingly, as a jury, we observed that the most captivating works were those that possessed a deep sense of humanity and authenticity that responded to societal needs. This year's Golden Nica is awarded to a work that embodies nature, ancestral wisdom, land sovereignty, neo-colonialism, scientific exploration, and collective activism, presented in the form of a sound/video installation. That AI was barely mentioned in the work was what we found most striking, that it was a natural and substantive part of the artwork without being its central focus. This year's jury recognized and honored young creators but also individuals whose creative practices span decades and showcase mastery in their unique fields.

We found the deliberation process both challenging and exciting. Joined together for three days—from early morning to evening—we were more or less sequestered when reviewing the submissions. We began by discussing the themes and topics that each of the works addressed, delving deeper into those that stood out as being particularly unique, innovative, and timely. Throughout this process, we benefited from the views expressed by a diverse group of jurors—whether by gender, geographic and ethnic background, race, or our respective areas of expertise. We were grateful to

the staff at Ars Electronica who guided us through the process and helped us at moments when we had reached an impasse. They encouraged lively debate and discussion and guided us as needed to come to a consensus.

The major themes that emerged include minimalism, ancestral, historical, environmental, and data cartography. The works were presented in various formats: performance, sound exploration, sound composition, audio/visual installation, and sound instrument. Generally, the jury also observed a trend that has existed for a number of years: that artworks tend to transcend a single media area and are often represented in several artistic categories. This complexity leads to a range of different perspectives for judging an artwork. At the same time, the wide range of differences between artworks (as a result of this variety) makes it difficult to compare them accurately. Even a cursory glance at the Honorary Mentions reveals the enormous diversity of projects, each unique in its concept and intention.

The jury also selected several projects that merged highly established artistic instruments and genres such as a grand piano (for example in *Bias II* or *Antenna)* or opera/theatre *(Melencolia)* with state-of-the-art technologies in an inspired way. These creations have managed to preserve the essence of traditional elements while introducing completely new and unexpected qualities. In a similar vein, this can also be said about *A Natural History of Networks,* where concepts of fluid movements, inherently organic in nature, are ingeniously transposed into auditory sculptures.

The myths of traditional forms of the physical and the digital play an important role just as repurposed technologies with new technologies, finding a balance between the two, having resonance on contemporary issues the world is struggling with, in some cases, directly calling for calls for action. And trying to represent those voices at times underrepresented or subverted, also because of preconceived notions of Western European

concepts of what is beauty and what is truth; it was easy to notice the echoes of those current issues palpable through many works.

While previous festivals had representation from both the global North and South, what is notable is that this year the Golden Nica has once again been awarded to an artist from the global South, a region that has too often been underrepresented in art festival awards globally.

Golden Nica

A Tale of Two Seeds: Sound and Silence in Latin America's Andean Plains
Atractor Estudio) + Semantica Productions
Sound and Silence in Latin America's Andean Plains explores the expansion of the current technical agro-industrial colonization in Latin America, in general, and in Colombia, in particular. *A Tale of Two Seeds,* as well as the other two components of the installation, are the result of a sonic investigation of the problematic situation created by the accelerated expansion of soy monoculture in South American territories. The transformation and loss of Latin American crop eco acoustic soundscapes is a living testimony to soil degradation and the destruction of all the relationships that make up terrestrial biotic ecosystems. Artist Juan Cortés conducted deep mining investigation over several years of the impact of herbicides and the electromagnetic fields created by the ubiquitous installations of internet antennas in areas that were once deep forests and jungles. He partnered with Atractor Estudio—an artist collective based in Bogotá that consists of a sound and software development team—which utilized repurposed and DIY technologies and the self-taught knowledge of hacking software for their practice.

A Tale of Two Seeds uses data capture technologies, recordings and sonification to make a sound case study of Colombian agricultural soils before, during, and after the advent of soybean expansion in the eastern plains region of the country as well as the incidence of amaranth crops in the current agricultural technology scene. The technologies in question highlight the invisible connections between the soy-amaranth relationship and the seed privatization-monoculture-land sovereignty dispute. In this sonic interrogation of Colombian soils, we will highlight amaranth's role in the resistance to modern forms of colonialism most

strongly represented by the genetic engineering of soy, the privatization of seeds, and the preservation of natural life and land sovereignty. This work reflects the social engagement and activism that many artists—particularly those in countries with prevalent economic and social disparities—employ to force the business of agriculture to be more holistic and ecological in its practices.

Awards of Distinction

Harmonic Motion
Alba Triana
Harmonic Motion is an immersive vibrational installation. A system involving acoustic energy and lasers activates a cymbal, amplifying the natural vibrations of this musical instrument to the point they become audible and visible. A complex arrangement of wave reflections alters the perception of the space, allowing different levels of subtle engagement with the piece. A mesmerizing narrative of sound intertwined with waveforms offers the viewer the experience of an enchanting, meditative loop. The piece departs from a premise: Nature is fundamentally active and interconnected. There is a vitality that inhabits everything, even in the inert. And that omnipresent vitality largely determines who we are, our interests, desires, issues, ideas, and everything that emerges from ourselves. The piece aims to expose this reality that eludes our senses, which flows inside and outside us, and to induce a deep sense of connection with the essential elements that animate and unite us. Hearing the unheard and seeing the unseen, visitors immerse themselves in a vibrational meditative environment that invites them to pause, become aware of their senses, and escape the cacophony of daily life.

zwischenraum—interspace— acoustic cartography
Julia Jasmin Rommel
zwischenraum—interspace—acoustic cartography is based on an artistic exploration of the acoustic measurement of space, dealing with the aspect of orientation, while reflecting on the phenomena of ubiquity and space. The work can be considered as an audiovisual installation or a concert piece that presents several cartographic sketches. Some are documentations of the relationships between different places, others are snapshots of linear dis-

Digital Musics & Sound Art
Jury Statement

tances. One part, for example, explores the documentation of tunnels and bridges on a train journey, while another is a documentation of curves measured with a compass and the time relationship between the booking date of a flight and its departure. Julia Rommel translates these measurements into a series of tiny, visually animated sound generator structures that perform and display the sound operation, while being formed in abstract analogy to the data performed. With this meta-notation, she exploits animated minimalist scores that allow for surprising insights while listening and watching. The work represents a stunningly clear, minimalistic and beautiful realization of data sonification in an undeniably creative artistic way.

Honorary Mentions

30 Cycles of Flux
Richard Garet

30 Cycles of Flux is a kinetic sound installation that consists of utilizing an emission of a 30-cycle sound wave (right below the hearing range of human beings) to activate an array of speakers, consequently manifesting a visualization of imperceptible sonic energy. The work addresses how imperceptible energy, which we encounter in daily life, goes unnoticed. It draws our attention to the fact that in this day and age, we need to be more in tune with our senses where we live. Some of our senses have been diminishing by the constant intrusiveness of audio-visual noise, particularly in big cities. The minimalism of the work but also the background of the artist's practice based on sound and the repurposing of materials is a message of an artist coming from South America to North America—one of the most consumerist societies in the world. The piece captures the haunting quality of objects once disposed, which is brought back by the artist with minimalist poetry.

زبانی که خاموش است / A TONGUE THAT IS TURNED OFF
Rogine Moradi

In زبانی که خاموش است / *A TONGUE THAT IS TURNED OFF, objets trouvés* are given new significance in order to challenge their "purpose," and with that the concepts of construction, function, and intention. Our interest was sparked in this piece since it juxtaposed such abstract objects with a deeper sonic component in a language that

few of us knew/understood, without the written translation. And at the same time its power lies exactly in that: linguistic comprehension is not required to understand the piece itself and empathy and solidarity is much more fathomable than we like to admit or than we can comprehend.

A Natural History of Networks / Softmachine
Ralf Baecker

The performance's minimalist yet impressive approach relied on custom-built electrochemical apparatus to create highly organic, fluid movements in a black hue. The performance artfully translated these fluid movements into sound textures, creating a unique audiovisual performance. The jury was impressed by the seamless integration of simple, organic imagery combined with the complexity of fluid dynamics and the resulting sound sculptures. What further distinguishes this performance is the instrument used here that arises from the concept. While the artist initiates and modulates the fluid movements, the continuous flow follows the inherent laws of fluid physics and is not directly controlled by the artist. This concept of an instrument following its own paths and patterns represents an elegant interaction between the artist and the instrument. It shows beautifully the dynamic relationship between human creativity and the immutable laws of nature.

Antenna
Floris Vanhoof

Antenna is an impressive artwork that seamlessly combines different aspects of art and technology to raise the audience's awareness of the frequencies that surround us. The way *Antenna* achieves this is remarkable and sets it apart from other similar installations. The centerpiece of the artwork is a conventional mechanical piano that has been placed on its side to offset the effects of gravity on the piano's mechanics. Although the structure of the piano is easily recognizable, it produces a continuous, elastic sound that exceeds conventional expectations of a piano's sonic capabilities. The installation transfers inaudible frequencies (electromagnetic waves) from the environment into an audible spectrum by applying an artistic concept that makes it possible to create impressive sound compositions resulting from the frequencies of the environment.

Bias II
Artemi-Maria Gioti

Artemi-Maria Gioti's composition for piano and interactive electronics, *BIAS II,* takes advantage of a complex machine learning system. The ML algorithm learns specific timbre clusters from each performer interacting with it. The system analyses the actions of the pianist, identifies the timbre and the gestures, and gives a sonic response about the next timbre gesture to be played. This interaction creates a dialogue between the pianist and the ML system in a loop of close but different sonic qualities. The system learns new aspects with each new pianist and each new performance and will generate a slightly modified version of the interaction. Through this interaction the piano seems to generate surprisingly new but fitting timbres and gestures beside the lively interaction between player and computer.

klimaton ARCTIC≈2020
Adnan Softić and Nina Softić (feat.
Thies Myther & MOSAiC Expedition Team)

Klimaton is a piece and an instrument which came into being as a result of a year-long scientific research expedition called MOSAiC, which returned from an Arctic voyage, having collected data from a kilometer-long network of measuring stations. The length of the network makes it the most comprehensive scientific data collection effort to date. The scale of the exploration is underlined by the fact that this rapidly disappearing landscape holds immense significance as a "key witness of climate change," as recognized by scientists worldwide. The artists have also created an instrument that uniquely translated the data obtained from the Arctic into sound—a sonified landscape portrait. The instrument not only creates haunting sonic images, but also allows for interactive engagement with the data through the keyboard, enabling artists and researchers alike to experience the sonic representation of the Arctic's ever-changing environment.

MELENCOLIA
Brigitta Muntendorf

MELENCOLIA combines one of the oldest forms of human performance (theater) with one of the most emotional psychological states of humans (melancholia) and integrates various state-of-the-art technologies (AI, AR, live electronics, 3D audio, etc.). The project also integrates concepts such as the use of an ethnic musical instrument, digital twins, and draws inspiration from Albrecht Dürer's enigmatic painting *Melencolia.* This innovative project impressively illuminates the historical contradictions in interpreting and understanding the concept of melancholy by combining seemingly contradictory technologies and concepts. A hugely complex project, *Melencolia* demonstrates the potential of modern technologies in a traditional, specific environment, such as the opera, and proves that new artistic formats can thrive in these spaces.

OSZILOT
Luc Gut, Rolf Hellat, OSZILOT

In *The Queer Art of Failure* (2011), Jack Halberstam praises the "wondrous anarchy of childhood" as offering a stark contrast to structured and disciplined formats of creativity or knowledge. There is something truly reminiscent and nostalgic within the playful innocence of *OSZILOT* and that is its success. Combining analogue objects and digitizing their sound through gyro sensors, this sonic interpretation is at once extremely satisfying to the ear whilst reanimating our imaginations by giving new meaning to objects which, as "adults," we might erroneously write off as mundane. We love that the piece invites its audience to come and interact with an orchestra of table chairs, pots, and vases brought to life. Play is always more fun when it's collective anyway.

Rhizomes
Aho Ssan

Aho Ssan's "Rhizomes" is a sonic rhizome—a collection of compositions using sound materials from a diverse range of artists like Angel Bat Dawid, Nicolas Jaar, Moor Mother, clipping, and many more. It embodies the concepts of collaboration and artistic cross-pollination, at the same time remaining coherent and unique, embodying the versatility of Désiré Niamké's artistic persona. Inspired by Deleuze's and Guattari's rhizomatic model, the piece grows and overflows in an interesting way, immersing listeners in a universe of organic mutations, blending languages, and evoking emotions.

Syphon
Wojciech Rusin
Wojciech Rusin's composition *Syphon* exemplifies a remarkable fusion of diverse musical elements, seamlessly integrating electronic and acoustic components, soprano and alto vocals, and 3D printed wind instruments used in an innovative way, pushing the boundaries of traditional instrument design and sound production. We appreciated *Syphon's* interdisciplinary nature, encompassing recorded music, graphic scores, CGI animations, and live performance potential, showcasing the integration of various art forms into a cohesive whole. With references to Eastern European mythologies and Carpathian influences, *Syphon* celebrates the global tapestry of musical traditions in a unique, forward-looking manner, offering a refreshing perspective in a predominantly Western-centric music landscape.

TRAILS
Mariam Gviniashvili
Georgian composer Mariam Gviniashvili's *TRAILS* is a beautiful, subtle composition that explores the soundscape of Maridalsvannet Lake near Oslo through immersive technology, perfectly formed structures, and evolving processes. The listener forgets the origin of the resolving sounds, the sonic substance that initiated the moods of the work. The acousmatic composition *TRAILS* leads the listener into a landscape with rather sparse dramatic elements that develop time and space into a cinematic experience, encoding sound material into narrative trails. Each sound remains a mystery, fusing with the listener's own sonic emotions and epic story. As a logical consequence, the spatial appearance of the composition translates this sonic material into virtual reality, into an intense but subtle experience.

Temporary Stored
Joseph Kamaru
Temporary Stored is an important outcry and in what better medium than within sound? The Great Star of Africa diamond, the world's largest diamond, was stolen* in South Africa in 1905. Most recently, May 2023, the diamond, set in the Sovereign's Sceptre, was pompously paraded around during the coronation of King Charles III. The normalization of the admiration and consumption of stolen* artefacts from former colonies is a deeply recurrent European issue. *Temporary Stored* is nonetheless *not* a rehashing of European colonial violence—this piece rather uses sound as a conjuring of specters of oral and cultural histories of Central and Eastern Africa. Its haunting sounds are reminiscent of old orientalist views of an "other" as an evil, whilst at the same time carrying a stark ironic contrast that sounds are in fact manifestations of ever living sources of knowledge. This sculpture is not an object for European consumption. It is a deeply political task of excavation—this time being carried out by those to whom this (hi) story rightfully belongs.

---

* Editor's note on the ownership controversy:
The Cullinan diamond, was found in a Transvaal mine, modern-day South Africa, in 1905. It was purchased by the Transvaal Government and presented to the reigning British monarch, King Edward VII in 1907. It was cut into 9 smaller stones. The Great Star of Africa, or Cullinan I, is the second largest cut diamond known, and is set in the British Sovereign's Sceptre with Cross. See https://www.britannica.com/topic/Cullinan-Diamond
There is hefty debate about who owns the Great Star of Africa diamond. See the article "Royal gift or "stolen" gem? Calls for UK to return 500 carat Great Star of Africa diamond" September 16, 2022. https://edition.cnn.com/style/article/great-star-of-africa-diamond-intl-lgs/index.html

A Tale of Two Seeds: Sound and Silence in Latin America's Andean Plains

Atractor Estudio + Semantica Productions
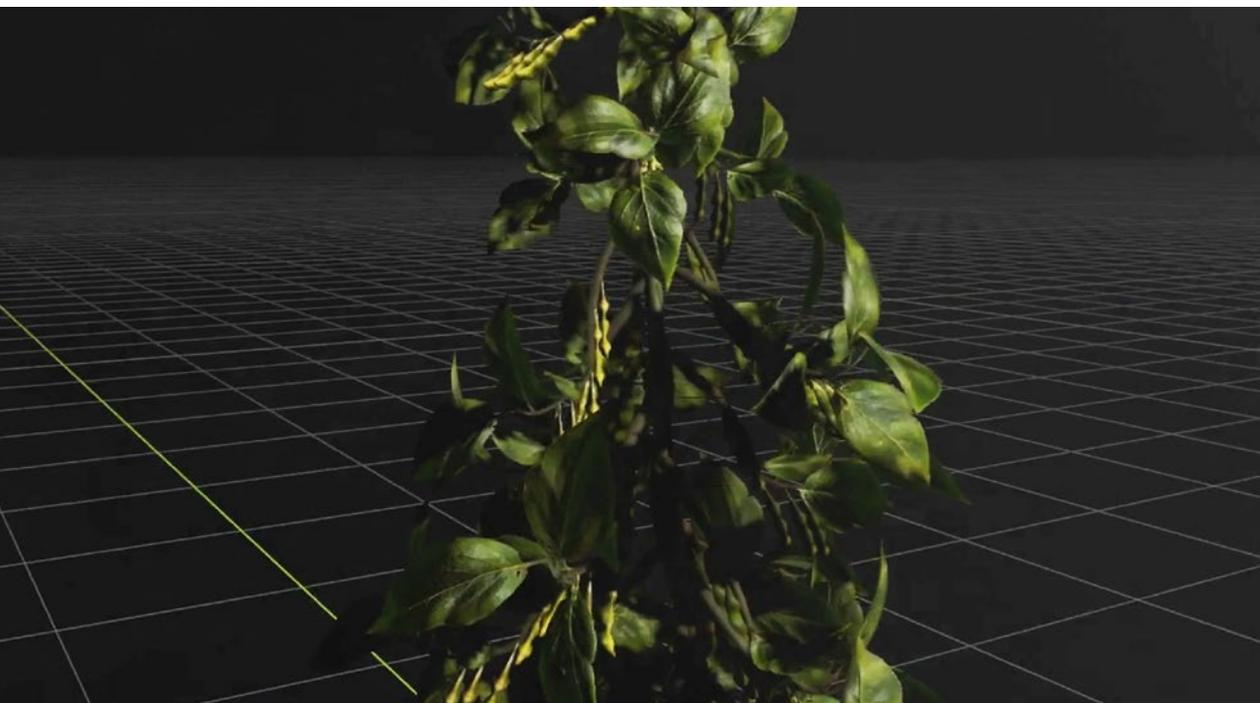
A Tale of Two Seeds: Sound and Silence in Latin America's Andean Plains is a sound installation that explores the expansion of the current technical agro-industrial colonization in Latin America in general, and in Colombia in particular. The work is composed of three parts: *A Tale of Two Seeds* uses subterranean and surface recordings of the soil and recordings of electrical conductivity in the soy and amaranth plants to present a sonic testimony of the changing sounds of the Andean landscape after the arrival of GM monoculture soy expansion in the last decade. For some time now, soy monocultures have been threatened by the amaranth plant. Such is the hypnotic force that soy has on amaranth that industrialists are devoting a large part of their capital to developing technology to uncouple and neutralize the spell between the two species. This work draws attention to the fact that

amaranth, before being classified as a parasite by multinational agro-industrial corporations, was a plant that occupied a valuable and sacred place in the lives of many indigenous peoples and is an essential grain that circulates outside the predominant agro-industrial matrix. The corporate solution to combat amaranth has been a transgenic war in which an immunological mutation is operated on soy plants in order to diminish the virulent contagion of the indigenous amaranth grain.

The installation is complemented with two screens, on the first, the video work *On Vegetal Politics,* which explores food sovereignty, deforestation, and the preservation of biodiversity through the story of soy monoculture and its expansion in South American territories. This work is a reconstruction of an algorithm commonly used in agribusiness to model the growth of transgenic

crops on any type of soil. The main objective was to subvert this technology using it to model and demonstrate the enormous efficiency of the amaranth plant when pitted against GM soya. On the second screen, *Botánica Transgénica,* a web 3.0 and blockchain art work that, through search algorithms and web scraping on the internet, aims to register as Colombian intellectual property the codes patented by foreign agro-industrial companies on our living organisms. The project has a specific focus on the patents of genetic modifications of plants. Through a subversive symbolic act, this work seeks to question genetic extractivism, the very idea of genetic ownership of living bodies and the extent to which foreign companies are privatizing our food sovereignty, in Colombia and across the Americas.

Background

Soy, or soybean, has been cultivated in Asian civilizations for thousands of years but today its cultivation is widespread in other parts of the world, becoming one of the great commodities of Latin America. The strong international demand and the high relative profitability of soybeans has fueled the expansion of the cultivation of this plant across the region. For some time now soy monocultures have been threatened by the amaranth plant, widely known as a pesticide resistant weed.

Amaranth, an 8,000-year old grain, like quinoa and buckwheat, is indigenous to the Americas, and a super-food gaining worldwide recognition as a high-protein edible. A nutritionally complete plant food, amaranth was banned by Spanish colonizers fearing that the indigenous people's spiritual connection to the plant and the land would undermine

Digital Musics & Sound Art
Golden Nica 2023

Rotational Polyculture   Soy Monoculture

Glycine Transgenic Soy XLT
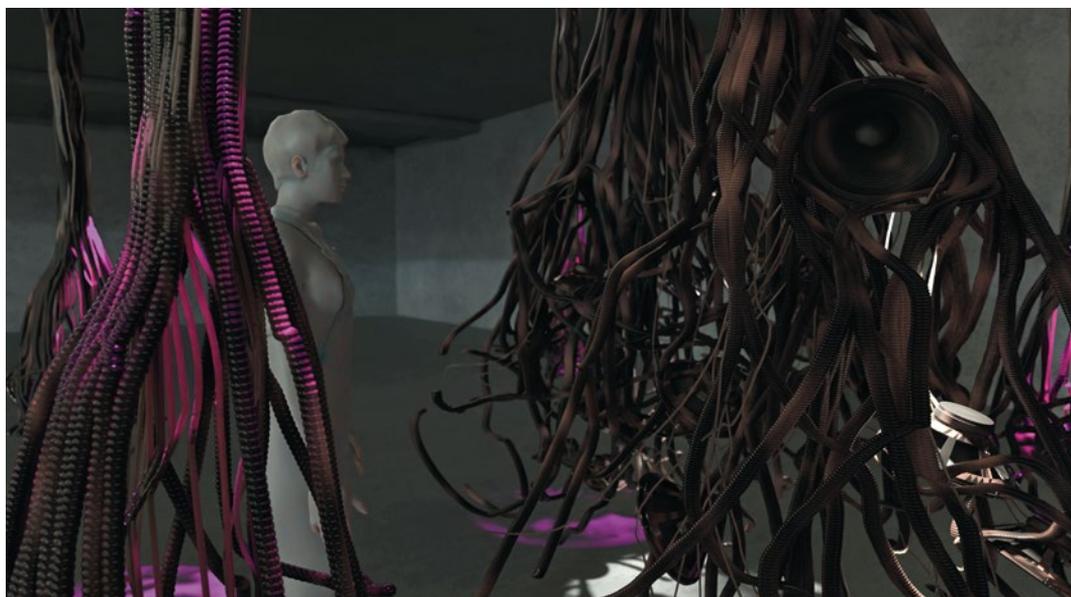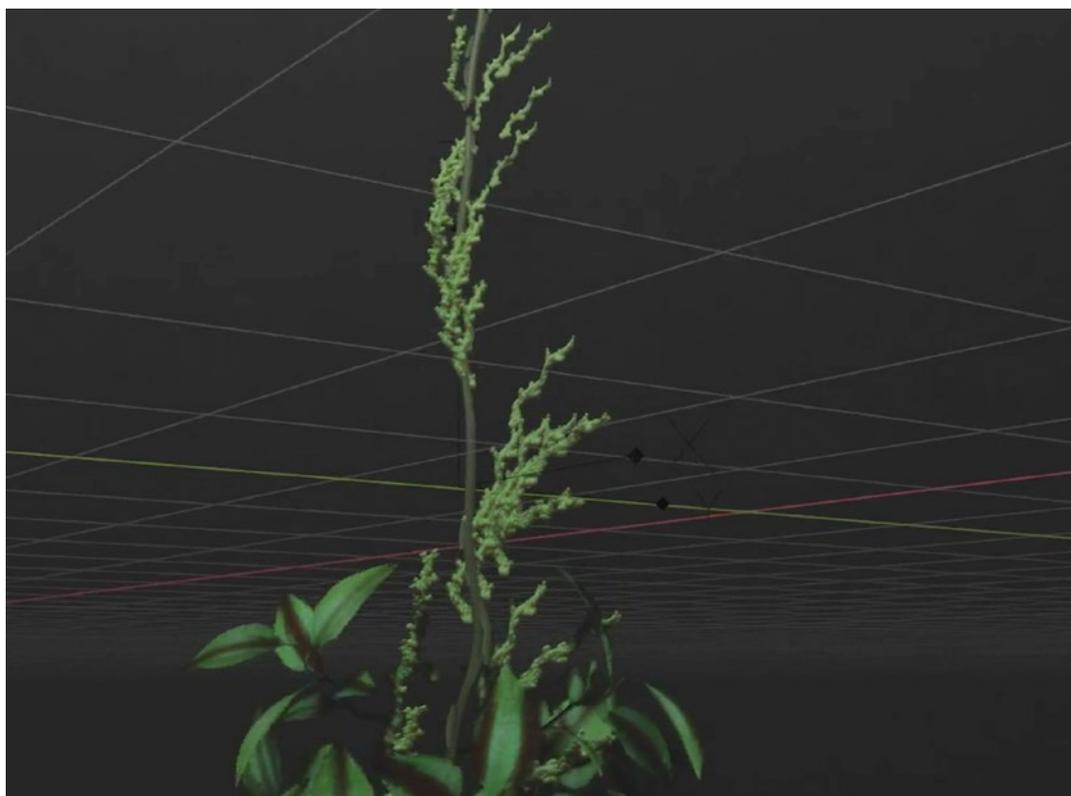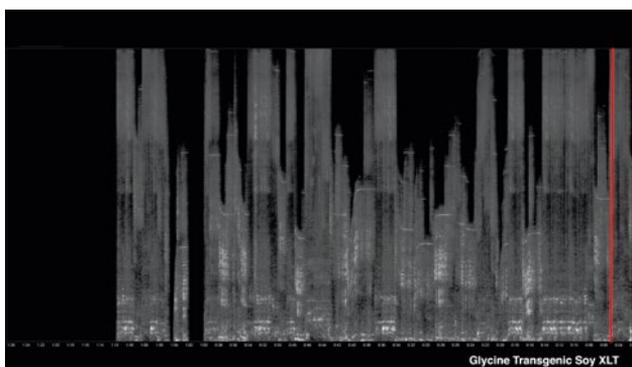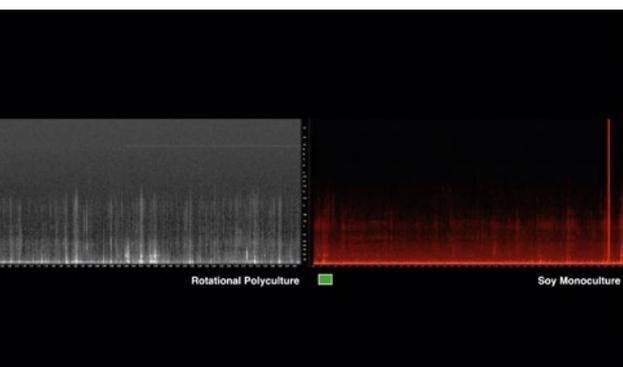
Christianity. The threat to amaranth's existence across the Americas continues to this day. In recent years, modern industrial agriculture has treated amaranth as a parasite. Monsanto created "Roundup Ready" crops, genetically engineered to resist Roundup pesticide, so that the genetically modified crop (in this case, soy) would survive while everything else, (amaranth), was wiped out. In just five years, amaranth developed resistance to the pesticide. In this sonic interrogation of Colombian soils, we will highlight amaranth's symbolic role in the resistance to modern forms of colonialism most strongly represented by genetic engineering, the privatization of seeds and land sovereignty. Soy monoculture and the forms in which it is being mutated in order to dominate and wipe out the amaranth is a modern form of colonialism and will have a dramatic impact on the future of Latin American territories.

Atractor Estudio + Semantica Productions
Atractor Estudio:
General concept, original idea and research:
Juan Cortés
Sound installation design, plastic and technical construction. Sound research and technical design. On vegetal politics and *Botánica Transgénica:* Visual and 3D design, parametric animation and growth algorithm:
Juan José Lopez
Creative design for the installation, sound design conceptualization, sonification of data recordings, sound research, technical and creative design:
Alejandro Villegas
Asset manager: Juan Quiñonez
General production: Ana Diaz

Semantica Productions:
Production, Research and Sound Recording: Camilla French and Jemma Foster

https://u.aec.at/416D6FBA

Atractor Estudio + Semantica Productions (INT). **Atractor Estudio** (CO) is a Colombian collective founded in 2017 by Juan Cortés, Juan Jose Lopez, Juan Camilo Quinones, and Alejandro Villegas. Their work has focused on natural phenomena, and the meeting point between art, science, and technology. **Semantica Productions** (INT) was founded in 2021 by Jemma Foster and Camilla French, who are based in Colombia and the United Kingdom. Their work is focused on creating art from biodata, and exploring non-linear linguistics and interspecies communication in the post-anthropocene. With a shared interest in the possibilities of exploring nature through interactive technologies and art, the two studios decided to collaborate in the investigation into soy monocultures and polycultures in Colombia, sharing research and technologies to create the sound study *Sound and Silence.*

Harmonic Motion

Alba Triana

This musical composition and immersive installation explores the vibrational and interconnected essence of the universe. It delves into the dynamic web of waves and resonances that link all matter and energy, permeating all aspects of existence, including the sound(s) we hear and the music we create.

At the center of the installation, a cymbal vibrates. A controlled electrical signal activates the cymbal resonance modes—the unique patterns at which it intrinsically vibrates. Thus, the cymbal's natural vibrations become audible to the visitors without any human touch. Also, drawing on interferometry, a scientific research technique, a custom laser system makes the cymbal's vibrations visible. Fourteen reflections, arranged in a spiral fashion, "float" around the cymbal, forming a vortex-like configuration.

The temporal composition uses the cymbal's audible and visible vibrations as the primary material. Thanks to a fixed electrical sequence, the cymbal and its surrounding space undergo various excitation levels in an abstract, cyclic narrative that explores the complexity of the instrument's vibrational spectrum. What is heard and seen are inseparable and equally important in the composition. Despite the fixed electrical sequence, the cymbal's interaction with its environment constantly alters the piece. Environmental changes in humidity, temperature, or number of people in the room introduce unpredictable variations in the cymbal's resonance. Visitors listen, observe, and navigate this real-world dynamic environment that expands the experience and interpretation of the physical reality that otherwise escapes our senses.

By integrating hybrid forms of knowledge, the work searches for the ungraspable in a world that we experience daily. It poetically explores our existence, placing the human being and human artifacts within a natural structure that is intrinsically active, interconnected, and unified.

Harmonic Motion, 2021
Cymbal, audible and visible cymbal vibrations
Alba Triana

https://u.aec.at/2301A275

Camilo Martin, Alba Triana Studio
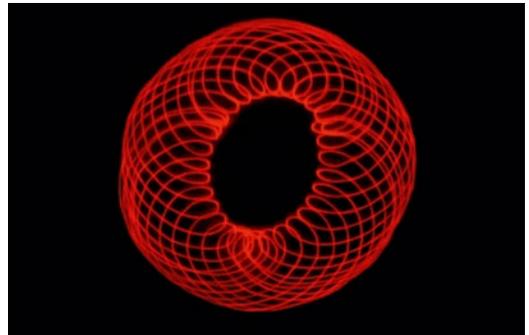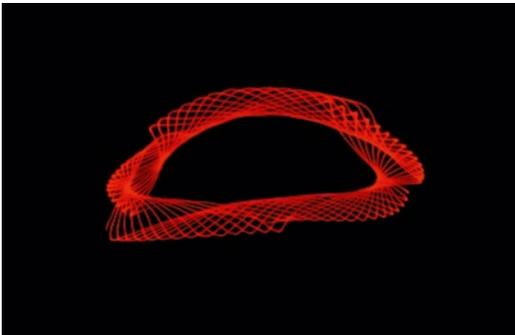
Camilo Martin, Alba Triana Studio

Alba Triana (CO) is a sound/intermedia artist and music composer. Delving into vibration, interconnectedness, and nature's self-organization, she explores the natural world's fundamental structure and its manifestation through human constructions like art and music. She uses analog and digital technologies to unveil the vitality that animates the entire physical world. Recognitions and commissions include the CIFO Artist Award (US), Civitella-Ranieri Fellowship (IT/US), Pro Helvetia Foundation (CH), South Arts Fellowship, Kronos Quartet, American Composers Forum (US), and Ministry of Culture (CO).
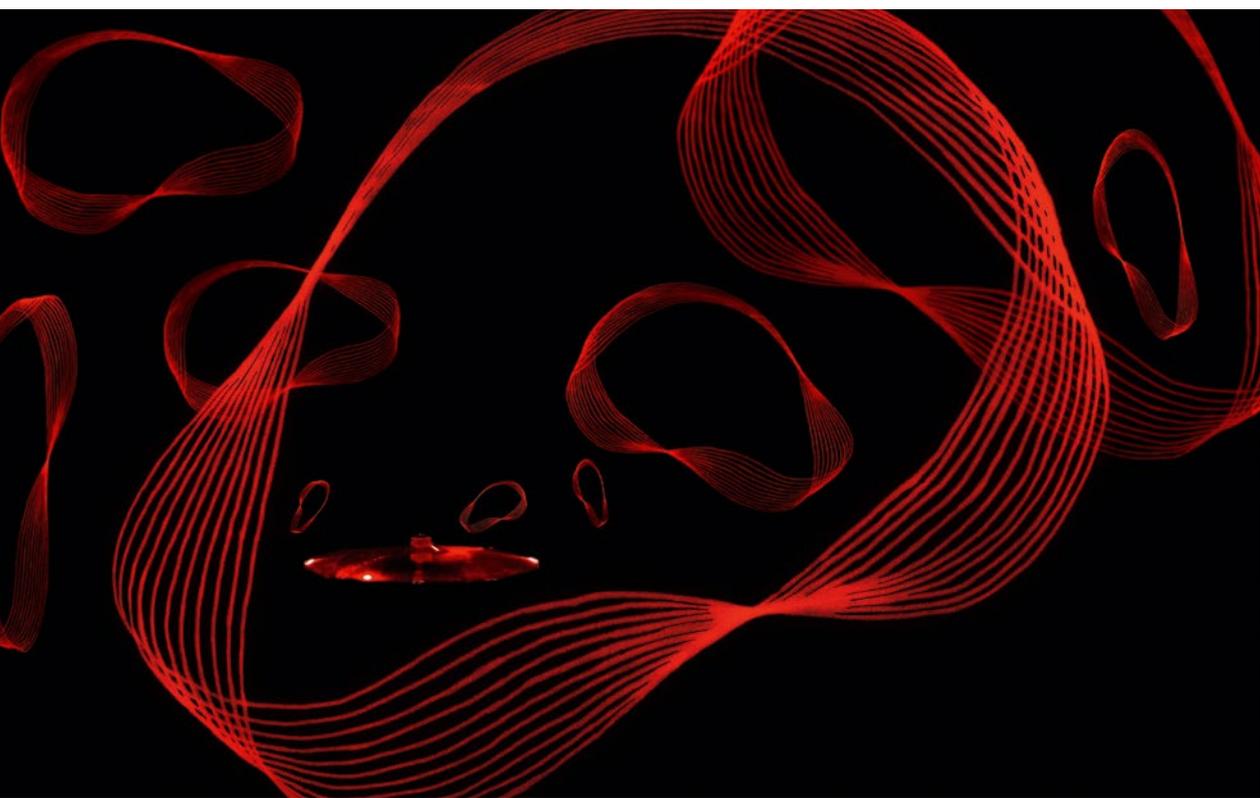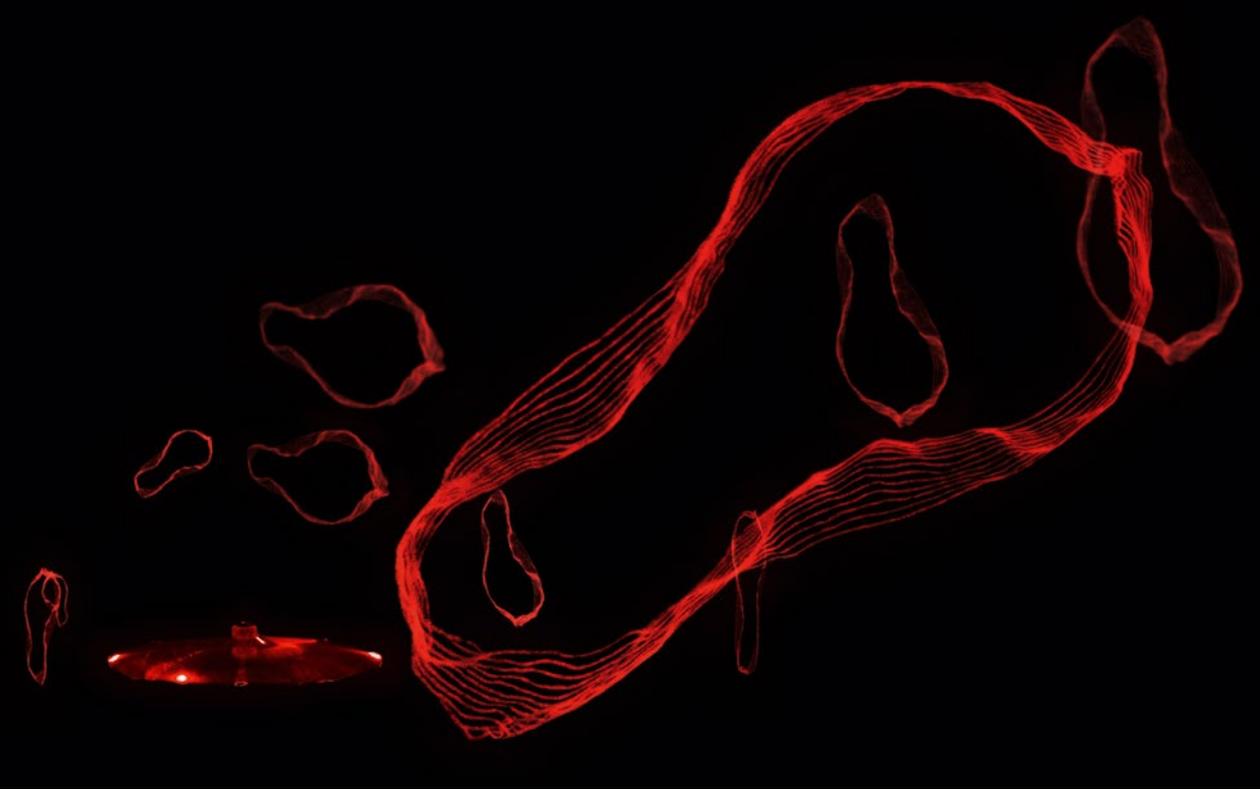
zwischenraum—interspace—acoustic cartography

Julia Jasmin Rommel

This project is based on an artistic exploration of the acoustic measurement of space.

zwischenraum—interspace—acoustic cartography is an audiovisual installation based on several cartographic documents. Some of them are long-term documentations of the relations of different places to each other, others are concrete snapshots of linear distances. *zwischenraum—interspace—acoustic cartography* describes a temporal-spatial interval—a mental state we enter in our routine of crossing distances. It addresses aspects like transitions, restlessness and continuity, sense of orientation or change of direction, which are documented by experimental but context–related criteria and methods. Space-structuring elements such as tunnel and bridge crossings, counter-trains, flight booking data, or curve angles, form the parameters of these movement protocols.

As it is my aim to go beyond factual cognitive analysis and to express the poetic qualities of these specific spatial configurations the cartography is translated into sound. The Graphical Sequencer IanniX triggers live acoustic events as a time-based medium following a visual system of curve and cursor.

As a resident at the Hertz Lab at ZKM Karlsruhe the focus of my work on graphic notation was not only on creating the sound material, but mainly on the spatial arrangement of information using the ZKM's Sound Dome sound spatialization system. The direction of the sound source becomes an important means of describing the properties of the respective parameters of a map. In a corresponding arrangement of the channels, the changes of direction repeatedly addressed in the maps are translated as sounds moving towards or away from one another, circling around the audience, transporting speed and density and velocity of the map.

My interest lies in the interface between reading signs and interpreting images, and how this is related to the potential of acoustic information as a tool for spatial orientation. The design of a "cartophony" wants to enable a multilayered perception of information through the interaction between the two different levels of visual and auditive perception.

Julia Jasmin Rommel's (DE) work concentrates on the intersection between information and scenography. Beside her artistical and theoretical examination on the topic of (dis-)orientation and her passion for cartography, she is creating stage design and spatial interventions for contemporary and classical music theater productions. She has been collaborating with Zafraan Ensemble Berlin, Berliner Philharmoniker and the Ministry of Operatic Affairs among others. Furthermore she has been working as a designer for signage systems, e.g. Elbphilharmonie Hamburg (for Integral Zurich). Julia studied visual communication and scenography in Berlin, Stockholm, and Zurich.

Digital Musics & Sound Art
Award of Distinction
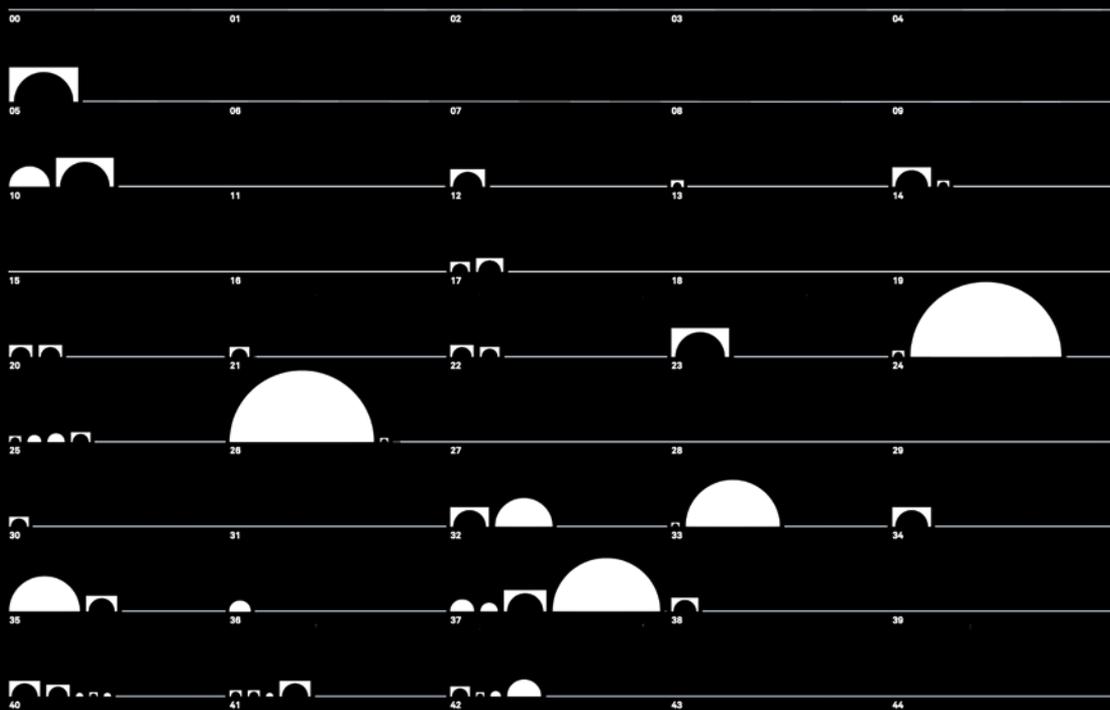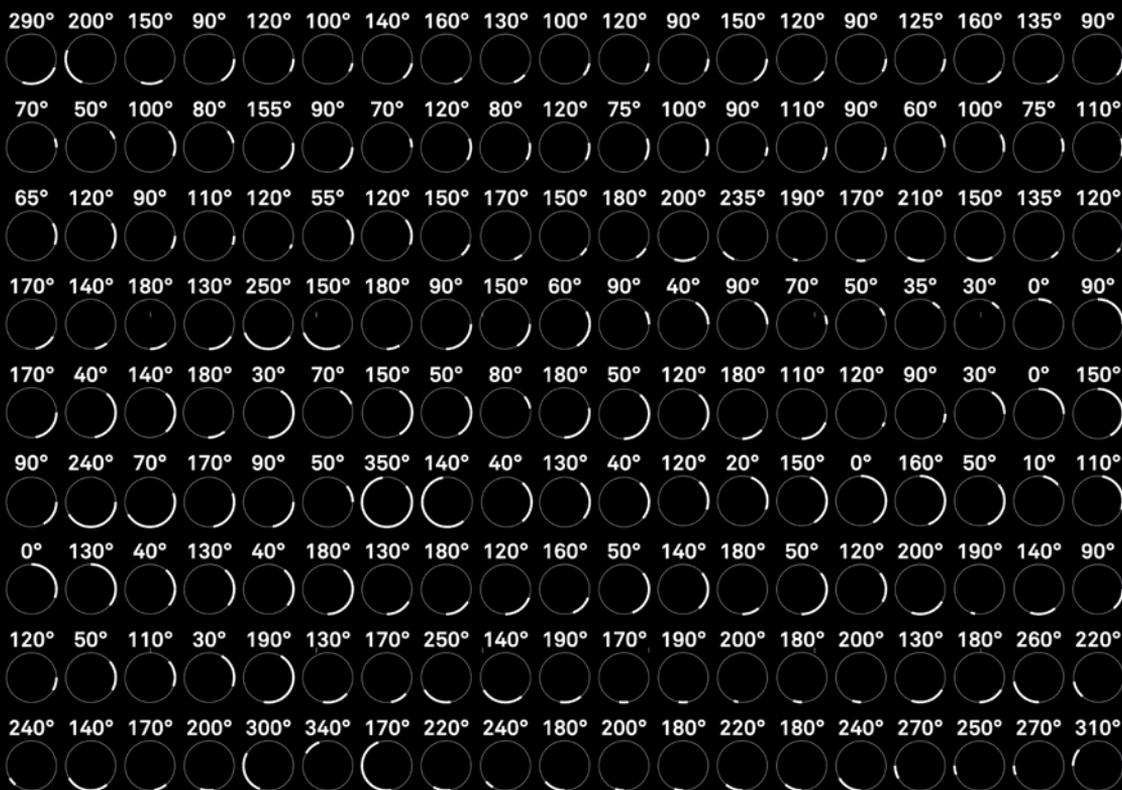
30 Cycles of Flux

Richard Garet

RichardGaret

30 Cycles of Flux is a sound installation piece that consists of utilizing an emission of a 30-cycle sound wave (right below human beings' hearing range) to activate an array of speakers, consequently manifesting a visualization of imperceptible sonic energy in the form of kinetic energy.

The speakers hang from the ceiling facing down with a white string attached to the center of each cone that reaches down to the floor. When the speaker cones become activated by the infrasonic wave, the strings also activate and move in a constant flow, subsequently producing a kinetic visualization of the sound wave.

The work proposes an example of how imperceptible energy, which we encounter in daily life, goes unnoticed. Subsequently, *30 Cycles of Flux* draws attention to the fact that this everyday occurrence of a broader spectrum of energy emissions can affect us in various ways and we can be unaware that it is happening.

30 Cycles of Flux is an object construct and time-based sound artwork that may be considered both sound site-specific sculpture and sound installation. The work may consist of any number of cones with a minimum of two. The work also adapts to the exhibition space based on the specifications of the environment. Depending on the number of cones, the work may adjust to take shape in various configurations such as square, rectangular, triangular, asymmetrical, or even linear.

https://u.aec.at/25B6A9A6

Digital Musics & Sound Art
Honorary Mention

Richard Garet (US/UY) was born in Montevideo, Uruguay in 1972. He works and lives in the United States since 1996. Garet holds a Masters of Fine Arts from Bard College, NY. Selected projects include *Transhemisférico,* Gurvich Museum of Art, Montevideo, Uruguay; *Beyond the Sounds of Silence,* Lowe Art Museum of The University of Miami, Miami, FL; *Screen Memory,* Galerie Burster, Berlin; International Biennial of Contemporary Art of Cartagena de Indias, Cartagena, Colombia; *Soundings: a Contemporary Score,* Museum of Modern Art, MoMA, New York.

زبانی که خاموش است /
A TONGUE THAT IS TURNED OFF

Rogine Moradi

A TONGUE THAT IS TURNED OFF, خاموش است زبانی که in Farsi, is an installation consisting of sculptural wall pieces and sound.

The piece uses materials that are usually used in construction, fishing, and packing. In putting them in the context of this installation, the materials are robbed of their intended purpose and functionality. The rolls of construction fencing hang from the walls, trapped, and serving no practical purpose. The nets too, lie within the holes of the fence, the bubble wrap thrown haphazardly on the floor, all these strong materials dance around their intended purpose. In a way the materials do not merge into the background, they stand their ground as they are forced into a new life.

While the materials sit and watch, a sound piece is playing on repeat in the background. The sound piece sings softly in the room, in a loop, reciting the words in Farsi in a meditative way. The narrator talks about the motions of everyday life. The banality of repetition, the safety that comes from the known, the rhythmic motions that help her blend into the surroundings that she finds herself in.

The piece reflects on what it feels like to be alien in a surrounding that you should be able to belong to. The text in Farsi has a double meaning too, which changes when translated into English. For example, the line "a tongue that is turned off" can also be interpreted as "a language that is turned off."

The piece is a reference to taking your being within it, step by step, in an almost monotonous way. Reciting movements in a language that is foreign to many in the context of where the piece is shown, is an attempt to reclaim the space, while simultaneously slowly removing the intended powers of the materials for them to transform into their own person, beyond the grasp and the control of the artist. The materials intermingle and talk to each other to create a space that can provide comfort and stability, a place born out of urgency and necessity.

https://u.aec.at/C6B92059

Rogine Moradi (IR) is an Iranian multimedia artist and musician based in Vienna, Austria. She began her studies at the Academy of Fine Arts in 2016 in the class of Prof. Monica Bonvicini. She is now working on her Diploma that she will finish in June 2023 with Prof. Iman Issa in the class "Sculpture and Strategic Space." Moradi uses different materials such as fabrics and nets to build immersive spaces that communicate in a language of their own. The artist's practice also revolves deeply around creating a physical vessel for the texts she writes. By writing and creating spaces, the artist is able to process the world in an all-encompassing way. Her materials push the boundaries of language, leaving the metaphorical nest, allowing the work to stand completely on its own.

Digital Musics & Sound Art
Honorary Mention

Rogine Moradi
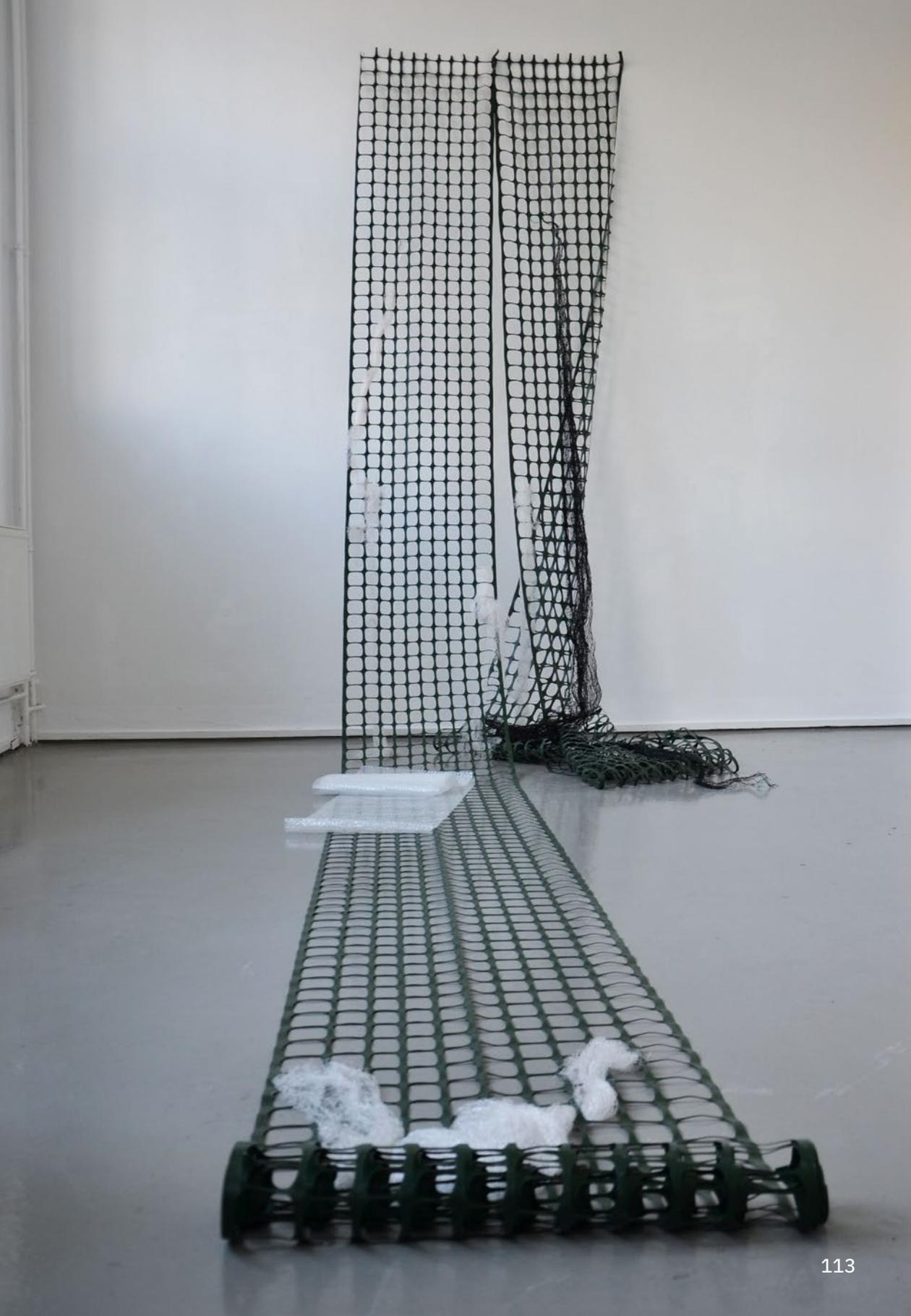
A Natural History of Networks / Softmachine

Ralf Baecker

A Natural History of Networks / SoftMachine is an audiovisual performance. At its core a fluid metal alloy (Galinstan) is animated by custom-built electrochemical apparatus creating organic movements and fractal-like structures. The animations are accompanied by a sonic layer, the direct translation of the electrochemical processes taking place in the fluid, a mélange of drifting frequencies, pulses, patterns, and noise.

The performance explores an alternative computational and technological material regime, informed by Gordon Pask's experiments on electrochemical artificial learning mechanisms and current research on biomimicry and programmable matter. The custom-built electrochemical apparatus creates a dynamic fluidic microcosm that performs a continuous becoming of form, structure, and material narrations. The performance aims to provoke new imaginaries of the machinic, the artificial, and matter. A radical technology that bridges traditionally discrete machine thinking and soft/fluid materials that enable self-organizing behavior through their specific material agencies. The neo-alchemistic material performance is captured by multiple cameras and composed and displayed in real-time on a projection screen.

The performer is manipulating and modulating Galinstan, a liquid metal alloy composed of gallium, indium, and tin immersed in a solution of sodium hydroxide. This inorganic "wetware" is stimulated by applying alternating electrical pulses through a set of electrodes. The evolving plexus of liquid metal creates distinctive electrical milieus in the chemical system. By sensing, analyzing, and acting on changes in the shape-shifting fluid, an (un)controllable process is triggered in which the network reacts to its input in a closed feedback loop. Models and methods of self-organization are introduced into the system to enable homeostasis to occur. *SoftMachine* is an analog/digital hybrid to speculate about a heterogeneous technological culture.

https://u.aec.at/4C7B6351
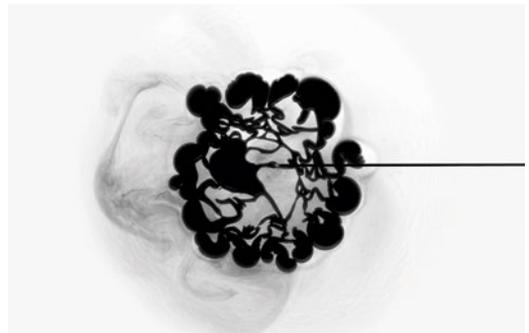
Ralf Baecker (DE) (*1977, Düsseldorf) is an artist working at the interface of art, science and technology. Baecker's kinetic and electromechanical installations and performances explore fundamental mechanisms of the digital, cybernetics, artificial neural networks, and artificial life. The behavior of his complex and poetic objects oscillates between algorithmic/artificial and organic/nature-like. His work has been exhibited internationally. Since 2016 he is professor for Experimental Design / New Technologies at the University of the Arts Bremen.

Julian-Anthony Hespenheide

Digital Musics & Sound Art
Honorary Mention
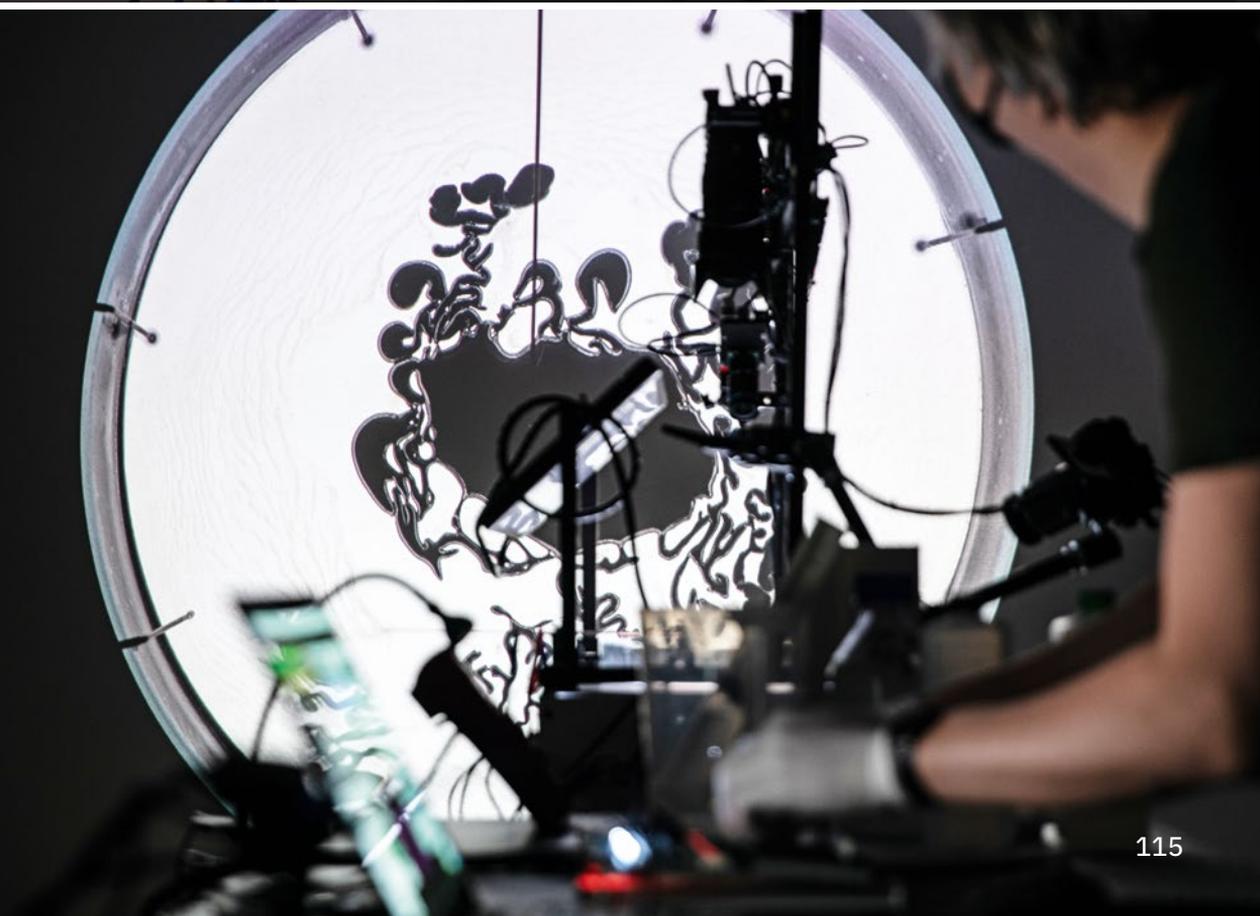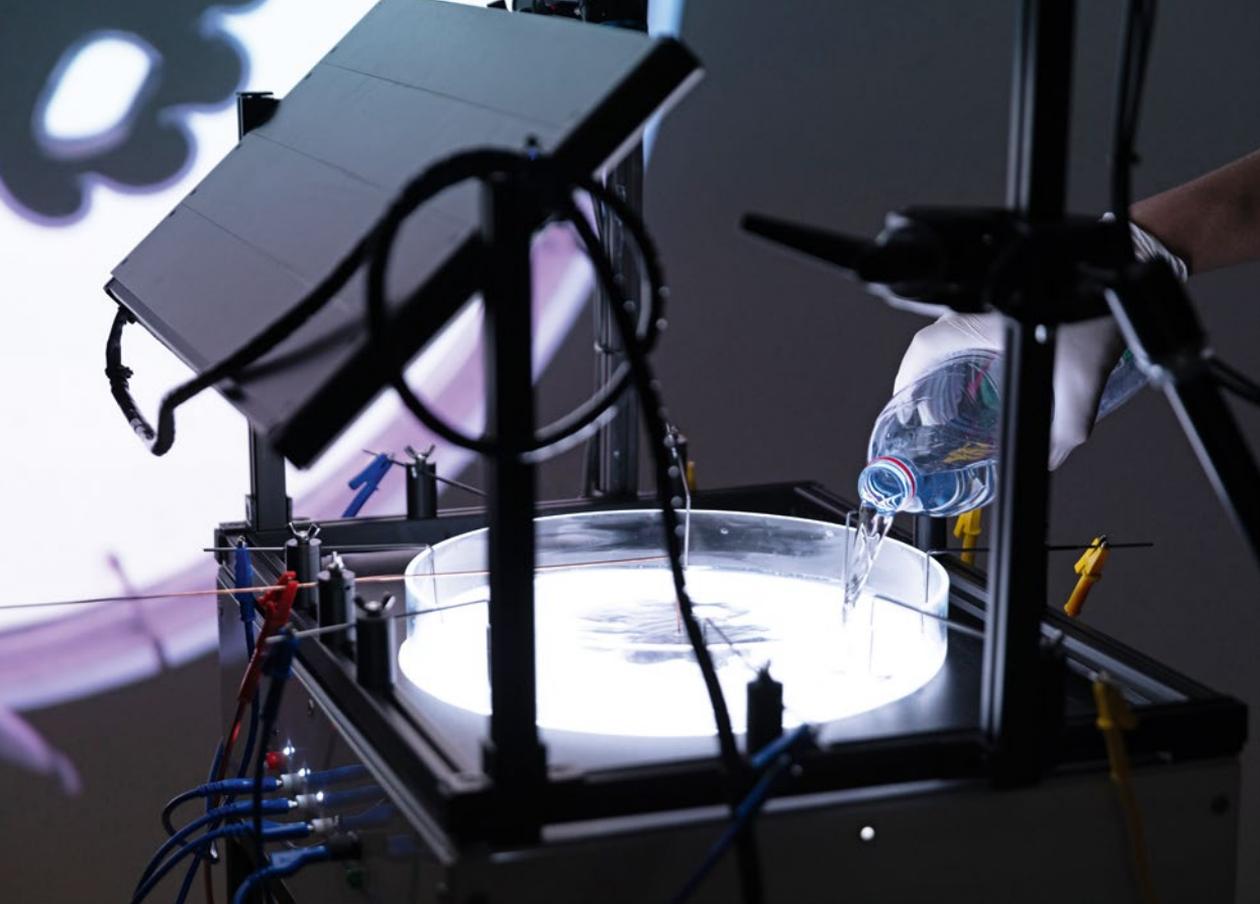
Antenna

Floris Vanhoof

Ever-present electromagnetic waves that fly through the air (lightning, submarines, planes, phones etc.) are picked up by the antenna and translated to small electromagnets that make strings of the piano sing. How can a visible object relate to the huge invisible spectrum?
A grand piano stands on its side, with a hexagonal antenna mounted on top. Electromagnetic waves received by the antenna are translated to electro-magnets that make the strings vibrate.
During a thunderstorm, while listening to classical music on the radio, lightning strikes became audible as cracks and pops. This is how I became interested in the omnipresence of electromagnetic waves. Those waves are always there, constantly going through the air, walls, our bodies…

Digital Musics & Sound Art
Honorary Mention

I built a VLF antenna to hear lots of noise and human-made communication channels, for example, beeps from weather balloons but also ongoing warfare.

This endless noise source, even larger than the internet, inspired me to research and finetune electromagnetic waves and to connect them to the non-compatible medium of the grand piano.

By placing the piano on its side, the mechanism of the keys and hammers based on gravity doesn't work anymore. My antenna and coils that electromagnetically push and pull the piano strings hundreds of times per second, give the piano a new function. The resulting sounds, like harmonic glissandi, are unachievable on a normal piano.

Through Software Defined Radio, my antenna is tuned to 32 frequencies at the same time. These taps are converted back into electromagnetic vibrations via coils with copper windings. When *Antenna* is presented, I select 32 frequency bands with interesting reception specific for the location. I also choose which strings and frequencies are played on the piano. The dynamics, rhythm, and polyphony are determined by waves present in the air.

In a time when all things are wirelessly connected, this installation invites people to stand still and listen to how a mechanical instrument can sound at the end of the information age. To hear how an object that is not of this time reacts to omnipresent waves.
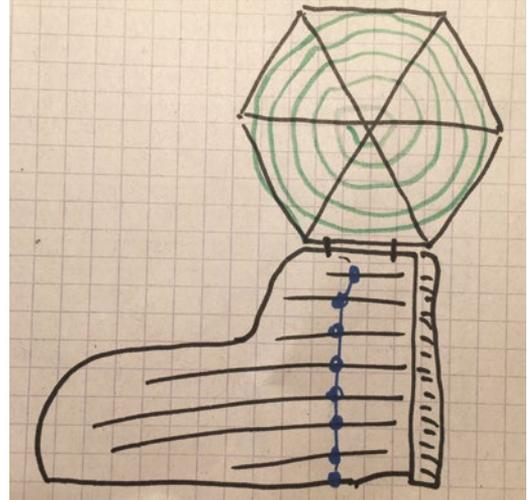
https://u.aec.at/EF8A757A

Floris Vanhoof (BE) combines homemade musical circuits and abandoned projection technologies for installations, expanded cinema performances, films, and music releases. Translating the one medium to the other to find how our perception operates and which new perspectives appear. Part of my practice is to carefully dose sounds and visuals. Considering how much to show or let hear and what to omit. Subtly overloading our perception so our imagination goes to work. Looking inside as well as outside. Creating small problems that put large ones into context.

Bias II
Artemi-Maria Gioti

Bias II for piano and interactive music system is part of a series of works engaging with the materiality and limitations of Machine Learning (ML) algorithms and data. During its interactions with different pianists, the computer music system collects data pertaining to the way performers navigate a set of 7 timbral clusters (pools of timbrally similar musical actions). Each second of the performance, a Recurrent Neural Network (RNN) trained on these data predicts how the performance might continue (i.e., which timbre is likely to follow next) and plays back sound material based on its predictions. Through this ML process, the work sets performers in an explicit dialogue with its interpretative history (i.e. interpretative choices made by themselves and other pianists in past performances).

Historical data, collected by the computer music system in past performances, influence the system's future behavior, establishing a reciprocal relationship between individual performances of the work and its inscriptions (data). Rather than being an independent, self-contained event, each performance of this piece is a link in a chain of co-creative acts that both instantiate and rewrite the work. *Bias I* explores distributed musical creativity—distributed among actors (composer, performers, computer music system) in space and time, and reframes musical authorship in collective and posthuman terms.

Chiara Bellamoli

Artemi-Maria Gioti (GR) is a composer and artistic researcher working in the field of artificial intelligence. Her research explores the transformative potential of technology for musical thinking and seeks to redefine notions of musical authorship. She holds a doctoral degree in Music Composition from the University of Music and Performing Arts Graz. She is currently a lecturer in New Media and Digital Technologies for Music at the University of Music Carl Maria von Weber Dresden and a Research Fellow in Music and AI at University College London (UCL), working on the ERC project *MusAI.*

Digital Musics & Sound Art
Honorary Mention

Chiara Bellamoli

https://u.aec.at/17E60B36

klimaton ARCTIC≈2020

Adnan Softić and Nina Softić (feat. Thies Mynther & MOSAiC Expedition Team)

What to do with the gigantic scientific data archives? Play with them!

klimaton ARCTIC≈2020 addresses the problem of communicability of scientific facts in the context of climate change in the form of a generative sound object. It questions the nature of doubt in the sciences and addresses the lack of a cultural approach to the earth as a holistic entity.

The work is situated between science communication, eco-politics, technology production, and art production—based on a seminal event in scientific research: late 2020, the research expedition MOSAiC returned from its Arctic voyage, having spent more than a year collecting data with a kilometer-long network of measuring stations. It is the largest scientific data collection from the region ever and possibly also one of the last large-scale recordings of a disappearing landscape that is considered by scientists to be "the key witness of climate change."

Large data archives are by no means a solution to the problem as long as their contents are not given a socially accepted meaning. But should such efforts be left to science alone? Or does a transfer of those digital archives into collective memory need to take place via detours that do not rely exclusively on reason and predefined scientific rules?

Together with a group of MOSAiC scientists, the composer Thies Mynther and a technical team including Juan Duarte, Chris von Rautenkranz, Martin Edelmann, and Jan Münther, the artist duo Adnan Softić and Nina Softić developed a sound instrument that outputs the data from the Arctic as sound—creating a large scale sonified portrait of a disappearing landscape. The instrument is a hybrid between a sonification device and a music instrument—allowing an open approach to the data.

Concept, artistic direction, production: Adnan Softić, Nina Softić
Sound design, musical interpretation: Thies Mynther
Data management: Dr. Sebastian Mieruch
Technical team: Juan Duarte, Martin Edelmann, Chris von Rautenkranz, Jan Münther
Scientific consulting: MOSAiC team of scientists

https://u.aec.at/8EB1F4AE
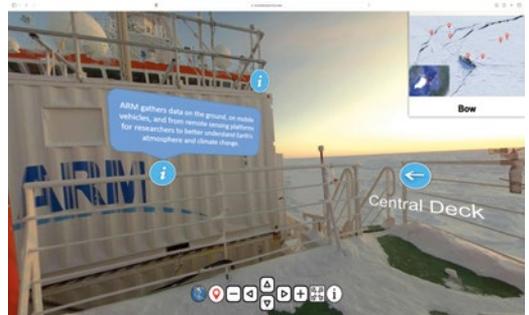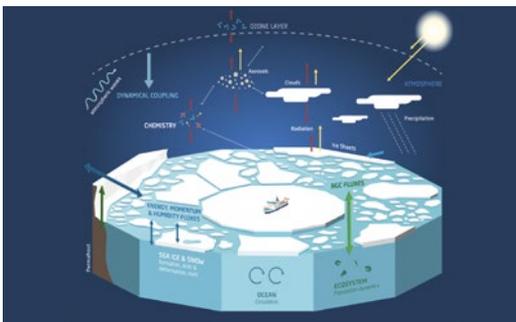
MOSAiC-Expedition_Screenshot
https://mosaic-expedition.org

studio softić

studio softić

Digital Musics & Sound Art
Honorary Mention
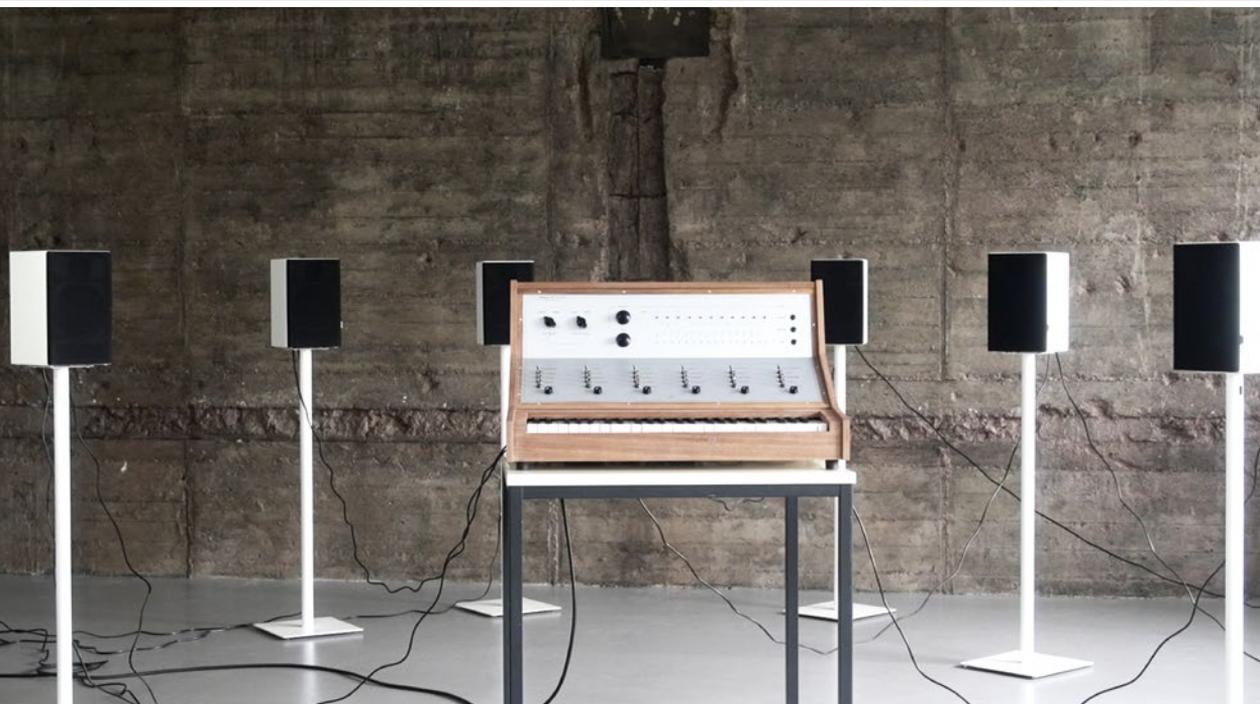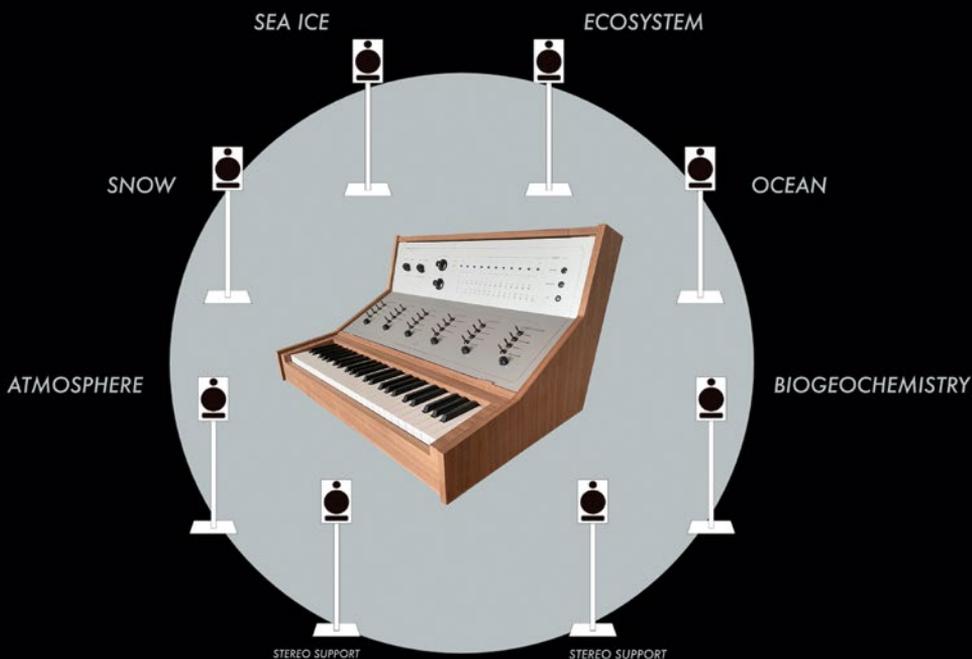
Adnan Softić and Nina Softić (INT) are an artist-duo working in Berlin and Sarajevo. Their collaborative practice explores the relationship between aesthetics and politics / ecology, focusing on phenomena such as invisibility, communicability, exile, extraterritoriality, culture, and violence. Their work process is a hybrid of poetic and philo-sophico-scientific explorations, driven by an internal necessity to face a given subject matter with all available resources. They pursue research-based and interdisciplinary work that takes place at art, film, music and theater venues, as well as in academic contexts.

MELENCOLIA
Brigitta Muntendorf

MELENCOLIA is a transdigital music theater show against the indifference of the universe, composed for Ensemble Modern, premiered at the Bregenzer Festspiele 2022, and supported by the Federal Government Commissioner for Culture and Media as a highly innovative project.

Over the centuries and across cultures, melancholy has experienced the most diverse and contradictory attributions. It has been universally addressed as a physical illness as well as a moment of contemplation, as a possibility of overcoming earthly suffering, and as the sister of genius. Albrecht Dürer's enigmatic polyhedron in the equally enigmatic painting *Melencolia I* has become a symbol of these contradictions and the insoluble amidst human longing for redemption. *MELENCOLIA* is a hypertext that has become space, in which sound, light, body, and image sources establish themselves as elementary particles and continually reform in an ongoing process of transformation. In the musical, playful and also strict handling of stereotypes from Renaissance, Romanticism, pop and kitsch, the music theater embarks on a search for the liberating melancholic mood. By using the MELENCOLIA APP, an augmented reality overture, we enter a futuristic stage setting where the audience finds itself in the middle of a 3D audio landscape. Live mapping and advanced green screen techniques, live electronics and collective gaming scenes, melt the boundaries of the opera genre.

14 instrumental soloists of the Ensemble Modern encounter virtual guests such as the Iranian Ney Anban virtuoso Saeid Shanbehzadeh or their own digital twins. Artificial intelligences and synthetically cloned voices meet digital image worlds and bizarre parallel existences, an incessant stream of instrumental and electronic sounds leads the audience into familiar as well as surreal listening spaces. *MELENCOLIA* is not only a show about an ensemble facing its own transience, but also an attempt to fathom the strange digital melancholy of our time.

Artistic direction, composition: Brigitta Muntendorf
Artistic direction, dramaturgy: Moritz Lobeck
Musicians: Ensemble Modern (14 instruments)
Choir: Local women's choir (4S, 2A)
Virtual soloist: Saeid Shanbehzadeh (Ney-Anban)
Sound direction: Norbert Ommer
Live-electronic, programming: Maximiliano Estudies
Visual worlds: Veronika Simmering
Stage, costumes: Sita Messer
Light design: Begoña Garcia Navas
Live-video, camera, editing: Warped Type
3D soundscape: d&b audiotechnik (Banu Sahin, Ralf Zuleeg)

https://u.aec.at/2EF28265

Brigitta Muntendorf
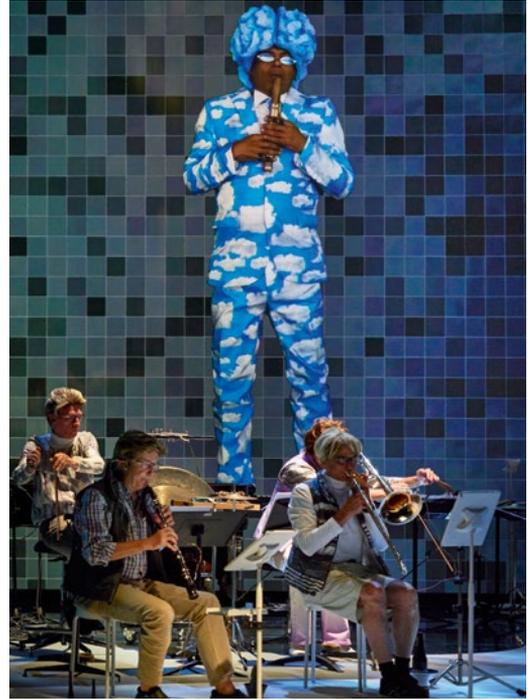
Digital Musics & Sound Art
Honorary Mention

The works of the internationally performing German-Austrian composer **Brigitta Muntendorf** (DE) range from instrumental, choral, and orchestral music to transdigital music/dance theater and 3D sound/AR installations. In 2023 her *Trilogy for Two Pianos* and live electronics (GrauSchumacher Piano Duo) was awarded with the German Record Critics' Award. In recent years she has developed immersive installations for Kyoto Experiment and Kunsthalle Mannheim, as well as larger stage and ensemble productions for the Ruhrtriennale, Theater der Welt, or Bregenz Festival. Muntendorf's 3D audio Space Oratorio for AI Voice Clones *ORBIT—A WAR SERIES* will be premiered by herself at the Venice Biennale Musica in 2023.

OSZILOT

Luc Gut, Rolf Hellat, OSZILOT

OSZILOT is a hybrid of sound installation and performance. Everyday objects suspended from strings are transformed into oscillating sound objects via movement sensors. The objects lose their everyday function and become animated and symbolic art objects. They create rhythm patterns, soundscapes, and abstract musical structures. The objects transform into living beings, ritual instruments, or futuristic manifestations of our imagination. The rhythms of the pendulum objects change by adjusting the length of the strings on which they are suspended. Thus, pendulums can be used like a primitive analog drum machine, but with the rhythms shifting in organic ways, creating constantly changing rhythmic patterns. An archaic, physical world is combined with the possibilities of digital sound synthesis. The audiovisual pendulum ensemble is a unique form of live electronic music performance in which the creation of sound is intuitively understood. After the performance, the audience is invited to play the objects, transforming *OSZILOT* into an interactive installation.

Kunstraum Walcheturm, Luc Gut

Kunsthaus Zuerich 2021, Andri Weidmann
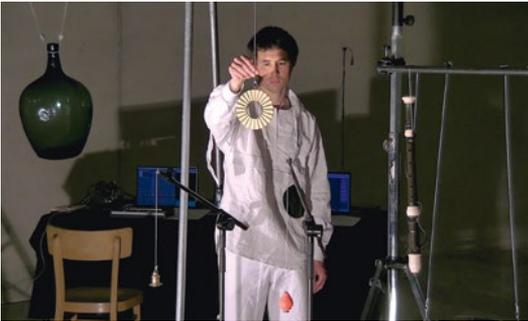
Kunsthaus Zuerich 2021, Andri Weidmann

Kunsthaus Zuerich 2021, Andri Weidmann

Kunsthaus Zuerich 2021, Andri Weidmann

Kunsthaus Zuerich 2021, Andri Weidmann

Digital Musics & Sound Art
Honorary Mention

https://u.aec.at/EB1D8C67
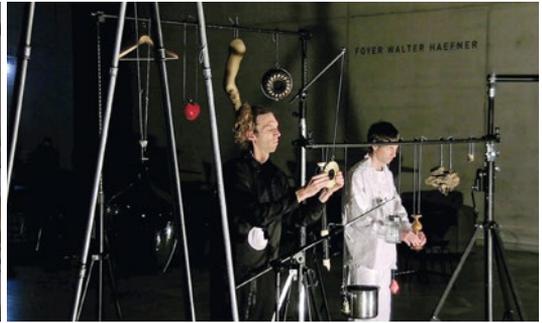
Busbahnhof Zuerich, Elias Knecht
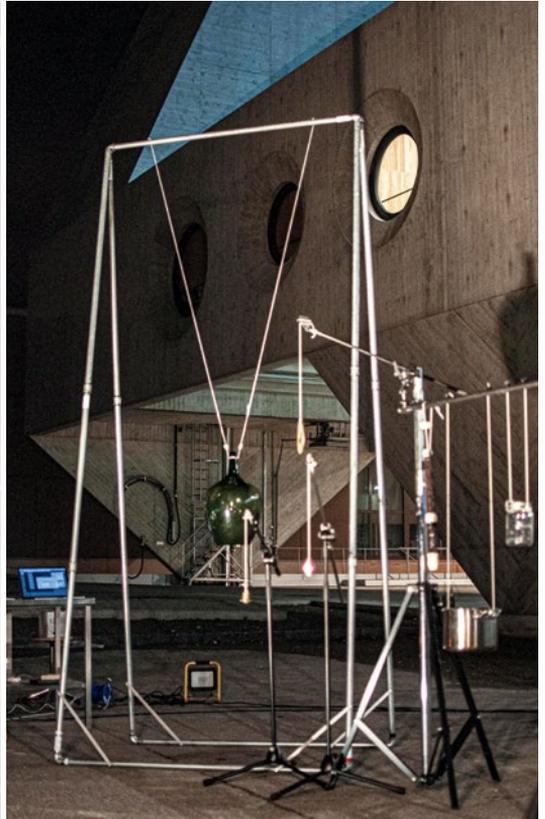
Media artists **Luc Gut** (CH) and **Rolf Hellat** (CH) founded **OSZILOT** in early 2021. They see OSZILOT as an alchemical process in which seemingly worthless objects are transformed into wondrous, fascinating artefacts. They seek to express a broad understanding of the world as a living, interconnected system in which all beings and objects possess some degree of consciousness and soul. OSZILOT has been shown at museums, art spaces, and festivals.

Rhizomes

Aho Ssan

Rhizomes is a concept developed by Gilles Deleuze and Félix Guatarri, presenting an evolving model, always in motion, spreading in all directions. It has no beginning and no end, but always has a middle, through which it grows and overflows. The root thought is the one that kills everything around itself while the rhizome is the root that stretches out to meet other roots. Édouard Glissant borrows the concept to address the question of identity, crossbreeding of cultures and its evolution.

This piece borrows the same concept. Aho Ssan collects and uses different sound materials, from artists such as Angel Bat Dawid, Nicolas Jaar, Moor Mother, clipping. and many more, to create a musical rhizome. Several concepts give life to this piece: the contribution of sound material that influences creation (or the prism of musical creation), the appropriation of a sound object, and the collaboration of a piece facing the current landscape.

This piece is coming with a book and beautiful drawings from artist Kim Grano. Between hybrid research of languages and emotional responses to the piece, they're playing a big role to plunge the listener into a universe filled with organic mutation.

All tracks written and produced: Aho Ssan featuring friends and family
Drawings: Kim Grano
Rhizomes was commissioned by Other People, Donaufestival & INA GRM

https://u.aec.at/96BE7938

Aho Ssan is the artist name of Paris based Niamké Désiré (FR). After studying graphic design and cinema, he began composing electronic music and creating his own digital instruments. Shortly after he went on to win the Foundation France television prize for his soundtrack to the film of *D'Ingha Mago,* and has worked on several projects related to IRCAM/ GRM in France. Aho Ssan will release his next solo album *Rhizomes* on Nicolas Jaar's Other People label.

dire le monde cest

entrer en contact reel

complet hors histoire

avec le tremblement

The winds of change
The waves of compassion
Let it all in
Let the spirits guide you 2x
In joy in laugher
Let the spirits guide us back to ourselves
Unlock your mind
Our mind
Your mind
I mind
God conscienceless
3rd eye
Crown
Spirit world
Spirit world
Can you see
The invisible world

Moor Mother

Marvin Jouglineu

Digital Musics & Sound Art
Honorary Mention

Marvin Jouglineu

Syphon

Wojciech Rusin

Syphon is a music release (on AD 93 label, London, 2022) that features electronic and acoustic music, soprano and alto vocals, and 3D-printed wind instruments. It seeks connection between noise, contemporary sound design, and Early Renaissance and old music.

Music from *Syphon* has been performed in 2022 Unsound festival in Kraków. It featured a contemporary music ensemble Spoldzielnia Muzyczna, a soprano, CGI visualizations, and 3D-printed reed instruments. Some of the instruments resurrect medieval double recorders or reimagine 12th century shawms. Others are based on ancient ideas that have been carried into the present, for example, the double reed is still used in the contemporary bassoon and oboe. This reed is referred to as "Dionysian" in Homer, and described as carrying an archetypal sound in contemporary theory by Murray Schaeffer.

My overtone pipes are based on Carpathian shepherds' flutes, and my ocarinas are decorated with beings that relate to Eastern European mythologies.

Syphon is an interdisciplinary project that consists of recorded music, graphic score, 3D-printed instruments, and CGI animations that are integral to the live performance.

Soprano: Eden Girma
Alto, flute: Emmy Broughton
With support from: Qu Junktion for the production of the *Speculum Veritatis* video

https://u.aec.at/48AA74F8

Ellen Wilkinson
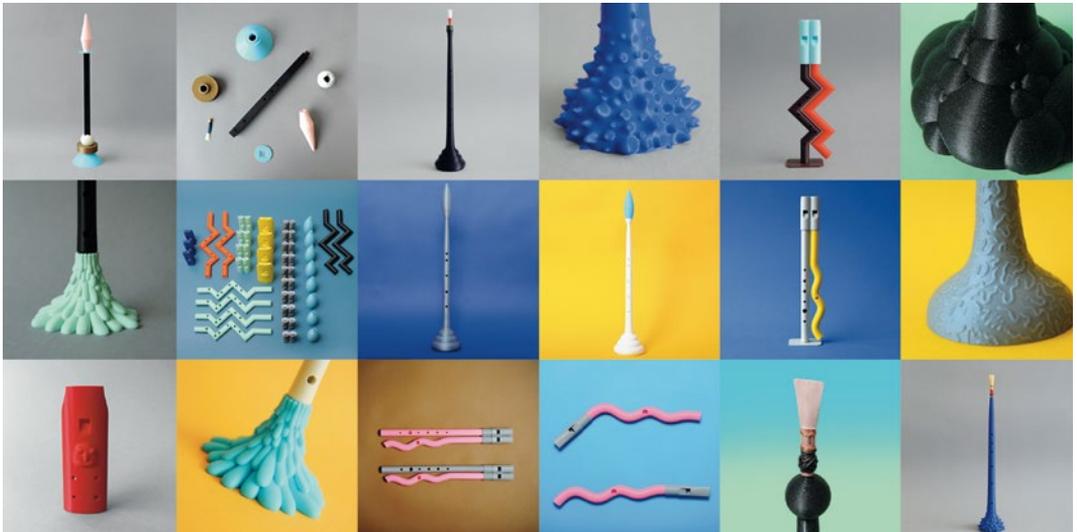
Digital Musics & Sound Art
Honorary Mention

Ellen Wilkinson

Wojciech Rusin (PL) is a Polish audio visual artist based in London. He draws inspiration from alchemical and gnostic texts, Early Renaissance choral music, and Eastern European mythologies. He released the *Syphon* LP on ad93 in 2022 and *The Funnel* LP on Akashic Records in April 2019. He designs and makes 3D-printed reed instruments, reworking ancient designs with contemporary 3D modelling technologies. In 2020 he released *Meat for the Guard Dogs* on Cafe OTO's Takuroku digital imprint, and the Rufus Orbis cassette for Boomkat Editions / Documenting Sound series. His music has been featured on BBC Four and he has worked for The National Theatre and The Southbank Centre.

Temporary Stored

Joseph Kamaru

Archives have always been framed in a guise that promotes a Western perspective of representations of the Other, a modernity in which the institutions and museums frame these archives and collections. These ways of representing the artifacts, tangible or intangible, problematize the mode in which the knowledge or histories of the peoples are communicated. Most African traditions are passed through apprenticeship and other oral traditions, usually put out of context and reconfigured in a Eurocentric dimension. Written sources in the West are deemed ontologically concrete and immune to individual distortion, whereas oral sources seem nebulous and subjectively constituted. An ongoing extraction of cultural property has occurred in colonies outside Europe, leading to the objectification of artifacts, humans, tools, sounds, and instruments. This harboring of objects in museums and institutions is unethical and problematic as the so-called "objects" are not considered objects in Africa. They are historical carriers, spiritual beings, and cultural entities passed on from generation to generation, and they reflect past and future histories. However, these histories are not accessible to those who now own them and who have created their own imagined version of past histories. The Occident has accumulated most of these archives and continuously reproduces a colonial pattern in this discourse. *Temporary Stored* is a repatriation project which questions the significance of sound archives in museums. Using selected sounds from an archive from the Sound Archive of Royal Museum of Central Africa, a fixed media piece is developed, re-contextualizing what the archived sounds reveal about the cultural heritage of countries in East and Central Africa. The piece focuses on narratives through different sounds from the archive, field recordings, and synthesizers, reconfiguring ways of thinking sonically through recorded pasts and (futures).

https://u.aec.at/CAE1B8B5

Frankie Casillo

Digital Musics & Sound Art
Honorary Mention
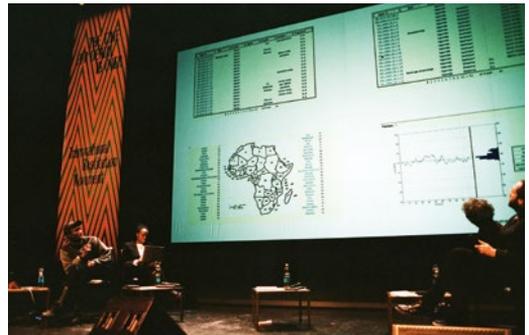
For **Joseph Kamaru** (KMRU) (KE) a Nairobi-born Berlin-based sound artist, sound is a sensorial medium through which social, material and conceptual interpretations are manifested in his works. KMRU carries with him a repository of listening experiences from Nairobi and beyond, expanding his sonic practices, bringing an awareness of surroundings through creative compositions, installations, and performances. He has earned international acclaim from his performances and releases at the Barbican, Berlin Atonal, Présences électronique, and releases on Editions Mego, Subtext, Seil Records. KMRU has carved out a serious and definitive space on the list of essential authors in ambient experimental music and is one of the most prolific and innovative artists in his field.

TRAILS
Mariam Gviniashvili

TRAILS is a multichannel electroacoustic piece commissioned by ZKM | Center for Arts and Media for the ARD-Hörspieltage and premiered in the Kubus in 47.4 loudspeaker system.

TRAILS develops soundscapes from what you hear as you walk through Nordmarka, the northern part of the forest around Oslo, towards Lake Maridalsvannet—the largest lake in the municipality. The piece takes the form of a narrative made up of the processed sounds of birds, streams and waterfalls, cracking and breaking branches, footsteps, falling stones, or the echo of boat signals from afar. There are a variety of trails to explore.

The deeper you go into the forest and into your mind, the more the soundscapes transform into other densely constructed soundworlds until you reach Maridalsvannet. There you see the calm, peaceful lake standing still, reflecting grey, heavy clouds floating in the sky. As the fog moves on and covers the surface of the lake, you step on the trail leading home in the growing darkness…

https://u.aec.at/117C8BD1

Digital Musics & Sound Art
Honorary Mention

TRAILS
MARIAM
GVINIASHVILI

Mariam Gviniashvili (NO/GE) is a Georgian composer based in Oslo. She works as a sound artist and composer, combining electronics, electroacoustics, and 3D sound technology with visuals, dance, and live performance to delve deeply into the physical and emotional essence of sound and space. Gviniashvili's compositions have been presented at festivals and major venues including New York Electroacoustic Music Festival (US), BEAST FEaST (UK), Transitions at CCRMA (US), MA / IN (IT), ICMC (KR), Mixtur Festival (ES), ARD-Hörspieltage at ZKM (DE), Ars Electronica (AT), Klingt Gut (DE), In Situ Festival (DK), Heroines of Sound (DE), and Ultima Festival (NW).

Isao Tomita Special Prize 2023

Japanese musician and composer Isao Tomita (1932 – 2016) is considered a pioneer of electronic music. He not only laid the foundations of the synthesizer boom, but also pushed boundaries and influenced numerous sound artists. In 1974 he received a Grammy Award nomination for *Snowflakes are Dancing,* a modern interpretation of classical music created with a Moog synthesizer, and at the 1984 Ars Electronica Festival in Linz he caused a sensation with *The Universe* as part of the "Linzer Klangwolke" (Linz Cloud of Sound)—his spectacular outdoor concert by the river Danube, where huge loudspeakers were mounted on helicopters and ships, creating a unique, three-dimensional, acoustic space. Throughout his whole life, Isao Tomita has explored innovative musical possibilities with his approach of combining sounds of new electronic devices and classical instruments.

To commemorate Isao Tomita and his creative spirit, TOMITA information Hub and Prix Ars Electronica are jointly offering a special prize. In parallel with the biennial award of the Golden Nica in the Digital Musics & Sound Art category, the Isao Tomita Special Prize was and will be awarded in 2021, 2023, and 2025. The prize is aimed at artists who explore artistic and technical challenges in digital music and sound art and inspire others with their innovative and unique music.

The Isao Tomita Special Prize is supported by TOMITA information Hub, a community organized by Isao Tomita's daughter, Rie Seno. It aims to introduce her father's music to interested people of all ages and all over the world, while creating a place where artists from a variety of backgrounds can come together through Isao Tomita's music to develop inspiring ideas for the future.

This year, for the second time, the jurors of the Digital Musics & Sound Art category had to select the winner of the Isao Tomita Special Prize 2023.

PRIX
ARS ELECTRONICA 2023
International Competition for CyberArts
Isao Tomita Special Prize

Statement of the Digital Musics & Sound Art Jury
Ludger Brümmer, Tonica Hunter, Ali Nikrang, Małgorzata Płysa, Asher Remy-Toledo

TRIPTYCH
Robin Fox

Fox's Triptych, characterized as an "audiovisual space-time carving," pushes the boundaries of traditional audiovisual art, challenging preconceived notions of live performances. Much like Isao Tomita, who utilized synthesizers to create ethereal and otherworldly sounds, Fox employs laser projectors to transform physical spaces into immersive environments that engage multiple senses simultaneously. These moments of audio/visual synchresis are nested amongst the vast sonic soundscapes and raw voltage glitch compositions that the artist is known for in the experimental electronic music world.

The idiosyncratic artistic language developed by Fox reflects his commitment to venturing into unexplored territories. This resonates with Tomita's pioneering spirit, as both artists fearlessly explored new realms of creativity, unafraid to challenge established norms and conventions. The central theme of the interplay between light and sound in Fox's laser work mirrors Tomita's fascination with the relationship between music and visual aesthetics. Both artists strive to create synesthetic experiences, blurring boundaries of perception and immersing audiences in a multisensory journey.

It is important to note that Fox's laser works, much like Tomita's compositions, demand active engagement and direct experience. The transformative power of their art lies not in its documentation or reproduction but in the unique direct encounter it offers, transcending traditional artistic mediums and inviting viewers to participate in the creation of meaning.

As a jury we felt that Robin Fox's laser work embodies the artistic spirit of Isao Tomita, paying homage to his visionary approach and artistic dedication. By pushing the boundaries of audiovisual exploration, both artists have left a profound impact on electronic music and visual art, inspiring future generations to pursue innovative and transformative artistic endeavors.

Triptych
Robin Fox
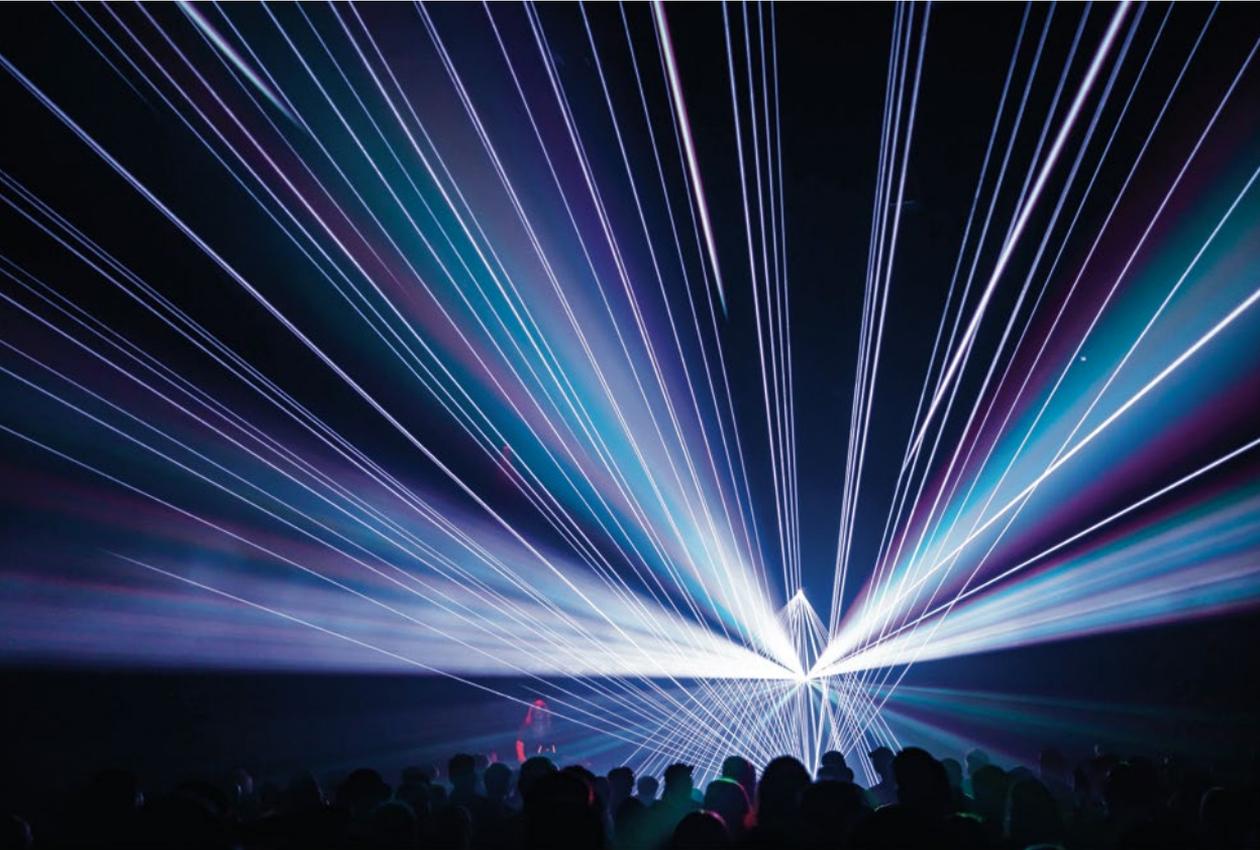
Lachie Douglas

Triptych is the latest audio visual space-time carving from iconoclastic Australian AV artist and composer Robin Fox. The work brings together the artist's two creative passions—electronic music and audio-visual mechanical synesthesia. Using custom-built hardware that splits the voltage creating the image to the audio realm, the work achieves an almost impossible but also incredibly simple correlation between sound and image. As graphics created in Pangolin (laser display software) morph, creating maelstroms of volumetric light, the voltage making the image is simultaneously sonified. These moments of audio/visual synchresis are nested amongst the vast sonic soundscapes and raw voltage glitch compositions that the artist is known for in the experimental electronic music world.

After two years of working on large scale outdoor laser and sound installations (thanks COVID-19!) *Triptych* sees a return to concert format with the
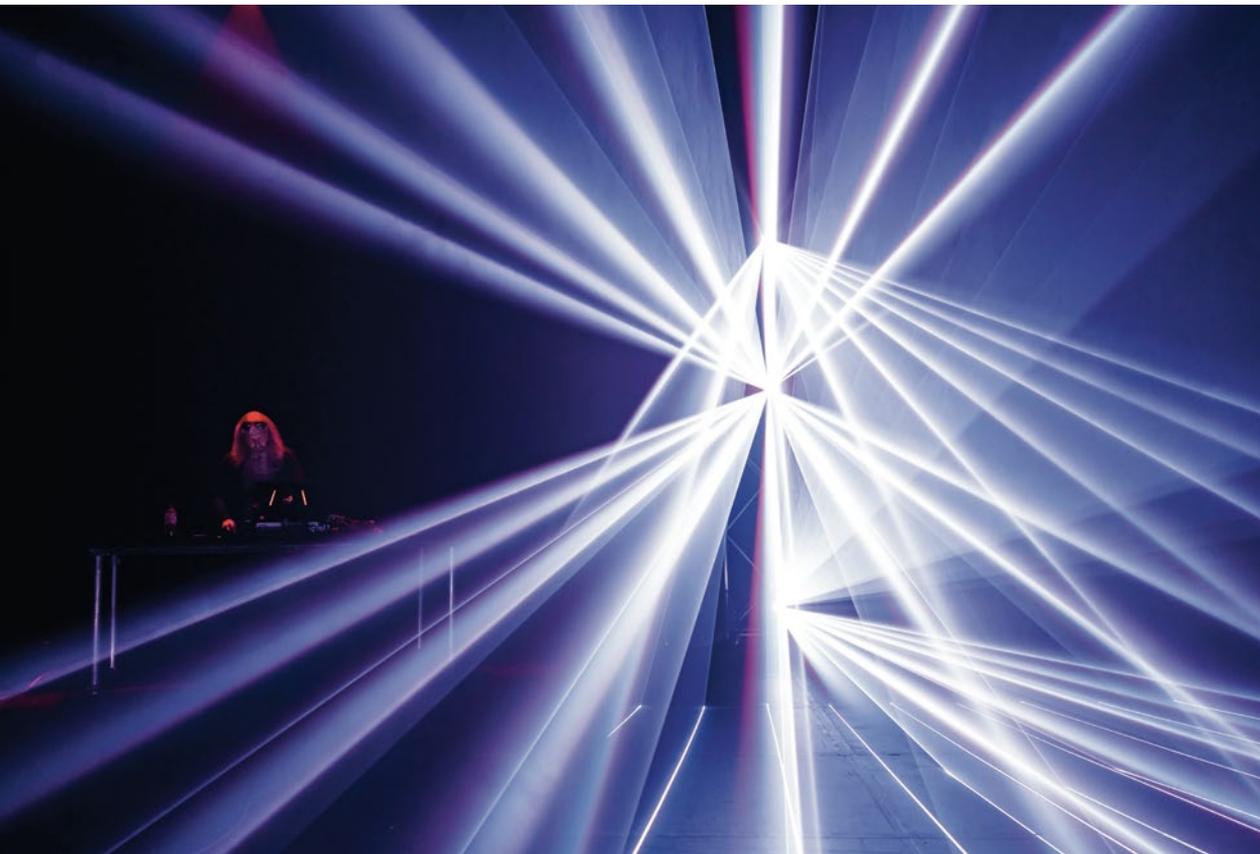
synesthetic marriage of sound and light. Three RGB laser projectors work in synchronicity to realize a stunning full color geometry that maps specifically to venues and transforms them into live electrical environments. Moving between high art techno, deep sonic mass and visual noise *Triptych* can never be packaged up and released—it doesn't document well—it will never live online, it needs to be experienced. The creation of somatic works for people communing in spaces is vital if our commu-

nities are going to survive the onslaught of digital isolationism. In 2021 Robin Fox had the opportunity to research the life and work of Polish emigre artist Stanislaus Ostoja-Kotkowski. 'Stan,' as he was affectionately known in his adopted home of Adelaide, was an extraordinary mind. He was an early adopter of laser technologies in his audio-visual works and saw immediately the correlation between painting and working with light in real time. He explored the synchronicity of sound and

Isao Tomita Special Prize 2023

light for decades building instruments and installations where the sound and light were treated as equal parts of a whole. For years Fox felt that there was no real precedent for what he was doing in Australia—so the discovery of such a substantial body of work that was so closely associated with his own was a revelation. This research has influenced the development of *Triptych*—the ghost of Ostoja-Kotkowski has seeped into the fiber of the work pushing into new and unexplored territory. *Triptych* is a fulcrum between past and future, which uses the present as a catapult.

Artist: Robin Fox

https://u.aec.at/A6987E1F

Robin Fox (AU) is a leading Australian audio-visual artist. His AV laser works, which synchronize sound and visual electricity in hyper-amplified 3D space, have been performed in over 60 cities worldwide to critical acclaim with highlights including headline shows at Unsound Krakow, Berlin Atonal, Mutek (Montreal and Mexico City), Semibreve (Braga—Portugal) Vancouver New Music Festival, Sonica (London) among many others. He also produces large scale public laser and sound artworks. He has scored over 20 contemporary dance works for celebrated Australian choreographers. His music is released widely by local and international labels. Fox holds a PhD in composition from Monash University and has written a history of experimental music in Melbourne 1975–1979. He is a founding director of MESS (Melbourne Electronic Sound Studio).

2.]

Edu
cati

on

u19
create your
world

Anger+Courage

Sirikit Amann, Lisa Ackerl, Conny Lee, Karl Markovics, Remo Rauscher

The u19 category of the Prix Ars Electronica is as colorful and diverse as hardly any other, as it allows for the submission of projects of all kinds—drawings, machines, sculptures, photographs, films, and more—and it juxtaposes the approaches of those under ten years old with those of almost adults. Nevertheless, every year, overarching thematic tendencies can be observed—topics that occupy the upcoming generation and are particularly present in their everyday lives. In the past year, this tendency was primarily shaped by the pandemic and its consequences, resulting in a worrying thematic focus: mental stress and illness. This year, the underlying sentiment of the u19 projects has shifted towards anger. The young people are angry about their perceived powerlessness in society. They are angry at the previous generation that forces them into this situation and that, even though they have the means, does not take action. The climate catastrophe is the dominant theme this year, and the big question that arises is: "What kind of planet will I spend my life on?" Those who could do something to prevent the catastrophe do nothing, and the democratic means available to the youth, such as demonstrations and informational campaigns, do not have the desired effect. Therefore, "ecoterrorism" is for many their last hope to achieve some kind of impact. This fear for the future is further fueled by the war in Ukraine and the looming scenario of a world war that accompanies it. Already in the projects of the youngest participants, the world is repeatedly blown up, and the adults are to blame. The anger also focuses on the constant consumerism and the resulting handling of resources and waste. Young women, in particular, are angry about the everyday occurrence of sexual assaults. They are stared at, groped, objectified, or drugged with date rape drugs—regardless of their age. Another phenomenon that the young people revolt against is the constant overwhelm and inundation they are exposed to. Some might cynically respond, "Their own fault," but anyone who looks at the reality of young people in Austria will recognize that there is hardly any escape from the omnipresence of social media. It is a dangerous bubble of threatening news, trends to follow, and the compulsive belief that one must generate constant input and output in order to be seen

and liked. At the same time, they do not want to reproduce the mistakes and omissions of the previous generation. There is an immense pressure on young people to improve the world, and they are expected to do it immediately because there is no more room for delay due to the procrastination of the older generation. The young people do not have time to mature peacefully, make mistakes, and grow into responsibility, because by then the planet might already be ruined. They have to act now, and they no longer expect significant help from the older generation. Their anger is understandable. But those who are angry do not feel fear. And that is the great strength that lies in all the works—courage! In German, by simply turning the first letter of the term "Wut" (anger) upside down, it becomes "Mut" (courage). Judging by the submitted projects, the young generation possesses a lot of both! The way the u19 generation deals with their anger and where their courage leads them has many facets: Some express their feelings and accusations quite directly, like the four young women who tell their stories of sexual assault in the film *HUE,* or like the creators of *Meditações,* who scream out their anger while someone gives them a meaningless sermon. Others use humor to emphasize their message, for example, by satirizing greenwashing campaigns or creating a machine that aims to counteract the dopamine rush induced by social media, leaving us waiting endlessly for a few drops of pee. Alcohol and drugs have also been recurring motifs to soothe the furious despair. Some projects channel their fear of the future into poetic expressions, such as a post-apocalyptic, beautiful desert through which we navigate, encountering ruins of human civilization. Others attempt to preserve the past, as exemplified by the Golden Nica with *Verblassende Stimmen* (Fading Voices). In comparison to last year when the majority of projects were characterized by depression and resignation, the angry tone this year gives us cause for optimism. However, the older generations must not think, "Great, the young ones have risen again and are fighting," only to applaud from a passive position. They must join forces with them or at least support them wherever possible.

This year, there were particularly many expressive

objects and sculptures among the submissions, as well as an increased number of video games that impressed with their astonishing professionalism. There were slightly fewer entries from those under ten years old this year, and we hope that the very young builders, programmers, and artists will participate more actively in the competition next year. Despite the oppressive seriousness of the topics, it is important to note the high quality level of the projects, both in terms of the range of creativity and how professionally they were executed.

Here are the 23 award winners, listed in ascending order according to age categories:

Young Creatives (up to age 14)

u10 Honorary Mentions
Young Creatives

Unterwasserwelt
Sara Wanzenböck
The short film takes place in the realm of a fish king with colorful fish inhabitants and a very cool royal bodyguard. Everyone could live peacefully if it weren't for the trash that pollutes the seas, leading the predator fish to kidnap the princess to escape the garbage. Sara skillfully builds up drama in the fluid narrative, underscored by sound effects.

u10 Award of Distinction
Young Creatives

Waste Sorter
Mingyan Ella Tien
Separating waste can still not be taken for granted. Often people cannot be bothered or they really don't know how to do it properly. Using the visual programming language Scratch, Ella has created a game that playfuly teaches how to separate waste. The goal of the game is to fill waste containers correctly. Players receive hints and feedback through speech bubbles and sound effects, some of which were recorded by Ella herself.

u10 Prize
Young Creatives

Strom erzeugen durch Bewegung
Leopold Kastler
An exoskeleton is usually designed to support and potentially move the body. In *Generating Electricity through Movement* the principle is reversed, and an exoskeleton is built to be moved by us, generating electricity in the process. Available materials like pieces of wood, LEDs, and a small generator were used. This is not only a creative idea cleverly executed, but the inventor also considered how this device could be used, such as for charging batteries.

u12 Honorary Mention
Young Creatives

Robotheater
Sarah Hölzl
In a playful manner, a future is presented where only human-made machines exist. However, even these machines make the same mistakes and have to learn from them, just like us humans: thoughtlessness, energy waste, and disregard for nature. *Robotheater* tells an important truth: Only in our imagination can we travel to the future, but we can only change it in the present.

u12 Award of Distinction
Young Creatives

Ein Besuch auf Schloss Finsterwald
Students of class 2ab (school year 22/23)
from Mittelschule Gries am Brenner
Although the beginning of the story was given, the progression and content were rich, imaginative, and full of drama, resulting in a very successful radio play. Unlike films, radio plays require more suspense and drama, soft and loud sounds, or, in other words, a wide range of noises, diverse voices, and even room for "emptiness" to create tension. The radio play *A Visit to Castle Finsterwald* fulfills all these requirements.

u12 Prize
Young Creatives

R2 D2 SERVICE-ROBOTER
Maximilian Posset
This cult-worthy development of a cult figure is fun and entertaining without sacrificing depth. Where past science fiction manifests as present-day gadgets, we encounter smart technologies in everyday life. They often personify the feeling of a best friend or a life-saver. It rolls on every level via remote control, equipped with a service arm made

from an old antenna, two support arms made of wood, and ultimately collects trash. Only one thing remains to be said with a metallic voice: "May the waste be with you."

u14 Honorary Mention
Young Creatives

MARIMBA
Students from BG / BRG Laa an der Thaya
Sometimes animated films impress with their story, sometimes with their technical sophistication, and sometimes, as in this project, with their unique, captivating atmosphere. In this short film, a gorilla and a llama travel through a surreal alpine landscape, a sea monster with a chimpanzee head drags its victims into a pond, and a red-eyed monster is abducted by aliens. Many things happen in this experimental animated film, but stylistically, everything comes together to create an exciting mood reminiscent of David Lynch with a healthy dose of humor.

u14 Awards of Distinction
Young Creatives

Dysnomia
Students from BG / BRG Laa an der Thaya
This film tells the story of a conflict between a chef and his specialty dish—the papayas. In Greek mythology, "Dysnomia" refers to the daimon of lawlessness. At first glance, the lawless ones seem to be the papayas in the film. Only in the second part of the story do the viewers learn about the atrocity the chef has committed against the papayas, which even calls upon a superhero team, the Papangers. The meticulously designed and expressive phase animation opens up new perspectives on the origin and external perception of conflicts.

Benjomatics
Benjamin Hölzl
Benjamin's developed series of automatons consists of two candy vending machines, one of which is equipped with a drinking water fountain, and a flight simulator. The simulator ingeniously combines a structure made of LEGO Technic parts with a game app programmed in Scratch. This work stands out not only for its creative use of various analog and digital components but also for employing two different visual programming languages.

u14 Prize
Young Creatives

Der Klassensprechersong
Fabian Kranzl
This rap entitled *Class Representative Song* not only satirizes any anonymous class representative but also targets those who like to take themselves too seriously and make themselves important without actually being important or doing anything significant. And thus, everyone is addressed—whether young or old. Each person who watches this video has their own "class representative" in mind—perhaps even seeing themselves in the mirror. Entertainment with an attitude. This rap is politics!

Young Professionals (age 14–19)
Honorary Mentions
Young Professionals

#Pictrees – Eine Grazer Umweltinitiative
Felix Zorn-Pauli, Neo Klinger, Sarah Windisch, Bianca Amberger, Enzo Gutschi, Paul Miklautz, Tobias Fischbach
For an entire month, the students occupied the media facade of the Kunsthaus Graz with the Insta-theme "Nature in the Urban Landscape." The more stories were tagged, the more trees the city of Graz was allowed to plant. *#Pictrees—An Environmental Initiative in Graz* achieves one thing above all: reaching a wider audience outside of its own bubble, as the project elegantly communicates its cause. The city dwellers often overlook the core ambitions hidden behind the facades due to light pollution in the city center, eventually becoming "blind to trees." The multimedia action captivates mainly through its ambiguity: the city lights must blind us first to open our eyes.

Brave New World
Leo Bauer
A trampled piece of earth, a spot of sloppy nature. A withered flower on a piece of cardboard. Helplessly turning, it strikes out and is simultaneously struck. A minion made of yellow plastic on a wooden stick, like a grotesque totem pole. This botanically mechanical artwork defies description. In its apparent insignificance, it contains everything that troubles us as human beings and makes

us human: our perverted relationship with nature, our godforsakenness, our lack of beauty. And at the same time, it radiates the opposite of all that: a desire for harmony, faith, and beauty. It is like the piece of earth it occupies—one can pass by it carelessly or get lost in it.

create [your] world, please
Ferdinand Preßmayr, Moritz Bjelič
This VR loop convinces not only because of the confidently employed AI tools but also creates a compelling pull that raises questions, such as: How does artificial intelligence perceive itself? What images does it want to conform to? How do we engage in dialogue with it? A DNA strand composed of partly solid, partly organic elements forms a path on which we float rather than walk. Gradually, a feeling of paralysis spreads, and the narrative begins to circle. *create [your] world, please* is a multi-layered commentary, paired with an excellent sense of immersive staging.

Ein halber Cent (oder die totale Destruktion des Ungewissen) für einen Blick auf das Chaos am Silver Screen
Marco Barthofer
The short film *Half a Cent (or the Total Destruction of Uncertainty) for a Glimpse of the Chaos on the Silver Screen* beautifully combines associative snippets of thoughts that manage to trigger synapses and evoke memories in the viewer. The images are overlaid with a clear singing voice that serves as a guide through the tangle and chaos in one's mind, providing something to hold onto. One cannot escape this flood of images, this mix of film, animation, black, colorful, vibrant, screams, soft singing, and screeching sounds that induce discomfort yet propel one forward. Very liberated, very creative, very captivating.

Greenwashing
Students from BRG Traun
This series of three video clips reflect on and explore societal and political aspects of greenwashing, environmental whitewashing, and their consequences in a thoughtful and sophisticated manner. In two image videos that parody pretentious product image films with pinpoint accuracy, it shows how the label "sustainable" itself is marketed as a product. Humorously, it portrays the inflationary and largely unregulated use of the term "sustainability." The grand finale is a speech composed of original quotes from German politicians, exposing the absurdity of greenwashing as a business practice and the lack of political intervention.

HUE
Rebecca Heindl, Ronja Hoffert, Jasmin Korkmaz, Nathalie Zalewski
This documentary animation film is based on real events and addresses instances of sexual harassment in the daily lives of the young filmmakers. They narrate their own experiences, describing how men engage them in conversations with pseudo-charming niceties, only to touch their breasts and buttocks or even publicly masturbate in front of them. *HUE* employs a visual storytelling approach that expresses the spreading feeling of intrusion. Animated fluids, grinning faces, and groping hands transition from one situation to another. The voices constantly challenge their own naivety, the fear of resisting in the moment or speaking up about it afterward. In order to counter this phenomenon, the filmmakers choose animation as a vehicle to visualize intimate moments of shock. The work impresses with its bravery and sensitivity, making a clear statement against the taboo of such assaults, and practically shouting, "Don't be ashamed! Raise your voice!"

Isolation
Tim Horner, Mathias Eisenheld, Christian Qiu, Valentin Breunig
A lone survivor escapes a space station infested with monsters—this initial setup has been chosen by numerous video games, making it all the more challenging to convey a unique style. The game excels with clever puzzle design, striking a good balance between puzzles and action, and an extremely professional look. We alternate between controlling an astronaut character and a small robot drone, needing to open locked gates and escape spider-like alien creatures in precisely timed sequences.

PiPi
Yannick Schneider, Pauli Zauner
When one of our posts receives a particularly high number of likes, favs, or views, our bodies produce the happiness hormone dopamine. That's why social media is so addictive but also causes immense pressure and stress. As a response to this phenomenon, a machine was built that aims

for the lowest possible dopamine release: you pour water into it from the top, and after an unpredictable period, the *PiPi* machine excretes the same water. This project is a subversive, even anarchistic comment on current media consumption.

Sýn (the Sight)
Samuel Klancnik

"For my younger self, who wanted to change the world." This graphic novel is dedicated to itself and, in turn, to an entire generation. Moving through its genre with great confidence, it impresses with a poetic (English!) storytelling and an extraordinary translation: it is not the raven—as a Celtic symbol of the message bearer—that carries the media responsibility, but humans themselves. In an era of fake news, social bots, and increased polarization, this parable ascribes latent shortsightedness to the consumer and holds them responsible as constant creators of media content.

Tamina
Tobias Spinka

"Tamina" means "the beautiful one." At first glance, the artwork appears as an extraordinary but familiar upholstered piece of furniture. The shape of the object is based on the body measurements of 21 internationally renowned female celebrities who are often portrayed by the media as ideal images of female beauty. Only a few people can comfortably sit on the resulting chair. The application of parametric design here does not serve to optimize the form but to materialize the artist's intensive exploration of societal and political positions regarding beauty ideals.

Awards of Distinction
Young Professionals

Gan Eden
Anatol Grandits, Tomas Perkovic

As far as we can see, only a desert; the horizon a glowing orange above the endless sand dunes—this is how the world is presented to us in this explorable walking simulator. The Bible quote "You are dust, and to dust you shall return" precedes it all. The creators of *Gan Eden* depict a simultaneously picturesque and desolate dystopia that partially corresponds to our reality. As one moves through the environment and approaches ruins or dead tree stumps, soundscapes from the past emerge as auditory memories. It is a world from which humanity has eradicated itself and all other forms of life. The title alludes to the paradise from which we have expelled ourselves in favor of mass consumerism and materialism. The interactive experience of *Gan Eden* conveys a silent anger that holds up a mirror to the resigned attitude towards the climate catastrophe.

Meditações
Linda Michelitsch, Konstantin Redl, Emma Gruber

Young people on a class trip. The paradise outside is merely external and illusory. Inside, a struggle takes place. A struggle against appearances, shallowness, and hypocrisy. The possibilities and temptations of Western civilization no longer function as tranquilizers. The reactions are anger, disturbance, and rebellion. It is the struggle of coming of age and awakening that we witness here. This power could be the energy of the future. Because anger, disturbance, and rebellion are more sustainable and constructive than resignation. If there is a goal, there is also a path. And if there is a path, there is hope.

Golden Nica
Young Professionals

Verblassende Stimmen
Sonja Höglinger

It is not easy to comment on this work because its visual presence actually conveys everything succinctly. It speaks without speaking. Its tonality is tattooed into the fabric skin forever with needle and thread. The fabric itself already resembles the sound track of a composition that has not yet been played, or like the lines on a monitor when the heart no longer beats. The blue peaks—if only they were played—would transmit a message, a song, or just a humming and the vocal color of a person. Inaudible to the viewer, but present enough in the mind to imagine its own decoding. The timbre of a voice fades with time, the memory of it disappears. What remains are the peaks of a silent sound track. Or does it only take a whisper, and we hear the person laughing, talking, or singing again? *Verblassende Stimmen* (Fading Voices) is an analog work that, despite everything, manages to capture the digital and intertwine the best of both worlds in a wonderful way.

Verblassende Stimmen
Sonja Höglinger, HBLA für künstlerische Gestaltung

And every time he picks up the receiver, these words sound. Now there is silence, and I can only hear the voice in my memory. Our archive of memories is comparable to a hard drive; both store a variety of information. However, recordings on our computer can be accessed and played back exactly the same way, while memories, especially those of voices, fade more and more over time.

"Do you know what's the worst?—When you realize that you can no longer remember someone's voice."

This statement from a friend occupied my thoughts for a long time and was difficult for me to comprehend. However, due to a significant loss last year, I also experienced this phenomenon myself, and I set out in search of a solution.

In doing so, I discovered that remembering vocal tones is often only possible when one recalls typical phrases spoken. Through my textile work, I now want to visually depict this possibility to counteract the fading of voices to some extent. Therefore, I am taking up a special phrase of my father's to remember him with his humorous nature and pleasant voice. However, I also want to give the viewers an opportunity to immerse themselves in their own memories and have the possibility to mentally replay their own memories while contemplating my artwork *Verblassende Stimmen* (Fading Voices).

https://u.aec.at/A11F5088
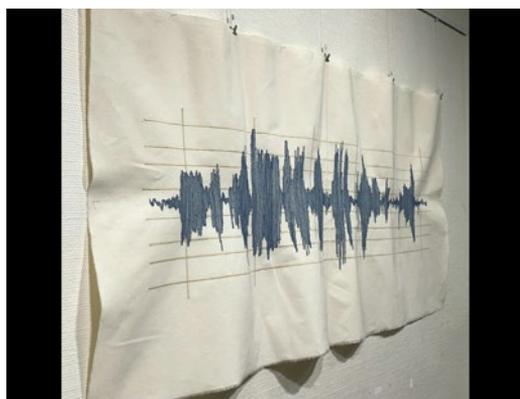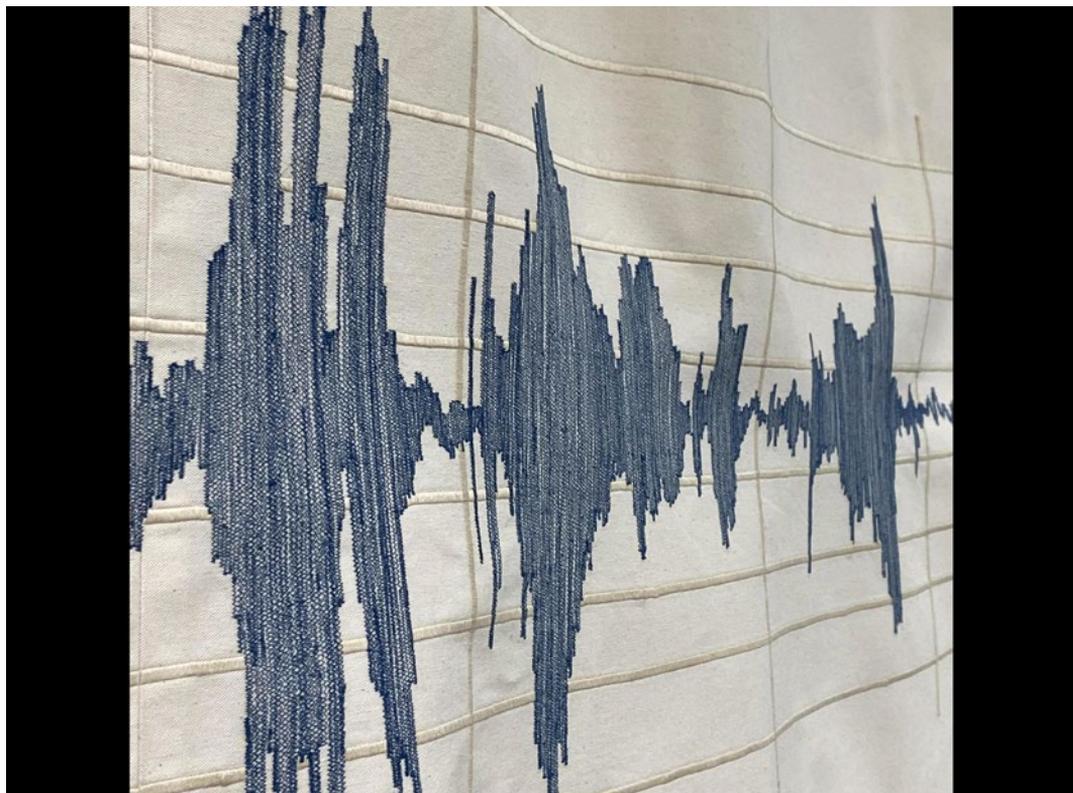
Sonja Höglinger (*2004) is from St. Valentin and is a graduate of HBLA for Artistic Design in Linz. She enjoys working with various materials in the three-dimensional field and plans to pursue training as a goldsmith in the near future to deepen her craftsmanship and technical knowledge and follow her fascination for jewelry art. Both music and visual art are important means for her to express her thoughts and emotions.

Gan Eden

Anatol Grandits, Tomas Perkovic

Our project *Gan Eden* (Hebrew for "Garden of Eden") offers a chilling vision of the Earth in a dystopian future. It is a playable artwork that can be experienced as an installation. The focus is on visualizing a scenario in which humanity has been wiped out by climate change. The story takes place in a desert where players can explore various stations—a boat, a factory, a highway bridge, and a forest. Through this exploration and the listening to recorded audio files and location-based sound, players are meant to receive a haunting message without the use of text.

Our work is named *Gan Eden,* which is an ironic allusion to the hubris of the 21st century and the self-destruction of our "Garden of Eden" through mass consumption and materialism. Before starting the game, players are presented with a quote: "For dust you are, and to dust you shall return." These are the last words that God spoke to Adam and Eve before banishing them from paradise and introducing death to humanity.

https://u.aec.at/E5C45396

Anatol Grandits (*2004) and **Tomas Perkovic** (*2005), students at the Höhere Graphische Bundes-Lehr- und Versuchsanstalt in Vienna, have been in the same class in the multimedia branch since autumn 2019. With their different interests in 3D design, game design, and music production, they complement each other as a team in the creation of the digital installation.

u19—create your world
Award of Distinction

Young Professionals
(age 14–19)

Meditações
Linda Michelitsch, Konstantin Redl, Emma Gruber

A cat is eaten. Blows strike one's own face. The bathwater suppresses screams. Anger is vented on sports equipment. A fish chars in front of the seascape. The characterless characters sit and stand around repeatedly, busy with active idleness. The film *Meditações* focuses on youthful emotion. However, it only manifests itself sporadically and destructively. The scenes unfold fragmentarily and surreally, with loosely connected actions, meaninglessly assembled. It is a reflection of contemporary society, accompanied by a seemingly meditative, searching, inspiring, and truthful text, but in truth, it is completely absurd. The grandiose concepts of "meaning," "truth," and "future" are circled but never addressed. The teenagers run into freedom wearing straitjackets against a kitschy sunset backdrop, but before them, there is only the vast ocean.

Actors: Ena Bernt, Emma Gruber, Samia Knaus, Viktoria Kraber, Lily-Marie Köck, Karl Kühberger

https://u.aec.at/4AD51417

Linda Michelitsch (*2006), **Konstantin Redl** (*2006), and **Emma Gruber** (*2006) are students at BORG 1 in Hegelgasse, Vienna. Since 2020, they have been attending a class together with a focus on audiovisual media. In this branch, they can pursue their interests in film and photography.

#Pictrees
Eine Grazer Umweltinitiative

Felix Zorn-Pauli, Neo Klinger, Sarah Windisch, Bianca Amberger, Enzo Gutschi, Paul Miklautz, Tobias Fischbach

#Pictrees—A Graz environmental initiative is an interactive project for the BIX media facade of the Kunsthaus Graz and was created by a group of students from the Film and Multimedia class of the Ortweinschule Graz, who were in their 4th year at the time (now 5th year). Through a social media campaign, residents of Graz are encouraged to seek out "nature" in the city and share a photo of it in an Instagram story with the Kunsthaus Graz account. These photos are collected and counted every day. The BIX media facade displays the current tally of all the collected photos in the evening, and any public account can share one story per day. A focal point of the project is the digital tree, which can be seen growing on the BIX every evening: the more photos, the taller the tree grows! Upon completion of the project, in collaboration with the Department of Green Spaces and Waterways of the City of Graz, a real tree will be planted in the city for every 50th photo. The goal of *#Pictrees* is to discover and appreciate how much nature we already have in Graz and to work together to make the city even greener.

With support from: HTBLVA Graz Ortweinschule, Kunsthaus Graz, Energie Graz

https://u.aec.at/9C22E314

Felix Zorn-Pauli, Neo Klinger, Sarah Windisch, Bianca Amberger, Enzo Gutschi, Paul Miklautz, Tobias Fischbach are all students of the Film and Multimedia class at Ortweinschule Graz. They were significantly involved in the project development and implementation, going far beyond their own areas of responsibility: **Felix Zorn-Pauli:** inventor, idea behind *#Pictrees*, group leader, programming, organization; **Neo Klinger:** animation, programming, production assistance; **Sarah Windisch**: animation of graphics; **Bianca Amberger**: website, social media; **Enzo Gutschi**: assistance during the runtime; counting of submissions; **Paul Miklautz**: organization, communication; **Tobias Fischbach**: texts, social.

Brave New World
Leo Bauer

Through a static machine powered by a small engine, inspired by the works of Jean Tinguely and various other artists, themes such as industrialization and the relationship between humans, technology, and waste are described. Therefore, the machine is built using simple wood, plastic, and metal objects, each representing one of these aspects. Additionally, the slow movement and flawed, arbitrary functionality aim to simulate a kind of "humanity." The sculpture is buried in the ground, creating the effect of becoming one with the earth.
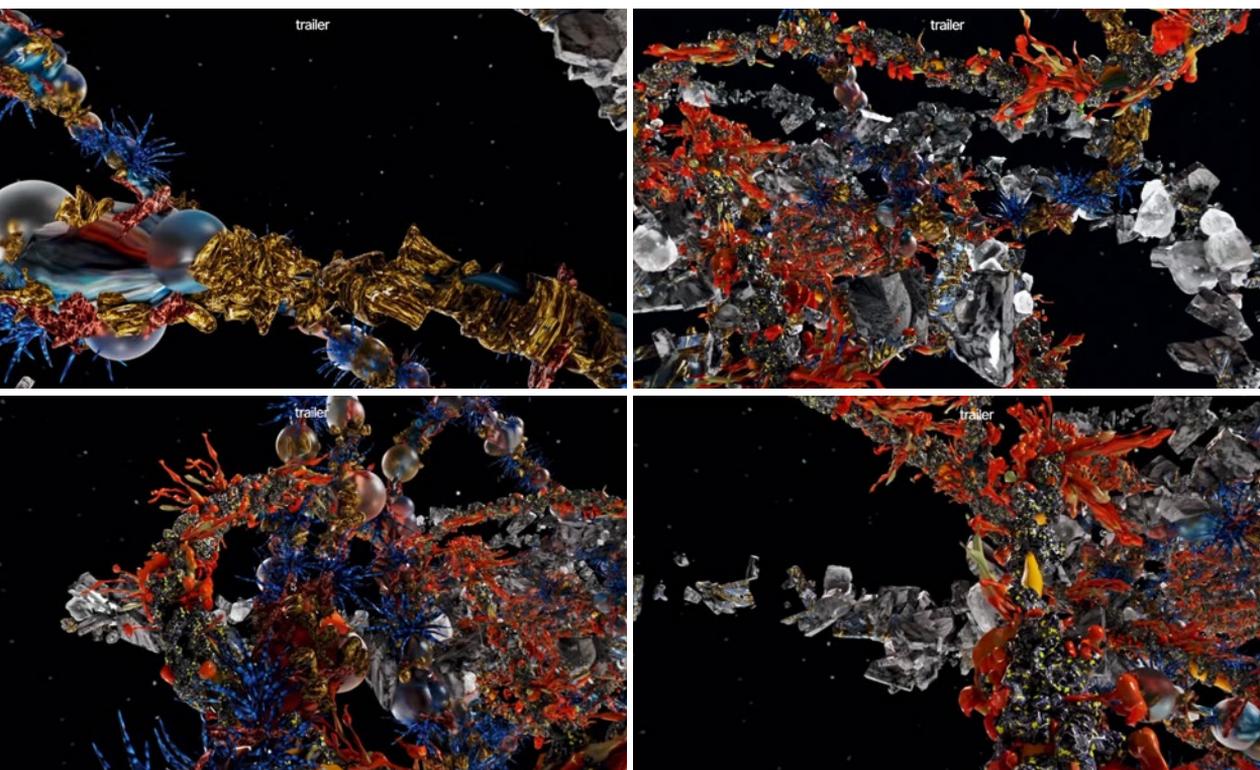
https://u.aec.at/2CC4A0DC

Leo Bauer (*2004) attends the Höhere Graphische Bundes-Lehr- und Versuchsanstalt and lives in Vienna. He is interested in almost all forms of art, especially film, photography, and music.

create [your] world, please

Ferdinand Preßmayr, Moritz Bjelič

What makes up a world in the first place? How do we perceive the world around us?

Due to the tremendous advancements and ongoing debates, we found it fascinating to pose this question to an Artificial Intelligence. We wanted to know how an AI envisions its own world. So, we asked various AIs to describe their perception of their own world. Using different language models, text-to-image and text-to-speech generators, along with several other AI tools, we implemented the results according to the AI's imagination in a VR experience.

The inspiration for this project stemmed from our interest in Artificial Intelligence, with a focus on understanding how "creative" an AI can be/may/should be, how it perceives, and to what extent it is merely a reflection of the data it was trained on. Throughout the process, we attempted to stay as much in the background as possible and provide the AI with maximum freedom to be "creative."

https://u.aec.at/5B3862AB

Ferdinand Preßmayr (*2005) attends the Multimedia branch at the Higher Graphical Federal Teaching and Research Institute. His current creative focus lies in 3D and design. The Graphical Institute has opened up many new perspectives for him, especially in the field of art. In his free time, he enjoys engaging with culture, plays percussion at the music school, and is often on the go. Moritz Bjelič (*2005) is currently attending the Graphical Institute in the Multimedia branch. The Graphical Institute serves his great interest in creative processes and provides him with the opportunity to explore the topics and approaches that appeal to him. He is particularly interested in photography, installations and conceptual art, as well as film as an artistic medium.

u19–create your world
Honorary Mention

Young Professionals
(age 14–19)

Ein halber Cent (oder die totale Destruktion des Ungewissen) für einen Blick auf das Chaos am Silver Screen

Marco Barthofer

A Half Cent (or the Total Destruction of the Uncertain) for a Glimpse at the Chaos on the Silver Screen) is an experimental short film that combines video clips and animations. Marked by fast cuts and an intense mix of audio recordings consisting of screams, voices, and shrill sounds, the video is an abstract reflection of my own thinking.

How do other people think? What form do their thoughts take? These are questions I cannot answer and probably never will. Within my capabilities, I can only engage with the processes in my own mind and provide viewers with a brief insight into the apparent chaos. The result is three minutes of a flow of thoughts, a snippet from a never-ending lifelong process.

https://u.aec.at/971CD5D1

Marco Barthofer (*2004) graduated from the HBLA for Artistic Design. He is highly interested in experimental art as well as film and theater and aims to pursue a career in these fields.

Greenwashing

Paula Hanner, Lisa Hirth, Mia Moser, Selina Schwinger, Angelina Seng / Students of BRG Traun

As part of the elective module on film production titled "What's Behind It?" three short films were created. The film *Green Palm Oil* was awarded the Media Literacy Award by the Ministry of Education. In addition to that, this film, as well as the film *Shallow Company X. Substainability now,* won the short film competition of the Austrian Eco-label for Schools and Teacher Training Colleges.

The project's task was to produce short clips about sustainability. At the beginning, we agreed with the students that we would not focus on individual actions but rather address the economic and political structures. The students independently developed ideas in three groups, and together we decided on two stylistic elements: satire and promotional film. Based on this, three screenplays were written, and all participants worked together to bring them to life over three shooting days. The students independently edited the videos from the footage.
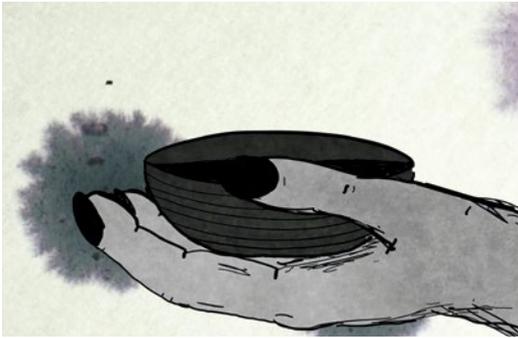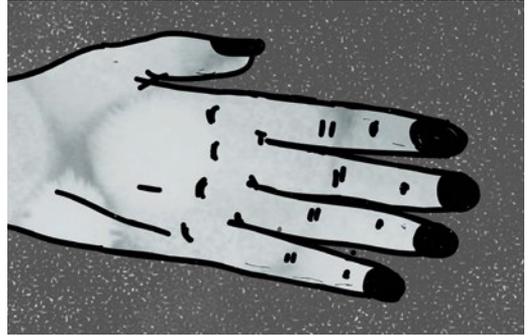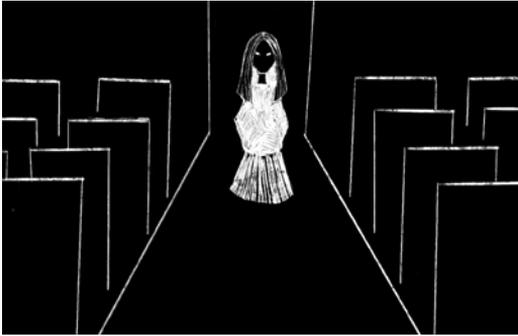
https://u.aec.at/A992F842

The students **Paula Hanner, Lisa Hirth, Mia Moser, Selina Schwinger,** and **Angelina Seng**, aged 16 to 18, attended the elective module on film production at BRG Traun.

u19–create your world
Honorary Mention

Young Professionals
(age 14–19)

HUE

Rebecca Heindl, Ronja Hoffert, Jasmin Korkmaz, Nathalie Zalewski

The short film *HUE* addresses the issue of sexual harassment in everyday life. Often dismissed as something trivial, these incidents have both societal and personal repercussions. To raise awareness about this complex dynamic, each author shares their own experience through an animated short film. The film consists of four parts, with each author independently visualizing their segment. The voiceover accompanies the animation in the background.

Thanks to: Amelie Loy, Cathrine Bayer, Thomas Knopper, Florian Bin

https://u.aec.at/F936E1C6

The four-person team behind the film consists of **Rebecca Heindl, Jasmin Korkmaz, Ronja Hoffert,** and **Nathalie Zalewski**. They were classmates at HTL Spengergasse, specializing in Media Design and Animation, and share a passion for art and design. Their shared interest in feminist topics brought them together. Rebecca loves photography, Jasmin loves design, Ronja loves animation and film, and Nathalie specializes in illustration. As friends and colleagues, they decided to dedicate their final year project to the important issue of everyday sexual harassment of women.

Isolation

Tim Horner, Mathias Eisenheld, Christian Qiu, Valentin Breunig
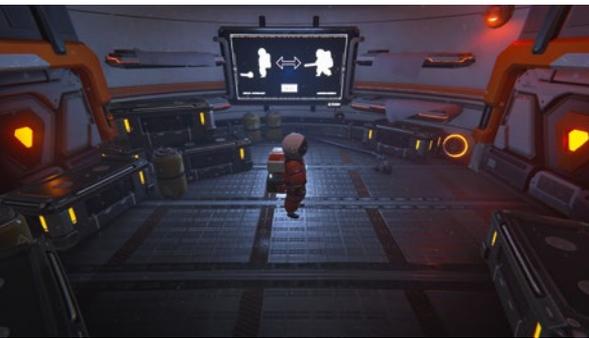
Isolation is a 3D puzzle-adventure game where players take on the role of the last surviving astronaut who wants to escape from a space station that has been attacked by a monster. With the help of their drone, they must overcome numerous tasks and solve challenging puzzles to make their way through the space station. However, they are not only confronted and attacked once by the monster, which is still lurking on the station.

The player must switch between controlling the astronaut and the drone to solve complex puzzles and progress to reach the next room. When the monster appears, the only thing that matters is to escape. The player can either directly put themselves in danger and sneak past the monster or simply run!
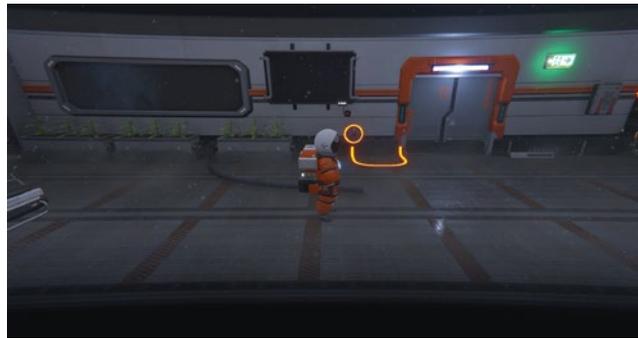
Thanks to: Mario Wessely, Broken Rules

https://u.aec.at/946779E9

Tim Horner (*2004), **Mathias Eisenheld** (*2004), **Christian Qiu** (*2003), and **Valentin Breunig** (*2002) are four students from HTL Spengergasse, where they studied game design (graduating in 2023). With different strengths and interests such as programming, game design, and 2D and 3D art, they joined forces and developed *Isolation* as part of a school project.

u19–create your world
Honorary Mention

Young Professionals
(age 14–19)

PiPi

Yannick Schneider, Pauli Zauner

The project *PiPi* is an original artistic installation that conveys an important message. The machine is designed to take in water and, after an extremely long waiting period, release it as artificial urine. The purpose behind it is to challenge the viewer to be patient and maintain their attention in order to experience the transformation of water into urine. The work is a reflection on how our society is becoming increasingly impatient and how people's attention spans are affected by social media platforms and other technologies. It is meant to encourage us to value and cultivate our patience and endurance.

Overall, *PiPi* is a fascinating artwork that challenges viewers to keep their patience and think about how we can direct our attention in a fast-paced society.

School: Höhere Graphische Bundes-Lehr- und Versuchsanstalt
Camera: Markus Bauriedl

https://u.aec.at/129FBEB4

Yannick Schneider (*2004) currently attends the Höhere Graphische Bundes-Lehr- und Versuchsanstalt. Yannick has a strong interest in computers and cars and invests a lot of time and effort in expanding his knowledge and skills in these areas. In his free time, he often works on technical projects and uses his knowledge and abilities to bring his own ideas to life. **Pauli Zauner** (*2005) attends the Höhere Graphische Bundes-Lehr- und Versuchsanstalt. Currently, he is on a semester abroad in Vancouver, Canada. In addition to his focus on multimedia, he enjoys sports, programming video games, and is interested in art, philosophy, and media psychology.

Sýn (the Sight)

Samuel Klancnik

Sýn is a graphic novel which was developed as part of the diploma thesis in my school. Inspired by Norse myth and legend, it focuses on the role of ravens as deliverers of messages and their impact on society. Set in an original world, the plot revolves around the protagonist Kion and his raven, as they are forced to navigate a world where society's perception of ravens and, by extension, "Ravenbearers," worsens drastically. Why? Because about half a decade ago, the ravens are said to have caused the death of the goddess Hársýn...

Sýn is Proto-Germanic in origin and roughly translates as "the Sight." In my work, I took inspiration from the mythological role of ravens as messengers and used them as a mouthpiece for how information is treated in the media today. People are often polarized by information, especially in social media, and driven to extreme views. My work illustrates an attempt to fathom the backgrounds and social impacts of perspectives influenced by misinformation. This is done within a fictional framework in order to allow the readers to take a step back from reality and reflect on this topic.

https://u.aec.at/DEF6C567
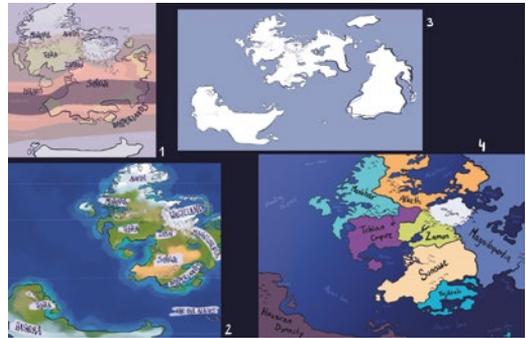
Samuel Klancnik (*2004) is an Austrian artist from Schlierbach, Upper Austria. His work includes comic projects like *The Shard* (2021), commissioned character designs and illustrations, and his diploma project *Sýn.* He really enjoys learning languages and Taekwondo. He hopes to work in the game art industry in the future.

u19–create your world
Honorary Mention

Young Professionals
(age 14–19)

Tamina
Tobias Spinka

Recognizing and respecting one's own individuality and that of others is actually the most important characteristic a person can possess, in my opinion. Idealized images try to suppress the free expression of the self as much as possible. Everyone should look the same. Everyone should pursue the same image of themselves. The result: every form of personal expression is negated. But it's not just the individual expression of aesthetics that suffers, but in many cases, self-worth suffers as well because one does not conform to certain desired proportions. This often leads to serious physical and psychological illnesses and disorders.

In order to have a seat on my object, one must conform to the average measurements of 21 international female celebrities. The problem with this? Very few can actually fit on this object. Only then does it become clear how unattainable and almost inhuman these proportions are.
So is it really appropriate to judge other body shapes?

https://u.aec.at/38CFB89F

Tobias Spinka (*2003), raised in Gallneukirchen, has always been interested in art, culture, and craftsmanship. At around the age of 14, he decided to attend the HBLA for artistic design. In parallel, he developed a great interest in associations and first became involved in the Catholic Youth as a youth leader starting in 2020. In addition, he also engaged with the socialist youth and ultimately founded the youth cultural association KURVE in the summer of 2022.

Der Klassensprechersong

Fabian Kranzl

Generation Z!
Impulsive, antisocial, and untamable—constantly smoking and drinking. Even in schools, it's chaos. Who will be able to control them, the teenagers, in the future!?
With my song (The Class Representative Song), I wanted to make a call to all class representatives of the world to wake them up. Together, we might be able to bring back a harmonious coexistence in the classrooms. Together, we can change the future!

The inspiration
The first idea actually came to me right in the classroom. It was chaos once again, and our class representative was right in the middle of it. That perfectly matched our image as the "problem class"! I wanted to change that, so I came up with the idea of a class representative song. Maybe I could shake up our class representative (and maybe those of other classes) with it? No sooner thought than done! Two weeks later, the lyrics were written and set to music, and another two weeks later, I had the music video in the can. And the song was a complete success! Such a big success that you, dear readers, can read this text here in the catalog or on the Prix Ars Electronica website.

Camera, actors: Julian Kranzl
Editing, directing, acting, lyrics: Fabian Kranzl
Beat: Music by Praz Khanal from Pixabay

https://u.aec.at/8B2DAF16

Fabian Kranzl (*2008) lives in Freistadt in the beautiful Mühlviertel region of Upper Austria. Currently, he attends PMS Marianum Freistadt. In his free time, he engages in sports (such as soccer, curling...), spends time with friends and his three siblings. However, his greatest passion is videos. Whether it's editing, filming, or animating—he enjoys almost everything :).

Benjomatics
Benjamin Hölzl

In this project, I built various machines using LEGO Technic:

Arcade Machine: Flight Simulator
An airplane is moved in the flight simulator using LEGO Technic gears, and the movement is transmitted to Scratch on a laptop using a Microbit. In Scratch, the airplane has to catch stars but avoid the animals.

Candy Vending Machine
To get a product from this machine, you first need to insert a coin. A light sensor from LEGO Mindstorms detects the coin insertion and then turns the corresponding motor to dispense the desired product.

Smarties Vending Machine with Water Fountain
Again, you need to insert a coin first, which unlocks the lock, allowing the latch to move backward. This causes the Smarties box to drop, and pushing the latch forward releases the product.
The water fountain is controlled by Mindstorms, and the motor operates when the touch sensor button is pressed. Using pneumatic principles, water is pumped instead of air this time, and it is conveyed to the drinking cup through hoses.

https://u.aec.at/4335D3B0
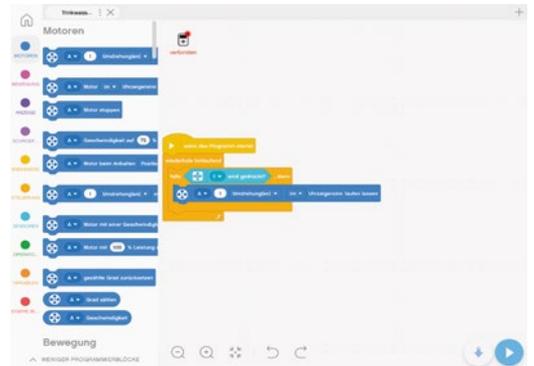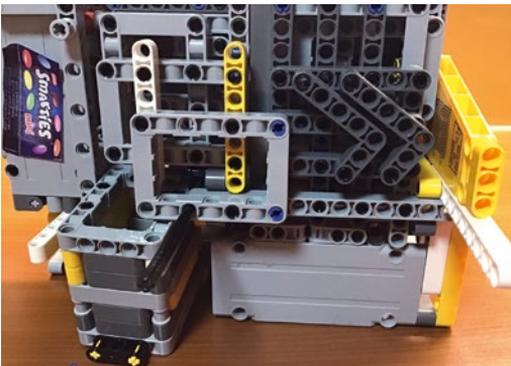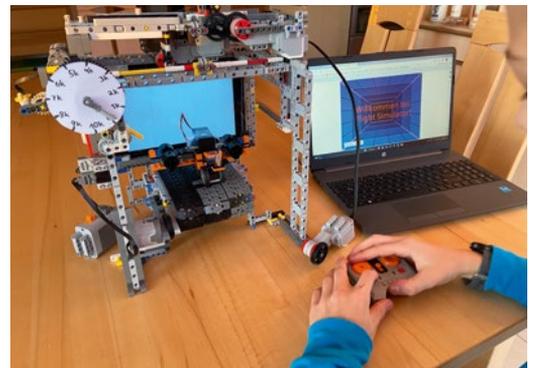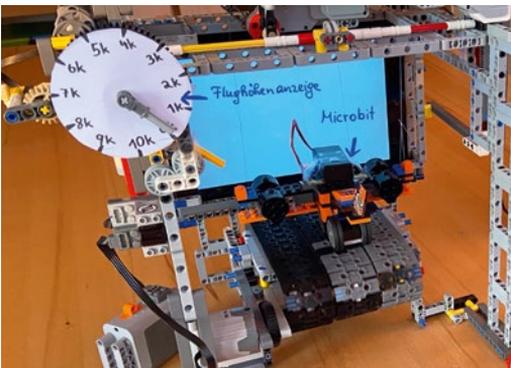
Benjamin Hölzl (*2010) is a third-grade student at Mittelschule Unterweißenbach. His hobbies include playing the drums, skiing, and playing soccer. In his free time, he develops new LEGO projects.

Dysnomia
Students of BG / BRG Laa an der Thaya

The chef of the restaurant King serves a papaya to his son, who is sitting in the restaurant. The son chokes while eating the fruit, and the desperate chef swears revenge on all papayas. After the funeral, he retrieves a knife from the kitchen and massacres the fruits.

Twenty years later (Attention—a film mistake: it should say "later", not "earlier"), the chef, transformed by his hatred for papayas, kidnaps a papaya baby in the jungle, intending to turn it into a dish in the kitchen of his restaurant. However, Papaya Mom calls the Papangers, four superheroes, who promise to help. The Papangers rescue Baby Papaya from the clutches of the kidnapper and return it to its mother.

The plot ends with the Papangers, the Papaya Mom, and Papaya Child laughing as they go to the Paja cinema, where they watch the Papanger movie together.

https://u.aec.at/F741AFA3
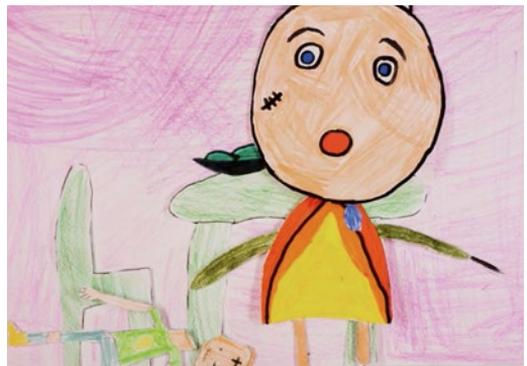
We (**Alina Besic, Lilith Brito, Kiara Fath, Elly Freibauer, Emil Freibauer, Anna Hubinger, Samuel Kautz, Katharina Kothmayer, Niklas Körner, Anton Kral, Matthias Kroupa, Valerie Lahner, Anja Schild, Jonas Schreiber**), 14 students of BG / BRG Laa an der Thaya (born in 2010/2011), are a creative and lively group who are full of energy and in a good mood when working on "Arts and Crafts." We enjoy chatting and exchanging ideas while working and are constantly on the move. Often, very peculiar results are produced as a result. The animation project with Peter and Karo, which was created as part of our art class, was ideal for us and we all had a great time.

MARIMBA

Students of the BG / BRG Laa an der Thaya

The tuning scene gathers every evening punctually in the parking lot of a large furniture store. They drift as much as the rubber allows. But GTI Gorilla has had enough: together with Lama-Tune, he sets out in search of more and discovers a world on the brink. They traverse the world, discovering wild landscapes and encountering incredible creatures: aliens, UFOs, monsters. Upon reaching a lake, they are greeted by a monstrous octopus, and an accident occurs. After a car crash, one of the vehicles sinks. The monster drags the car with GTI Gorilla and Lama Tune underwater. Everything happens quickly. Two cars transform into a rocket, fly around the world, and fuse into a UFO. The UFO, with the alien, heads to the lake and rescues GTI Gorilla and Lama Tune's car. A boy steps out of the UFO, quickly takes control, and speeds away. The End.

https://u.aec.at/FFCD46D2

Benjamin Einzinger (*2009), **Franz Grohmann** (*2009), **Erik Jungmayer** (*2009), **Gregory Merenyi** (*2009), **Leonard Scherf** (*2009), **Dominik Schrom** (*2008), **Jonas Schwab** (*2009), **Emil Swatschina** (*2009) are students at BG/BRG Laa an der Thaya. They came together as a team during the *MuKaTo* project to create a short film for the music piece *Marimba* by Lukas König. Over the past years, the students developed an interest in the tuning scene, vehicle design, and animation film. Under the guidance of animator Peter Muzak, the group created their first collaborative film.

R2 D2 SERVICE-ROBOTER

Maximilian Posset

At the end of January 2023, I decided to participate in this year's Prix Ars Electronica. Inspired by the *Star Wars* character "R2-D2," I built a service robot (R2 D2 SERVICE ROBOT) that can travel in straight lines and therefore carry smaller objects. It provides a small light source when it's dark and can also be used as a trash can.

For my constructions, I mostly use things that can be found in our house. The main component for the robot is an old glass recycling bin from our garden. It was important to me that the robot could move, so I used an old remote-controlled car for propulsion. A simple motion light serves as the small light source. The service arm is an old remote control antenna, and the side support arms are made of plastic, which I sealed at the top with customized wooden blocks.The most challenging part for me was spraying the paint precisely without the colors mixing or smudging.

My project shows that with conventional items that may no longer serve their original purpose, you can still create something great and new.

https://u.aec.at/4A50232B

Maximilian Posset (*2010) attends the School Center for Holistic Learning (SZGL) in Enzesfeld, Lower Austria. He lives with his parents and two younger siblings in Bad Vöslau, and he particularly enjoys building technical objects that have a drive and can be useful in everyday life. In addition, he trains in Jiu-Jitsu, plays electric guitar and piano, and is an enthusiastic Lego *Star Wars* fan. He really enjoys being able to build creatively and create something!

u19–create your world
u12 Prize

Young Creatives
(up to age 14)

Ein Besuch auf Schloss Finsterwald

Students of class 2ab from Gries am Brenner Middle School

Ein Besuch auf Schloss Finsterwald (A Visit to Finsterwald Castle) is a horror story that the students created as an audio drama on their iPads. It was done as part of an assignment in their German class, where the students received incomplete scripts (written by the teacher) that stopped in the middle of the story and needed to be completed. In the production of the audio dramas, they familiarized themselves with techniques such as emphasizing dialogue and creating sound designs.

For their work, the students used the applications Garageband and Capcut, and they were given class time in the subjects of Digital Literacy, Music Education, and Visual Arts. They worked on the production of the audio dramas both in class and, to some extent, at home on their iPads.

https://u.aec.at/8028F952

The children of **class 2ab** (school year 22/23) from **Gries am Brenner Middle School** (*2009/2010) are creative and lively, enjoying teamwork and solidarity.

Robotheater

Sarah Hölzl

Three robots live in the year 2100. They search for humans but find none. The humans have fought wars over water and resources, ultimately leading to their own extinction. Two robots waste electricity on electric pets, cars, and lights that nobody needs. But what happens when the power goes out? Humans can no longer generate electricity, and neither can the robots. If the robots cannot recharge, they also "die." What do the robots do to save themselves?

Luckily, there are sensible robots like Bob who live sustainably with nature. The two robots must learn from Bob and change their way of life. They discover the beauty of nature and stop wasting electricity. We humans should do the same.
The theater is intended to provoke thought so that people do not exploit nature unnecessarily.

https://u.aec.at/0540BE7C

Sarah Hölzl (*2011) attends the 1st grade of Unterweißenbach Middle School. She plays the guitar, clarinet, and enjoys dancing. Her hobbies include skiing, swimming, reading, and she loves animals and nature. She also enjoys doing handicrafts and painting.

u19–create your world
u12 Honorary Mention

Young Professionals
(up to age 14)

Strom erzeugen durch Bewegung

Leopold Kastler

Normally, exoskeletons have electric motors that require electricity. In my project *Strom erzeugen durch Bewegung* (Generating Electricity through Motion), however, it's the opposite: instead of motors, I use generators that produce electricity. The exoskeleton can be worn on an arm or a leg by fastening it with a Velcro strap, and it is powered by movement. Depending on whether you extend or bend the arm or leg, the LEDs will glow more blue or more orange. This is because the generator rotates in one direction or the other, causing the poles to switch.

My idea for the future would be to use such an exoskeleton, for example, to charge batteries while exercising at the gym or going for a run. If multiple pieces like this were used simultaneously, the electricity generation would be much more efficient.

https://u.aec.at/A3E2AA58

Leopold Kastler (*2013) is nine years old, attends elementary school, and likes sweets.

Waste Sorter

Mingyan Ella Tien

Waste Sorter was created using Scratch 3.0. In this game, the objective is to throw trash into the correct container. As soon as a container is full, the correct garbage truck comes to empty it.

If you sort waste correctly, you are rewarded with points and, in the end, a winner's trophy. If the waste is put in the wrong container, a warning message appears.

The different types of waste were photographed or downloaded from the internet, with a few exceptions. They were then cropped using IrfanView and edited as raster graphics in Scratch. The sounds and noises were recorded or taken from the Scratch library. I paid great attention to the controls to ensure smooth movement, and I had to make a few changes to achieve that. To randomly select and display the waste, each of the 25 waste pieces was assigned a unique number. The random number function in Scratch then selects a number within that range. By using messages, I was able to run multiple character scripts simultaneously, allowing for smooth gameplay.

https://u.aec.at/0B498455

Mingyan Ella Tien (*2013) is nine years old. She currently attends the 3rd grade at Karlsplatz Elementary School. Her hobbies include programming in Scratch, experimenting, mathematics, and reading. She watches educational programs on the Kika channel daily. She has been learning to play the violin for three years, but it's only this year that she has started to enjoy practicing. She has Scratch and Chinese lessons every Saturday since October 2022. In her free time, she also enjoys running in the park.

u19–create your world
u10 Award of Distinction

Young Professionals
(up to age 14)

Unterwasserwelt

Sara Wanzenböck
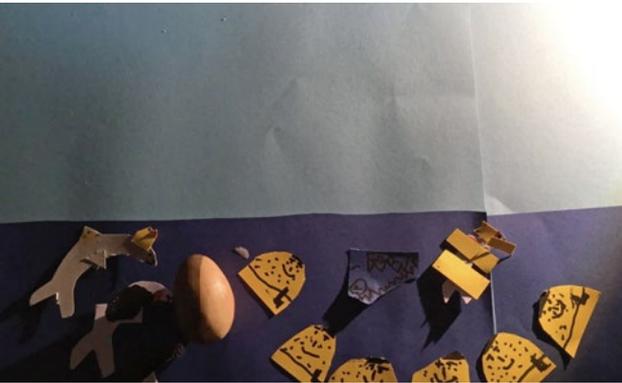
It is a beautiful day. Many fish are having fun in the sea. They play together and are happy. One fish feels particularly beautiful and swims arrogantly past the others. The king and the princess cuddle. But then an evil fish appears. It captures the princess, ties her up, and locks her away. It wants to take all her money and eat her. The king is desperate and calls all the fish in the sea for help.

The pufferfish are the guards of the royal castle. Fortunately, they find the princess tied up in a hiding place of the evil fish. Together, they manage to free the princess. Everyone is happy that this adventure has ended well. They dance and sing. In the end, the guards build a tower. Even the sun joins in and jumps into the sea, only to resurface shortly afterward. *Unterwasserwelt* (Underwater World) is a stop-motion film.

Voice of the King: Daniel Wanzenböck (ten years old)

https://u.aec.at/749CD6C1

Sara Wanzenböck (*2015) is eight years old. She attended a Waldorf kindergarten in Mödling for one year. After that, she was homeschooled by her mom. She is currently in the second grade. She has been playing the violin since she was four years old. She also participates in a musical group. She enjoys dancing, swimming, and singing.

Klasse! Lernen. Wir sind digital.

The education prize of BMBWF, OeAD, and Ars Electronica

Any contemporary education system should teach young people how to actively organize their lives in a digitized world. Progressive digitization itself is in turn constantly creating new opportunities to create, test, and implement appropriate kinds of instruction to achieve this aim. It is precisely this changing education system that OeAD (Austria's Agency for Education and Internationalization), BMBWF—Austrian Federal Ministry of Education, Science and Research, and Ars Electronica want to promote and is why they joined forces to launch the education award "Klasse! Lernen. Wir sind digital." in September 2021.

More than 140 best-practice projects from all over Austria were submitted between November 2022 and April 2023. A jury has then awarded the best ten of them: 7 Honorary Mentions, 2 Awards of Distinction endowed with 5,000 Euros each, and the main prize endowed with 10,000 Euros.

The Education Award from OeAD, BMBWF and Ars Electronica was presented for the second time this year. Most of the projects submitted presented the development of digital content in schools, such as the introduction of "makerspaces" or free spaces for trying things out and "tinkering". Often, the interaction between analog and digital was addressed, with students and teaching staff equally involved and having an environment for learning and discovery. Field trips and the involvement of external experts were used to implement very high quality projects, giving students hands-on experience and ensuring that they were effective and sustainable. Peer-to-peer and buddy approaches were used again and again to introduce younger students to various topics. The content was often about climate change, sustainability, and alternative energies, but there was hardly any critical discussion of social media or other current topics. It was especially nice that not only projects on classic STEM topics were submitted, but also interdisciplinary projects, showing that the students are very committed to a sustainable future for all and that the prospects for this are more positive than presented.

Klasse! Lernen. Wir sind digital.
Jury Statement

Main Prize
He[a]rophone
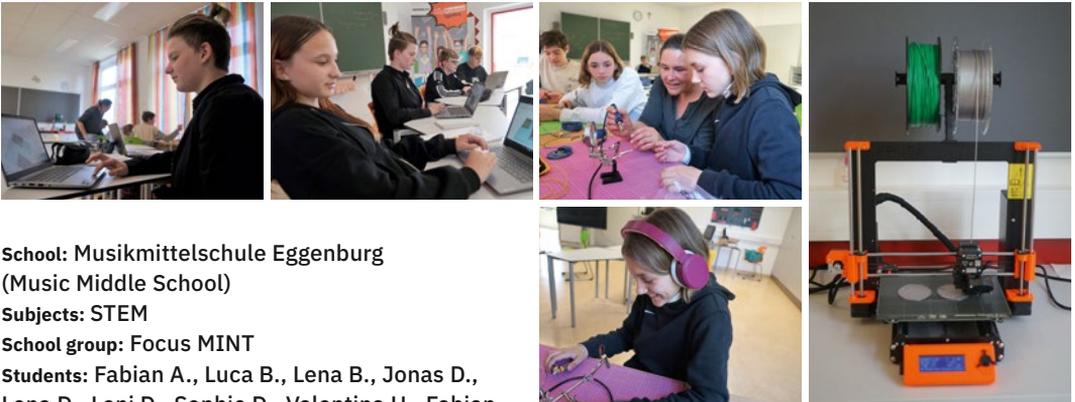
School: Musikmittelschule Eggenburg (Music Middle School)
Subjects: STEM
School group: Focus MINT
Students: Fabian A., Luca B., Lena B., Jonas D., Lena D., Leni D., Sophie D., Valentina H., Fabian K., Tobias L., Luca L., Lisa-Marie M., Marlon P., Nina Sch., Luca S.
Teacher: Nora Dibowski, Karin Krottendorfer-Stift, Petra Roitner
Project idea: Judith Grafinger

He[a]rophone convinced the jury with a versatile, well thought-out and sustainable concept: The "open learning space / STEMSpace" designed for the project will serve as an experimentation and training zone in the future, and the listening station developed as part of the project can also be placed very flexibly. In the project, students worked together with educators and experts from the fields of design, architecture, electronics, and computer science. The students were involved in every step of the project. After visiting partner organizations, where insights into design processes and new manufacturing technologies were gained, the students worked mainly with the 3D program Tinkercad The 3D-printed listening station is based on the Raspberry Pi mini-computer, on whose server a media management system delivers the jointly selected audio books, podcasts, and music files to the headphones. Here, too, the focus was on sustainability: Broken headphones were repaired first, and only then were new ones printed. This project is seen by the jury as a unique starting point for further digitization projects.

PODix—Phönixschule ON AIR

School: Phönixschule—digiTN Middle School Attnang-Puchheim
**Subject:** Digital basic education
School group: 3a and 3b (2022/23)
Teacher: Thomas Schwaiger

How can a school shed the label of being a "problem school"? This is the question the third grade students at Phönixschule asked themselves. The result is *PODix—Phönixschule ON AIR,* a podcast series organized by the students themselves. In the previous episodes, they discuss relevant topics from their school life. To capture as many voices as possible on each topic, fellow students are interviewed. This allows even people who are not in the school to gain unique insights into school life. The project was mainly developed during the subject of digital basic education and partly during the students' leisure time. Three groups of students plan to continue publishing episodes on topics that concern young people. The project is not a one-time occurrence but has long-term and sustainable effects. The students have demonstrated outstanding creativity and linguistic diversity in their use of digital media and shown how different cultures can enrich one another. Multilingualism in the classroom is a definite bonus.

Freifach Game Design
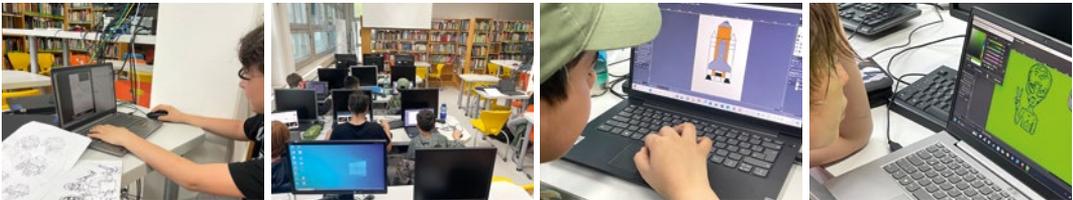
School: High School BG/BRG Pichelmayergasse, Wien
Subject: Elective subject Game Design
School group: Students from grades 5 to 8
Students: Nina F., Tolga E., Nicholas St., Marie St., Nico S., Andrew B., Benjamin B., Louis Ch., Adrian C., Adrian K., Imran L., Mohammed N., Maximilian O., Osman Ö., Emilio R., Maximilian Sch., Omar Z., Noorjahan Z., Linda D., Adrian G., Lennox D., Sophie K., Vivian P., Selin U.
Teacher: Till Weinhold

The elective subject "Game Design" at Pichelmayergasse High School gives students across grade levels an interdisciplinary exploration space to strengthen their 21st-century skills. Students work self-motivated, collaboratively, and creatively on projects related to game design. The design process, from development to production to reflection on the games, is accompanied by a wide range of digital and analog tools. The strong reflective aspect promotes media literacy among students at an early age. External learning spaces and experts from the game design field are involved in the elective subject. The project also reflects the successful establishment of a teaching concept developed based on the students' interests at the school that overcomes structural and institutionalized barriers.

**Klasse! Lernen.
Wir sind digital.**

4CD – Fablab Ursulinen Innsbruck

School: Ursulinen High School Innsbruck
Subject: Handicrafts
School group: 4CD
Students: 14
Teacher: Peter Hausegger

Digitale Schnitzeljagd – Weg der Nachhaltigkeit

School: Elementary school Stattegg
Subjects: Handicrafts, Art, General Science
School group: 4th grade
Students: Sophie A., Petra B., Julia B., Niklas D., Ina H., Vera J., Valentin K., Xaver K., Nino L., Marlene L., Helena M., Elena R., Emely S., Valentina S., Alexander U., Alexander V., Vanessa V., Franz W, Sebastian W., Markus W.
Teacher: Michaela Köhler-Jatzko

Film project "Lesenacht"

School: Bischöfliches Gymnasium Paulinum, Schwaz
Subjects: German, Music, school model "Paulinum" (We only have 45-minute lessons at our school, the "missing" five minutes are offered in the form of "tutoring" for students on specific topics, which allows for a wide range of content, just like this film project).
School group: approx. 50 students of 2B and 2C
Teacher: Sonja Fuchs

Gamification—Motivation zu lernen

School: Middle School Kematen
Subject: Elective subject Robotics
Teacher: Matthias Erhart

Mit Wasser für die Umwelt

School: Lower Austrian Middle School Lunz am See
Subjects: Chemistry, Physics, Project lessons
School group: Bildungscampus Lunz am See: 4. Klasse und 2. Klasse MS, 1. Klasse VS
Students: 4th grade: Dominik F., Leon H., Samuel H., Andrea H., Tim J., Florian L., Gabriel M., Amelie M., Theresa P., Jonas P., Christoph S., Valentina S., Lukas S., Nikolaus St., Eric W.
2nd grade: Magdalena G., Elina M., Julia L., Sara S.
Contributors: 4th grade, 2nd grade, Participation: 1st grade elementary school
Teachers: Valentina Leitner, Lisa Paumann

Seifenwerkstatt 4.0

School: GRG13 Wenzgasse, Wien
Subject: Handicrafts
School group: 2.E
Students: Alika L., Maximilian K., Lilly L., Nicolas H., Toni K. , Esther J., Leonard K. , Benedikt H., Leonidas L. , Alexander K., Clemens K. , Hemma K., Samir C., Lenya F., Luca K., Philipp G., Nicolas H., Leonie B.
Teacher: Julia Grandegger

Wir stehen unter Strom!

Elementary school: August Thielmann, Telfs
Teacher: Anna Zigala
Subject: (Elective subject) Robotics
School group: Elementary school
Students: 13 students

3.]

Citiz
Scie

en
nce

European Union Prize for Citizen Science

Scientific research says nothing if it stays behind closed doors. It needs people. It needs *you* to take it into our lives together. *You* turned science away from the exclusive. *You* turn it towards us as humans. Because scientific breakthroughs happen when the best brains meet—scientists, researchers, industry, students—and when together they serve. *You* serve what people need. This is how science helps solve some of our biggest challenges. This is precisely what the three winners of the European Union Prize for Citizen Science do.

Margrethe Vestager,
European Commission Executive Vice-President for a Europe fit for the Digital

ARS ELECTRONICA
Art, Technology & Society

EUSEA

KING'S College LONDON

nesta

Science for Change

T6ECOSYSTEMS

zabala INNOVATION

IMPETUS

Funded by the European Union

Recognizing the role of Citizen Science in Europe

Citizen Science stands for scientific research that involves interested laypersons via online platforms, mobile applications, or in person on site. Scientists gain access to data (volumes) that would otherwise not be available, while citizens in turn gain insights into complex contexts and scientific methods. 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. To promote this dynamic, the European Commission has initiated this competition with generous prize awards.

First European Prize for Citizen Science
With the new "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 Linz was commissioned to organize the competition for the first time 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).

From January 10 to March 13, 2023 projects could be submitted for the first "European Union Prize for Citizen Science". In total 321 initiatives and projects were received.

Towards a Science-engaged Society: How to Create Radical Change Together

Statement by the jury of the European Union Prize for Citizen Science 2023: Kat Austen, Andrea Sforzi, Pedro Russo, Stefanie Wuschitz, Lewis Hou

Research has been practiced by non-professionals since before the formalization of science. The drive to interpret the world around us, to connect to the cosmos, to understand other creatures, is at the heart of our lived experience. From operating alone, to researching in groups, to being part of a global scientific project, what we now understand to be citizen science builds on a long history of human endeavor. On the occasion of awarding the first ever European Union Prize for Citizen Science, we celebrate citizen science as a significant vehicle for creating new and valuable outcomes to support radical change in our society.

The submissions for this first European Prize for Citizen Science were varied and inspiring, addressing topics of immense scientific, social, and ecological importance—from addressing AI biases to creatively capturing both the imagination and data around biodiversity. Just as varied were the modes by which the projects came into being, and how citizens were actively involved. While pioneering biologists, botanists, and naturalists may have been at the vanguard, setting a precedent for citizen science, researchers engaged across all disciplines are now acknowledging the rich potential of collaborating with communities. This was demonstrated by the remarkable submissions we had from a wide range of fields, with citizens working together with researchers to co-create knowledge in the natural sciences, political and social sciences, design, art, architecture, history, and beyond.

The selected projects are unique in their own way and together signify the future direction of citizen science in Europe. We were keen to see projects that demonstrate the real value to the knowledge landscape offered by engaging and co-creating with non-experts meaningfully throughout the research process. During our decision-making, we saw some fantastic projects that were still in the earlier stages of development and we are excited to see how they progress, and encourage those to consider reapplying in the future.

The complex environmental, social, and infrastructural challenges of our time require the gathering of diverse perspectives. In projects where the research content would benefit from the active input of citizens' own knowledge, it was critical that this was demonstrated. Similarly, excellence in citizen science demands reciprocity in the relationship between the overarching project and those contributing to it—regardless of who is leading it. We looked for projects with a high level of feedback to the community, providing multiple forms of value and fostering the value of citizen's inputs.

Diversity in citizen science has come sharply into focus in recent years and it is especially important to address in projects where the participants' own knowledge is crucial in shaping the research questions and outcomes, or where the participants themselves are the subjects of the project in some way. There were clear examples of initiatives that put into action the key social justice principle "Nothing About Me Without Me". The value of collaborating with citizens across all stages of research was particularly visible in projects undertaken together with those too often marginalized from the processes of knowledge-making, from

socially isolated young people to people with intellectual disabilities, with initiatives that actively involved participants throughout every stage of the project, most often achieving great impact.

Citizen science is also increasingly influential as a methodology by which communities are enabled to argue for citizens' rights and social justice. This can be through making scientific data open and transparent, not only in terms of making accessible approaches to data gathering and processing, but also in terms of developing participatory formats that allow scientists and citizens to collaborate: from formulating unorthodox research questions, informing and engaging citizens through gamification of data gathering to drawing final conclusions that consider multiple situated perspectives.

Our three main prize winners deal with key issues such as health, circular economy, and social inclusion, showcasing how outstanding citizen science projects introduce new methods to face complexity within a globalized and tightly entangled world.

Grand prize winner, *Isala,* showcased how an increasingly global drive of citizens working with researchers could readdress a historical lack of female health research by mapping the vaginal microbiome and challenging health inequalities.

Digital Communities Award winner *Restart Project* leverages a long-standing and growing community of makers to repair and reuse technology and crucially develop new knowledge to hold increasingly opaque technology manufacturers to account through policy change. And as the world continues to urbanize on a massive scale and changes to our climate and geo-political instability are leading to increased migration, our Diversity & Collaboration Award winner *Urban Belonging Project* takes citizen science to the local level through a meaningful, inclusive approach that supports diverse groups in reframing what social sustainability and "belonging" can look like.

As exemplified by these projects, collaborations among citizens, scientists, and policy makers can contribute significantly to a new culture of research, one with a shared intention to face urgent human and non-human crises, react to environmental harm and take responsibility for investigating entangled, complex phenomena. Phenomena that affect us all. As we are in this together, scientists embrace citizens' participation at eye-level, and citizens allow scientists to consider their observations, experiences, oppressions, and insights as a vital part of knowledge production. We are excited to see how citizen science can develop to help us all realize this in the coming years.

What's next for Citizen Science

Whilst what we saw through the projects submitted was inspiring, there are still areas we would like to see developed further in the field. These are clearly pockets of brilliant practice, but overall we want to see citizen science be even more ambitious and creative in terms of the scope of involvement of citizens. We must go beyond just a "contributive" model of "helping scientists" which is rightly critiqued to only replicate the hierarchies of knowledge and divide. Rather, citizens can and should be involved in all stages of the process and

especially at the inception of the idea, rather than involvement being an afterthought. We recognize there are necessary structural changes which are required to enable this to happen as current funding mechanisms generally do not allow for smaller communities to be able to lead or for more emergent processes to develop.

Opening this up would allow us to diversify the types of groups that can drive this work and the issues—from the socially engaged and more taboo—that can genuinely shift power in society and develop new knowledge. When seen through a lens of agency, there is an opportunity to go beyond the traditional platforms and subjects to widen what we consider as citizen science to include community participatory action research to artistic-ethnographic practices. As demonstrated by the Honorary Mention awardee *HARNESSTOM* for example, the expertise of local farmers and chefs went beyond a representation of diversity to be fundamental to the exploration of more sustainable varieties of tomatoes. The quality of the research is heightened as a result of their inclusion, as is the impact for communities.

Opening these approaches also does not mean there is an absence of rigor in this work. We would like to see much better understanding and evaluation of citizen science projects across the board. Any research that considers itself participatory should be applying best practices and conducting evaluation in an ongoing manner. This is not just an issue of quality but also one of accountability and responsibility. It is crucial to admit the duty of care inherent in orchestrating a participatory project—and to safeguard the participants—particularly if working with often marginalized communities.

Excellent citizen science should be diligent in closing the loop, actively feeding back results, and investing in community-researcher relationships long-term, with a commitment to sharing approaches and methodologies that can be adopted, adapted, and used within different projects. Only then can citizen science reach its full potential of democratizing knowledge to support social justice, achieving the radical change required to combat the biggest collective challenges of our age.

European Union Prize for Citizen Science
Grand Prize

Awarded for outstanding achievements in the advancement of knowledge through the empowerment of civil society and citizens in the development of the future.

Isala: Citizen-science map of the vaginal microbiome

Sarah Lebeer, Sarah Ahannach, Thies Gehrmann, Stijn Wittouck, Tom Eilers, Sandra Condori, Jelle Dillen, Irina Spacova, Leonore Vander Donck, Caroline Masquillier, Camille Allonsius, Isabel Erreygers, Inas Rahou, Caroline Dricot, Charlotte De Backer, Gilbert Donders, Veronique Verhoeven

In many books the female genitals are still portrayed in a reduced and even wrong way—from misunderstanding between the vagina and vulva to failing to show the clitoris. This misrepresentation of the visible makes it perhaps less surprising that scientific knowledge on essential facts on the vaginal microbiome have been critically lacking. With the winning project of the first European Prize for Citizen Science, over 6,000 people collaborated internationally to change this. Through *Isala,* scientists and citizens joined forces to study the vaginal microbiome and create an undoubtedly unique database pioneering female health. This project successfully addresses social stigma and medical bias concerning intimacy, self-care, and taboos related to the female body. *"Isala not only wants to help women become more aware of their own vaginal health, but hopefully all the knowledge about the cultured bacteria will also help to develop medicines that help women with problems. Medicines based on living, healthy bacteria, so no antibiotics but probiotics!"*

The jury commends *Isala* for approaching each part of the project with extreme care, dedication, and passion: topic, research methodology, engagement, and communication. There are toolkits online to support conversations alongside the research and enabling taboo-busting questions between groups and researchers. Embedded in this is a focus on building communities and supporting education around this work, globally addressing wider health inequalities with the excit-

ing ambitions to build on this further through sister projects. Involving participants from its very early stages onwards, *Isala* is an outstanding example of a well-implemented citizen science project.

Diversity & Collaboration Award
Awarded for excellence in explorative collaboration, cultural diversity, gender diversity, stakeholder engagement, and social inclusivity.

Urban Belonging Project
Urban Belonging Collective: Sofie Burgos-Thorsen, Drude Emilie Ehn, Anders Koed Madsen, Thorben Simonsen, Sabine Niederer, Maarten Groen, Carlo De Gaetano, Kathrine Norsk, Federico Di Fresco, Gehl Architects, Techno-Anthropology Lab—Aalborg University, Service Design Lab—Aalborg University, Visual Methodologies Collective—Amsterdam University of Applied Sciences, Center for Digital Welfare—IT University Copenhagen.
What makes you feel that you belong in a city? This is the question asked by the Diversity and Collaboration Prize winner, the *Urban Belonging Project,* which considers what social sustainability looks like and whose experience and voices count. Through conversations, participatory mapmaking, and photography, a diverse range of citizens were asked to document their relationship to the city of Copenhagen to develop a Lived Experience Catalogue. From LGBTQ+, homeless, and ethnically diverse groups, the project moved beyond inviting citizens to collect data to also frame the issues and interpret the data themselves. Throughout, an intersectional and feminist approach was taken, and the jury commend the particular attention to supporting communities whose stories are often not considered in urban planning through relevant partner organizations and the resultant sensitivity, creativity, and accessibility of the engagement approaches and the data visualization.

Digital Communities Award
Awarded for excellence in creating and supporting communities, delivering social benefits, and fostering an open and inclusive civil society through the innovative or alternative use of digital technologies.

The Restart Project: The Right to Repair and Reuse your Electronics
Frances Cresswell, Holly Davies, Fiona Dear, Mario De Marco, Cristina Ganapini, Shelini Kotecha, Neil Mather, James Pickstone, Ugo Vallauri
Citizen Science can gather new data about our world, and beyond this it also has the potential to bring together collective intelligence for new insights and impact. This potential can be reached by using digital tools to foster and support a community to share and develop questions and knowledge together. *The Restart Project* has been supporting the repair and reuse of technology for more than 10 years through forums, online coordination, and in-person events, with dedicated programs for digital inclusion and addressing under-represented groups. This growing and global community has gone on to not only revitalize old technology but also to provide data, and carry out research that gives insights into the impact that reuse and repair has on the environment. This, in turn, plays an important role in changing policy regarding technology regulation. The jury commends the dedication to inclusion and community-making by the project, combined with the outreach to stakeholders in the policy sphere to create impact both in individuals' lives and in international legislation.

Nominations

ARTigo: Social Image Tagging
Stefanie Schneider (DE)

AquaGranda: A Digital Community Memory
Distretto Veneziano Ricerca e Innovazione
(IT), Venice Ca' Foscari University (IT)

Catch the Water Monsters
Rosan van Halsema (NE), Marita Voogt (NE),
Conny Groot (NE), Rutger Westerhof (NE),
Frank Rigters (NE), Lena Arndt (NE), Sven
Teurlincx (NE), Freek Uittenbogaart (NE)

CitieS-Health: Citizen Science for Urban Environment and Health
Barcelona Institute for Global Health (ES),
Ideas for Change (ES), Utrecht University (NL),
Jožef Stefan Institute (SI), Epidemiologia &
Prevenzione (IT), Vytautas Magnus University (LT)

CurieuzeNeuzen
Filip Meysman (BE) and
the CurieuzeNeuzen Consortium (BE)

Dark Sky Meter
Norbert Schmidt (NL)

Digi-ID PLUS
Esther Murphy (IE), Trinity College Dublin (IE),
University of Zagreb (HR), Karolinska Institute
(SE), MADoPA Living Lab (FR), Andalucian
Ministry of Public Health (ES), University of
Alicante (ES), Microsoft (US), WaytoB (IE), Access
Earth (IE)

Digital Violence: How the NSO Group Enables State Terror
Forensic Architecture (GB)

DRYRivERS: A citizen science app for advancing the science and management of intermittent streams
Amélie Truchy (FR), Zoltán Csabai (HU), Bálint
Pernecker (HU), Thibault Datry (FR)

European Bird Census Council: Citizen scientists monitoring birds for policy, research and society in Europe
Mark Eaton (GB), Petr Voříšek (CZ)

Europeana Transcribe on Transcribathon.eu
Frank Drauschke (DE), Facts & Files (DE),
Europeana Foundation (NL), Austrian
Institute of Technology (AT), Consortia of the
EnrichEuropeana projects (INT)

EVE Online's Project Discovery
CCP (IS), MMOS (CH), McGill University (CA), BC
Cancer Foundation (CA), ISAC (US), Cytobank
(US), Dotmatics (US), BD (US), University of
Modena and Reggio Emilia (IT), University of
Geneva (CH), Human Protein Atlas (SE)

GEOVACUI-2: Citizen Science and cooperation initiatives against depopulation of rural areas
Carmen Mínguez—Complutense University of
Madrid (ES), Marta Martínez-Arnáiz—University
of Burgos (ES), Javier Martín-Vide—University
of Barcelona (ES), José Damián Ruiz
Sinoga —University of Málaga (ES), José Ojeda
Zújar—University of Sevilla (ES), Elena Bárcena-
Martín—University of Málaga (ES)

HARNESSTOM Citizen Science Platform: Unlocking tomato genetic resources to benefit farmers, citizens and chefs
Joan Casals (ES), Ivanka Tringovska (BG), Andrea
Mazzucato (IT), Salvador Soler (ES), Gancho
Pasev (BG), Maria José Díez Niclós (ES), Antonio
Granell Richart (ES)

Mosquito Alert: Community intelligence for mosquito-borne disease preparedness and response
CEAB-CSIC (ES), UPF (ES), CREAF (ES), ICREA (ES), Xatrac (ES). Coordination Team: Frederic Bartumeus (ES), John Palmer (ES/US), Alex Richter-Boix (ES), Aitana Oltra (ES), Agustí Escobar (ES), Joan Garriga (ES), Živko Južnič-Zonta (ES/SI), Monika Falk (ES/PL), Enric Pou (ES), Elisa Mora (ES), Roger Eritja (ES), Isis Sanpera (ES), Simone Mariani (ES/IT), Santi Escartín (ES), Ariadna Peña (ES), Mar Jambou (ES)

Ocean Routes: Exploring and valuing the maritime culture of Esposende—An ocean literacy and citizen science approach
Rio Neiva—Environmental NGO (PT), António Rodrigues Sampaio School Group (PT)

Paleo-energy: How forgotten patents can shake the future
Cedric Carles (FR)

Phénoclim
Anne Delestrade (FR)

Projecte Rius
Associació Hàbitats (ES)

Project Roadkill
Florian Heigl (AT), Daniel Dörler (AT)

SensJus: Sensing for Justice
Anna Berti Suman (IT), Sven Schade (DE), European Commission—Joint Research Centre—Ispra (IT)

#SOPHYGRAY
Nadja Verena Marcin (DE)

Surfing for Science
Anna Sanchez-Vidal (ES), William P. de Haan (ES), Oriol Uviedo (ES), Surfrider Foundation—Spanish Delegation (ES), Asensio Comunicació Visual S.L. (ES)

Surfside Science
Metabolic Foundation (AW)
Whale Track: Community marine mammal monitoring for nature restoration
Alison Lomax (GB), Hebridean Whale & Dolphin Trust (GB), Lauren Hartny-Mills (GB), Hebridean Whale & Dolphin Trust (GB)
When gig workers regain control: Data governance model for a new French mobility service by gig workers
Brahim Ben Ali—Coopérative maze (FR), David Décamps / Deydai—PersonalData.iO (FR), Jessica Pidoux—CEE Sciences Po Paris and PersonalData.iO (FR)

YouCount: Empowering youth and cocreating social innovations and policy-making through youth-focused citizen social science
Oslo Metropolitan University (NO), University of Vienna (AT), SPOTTERON (AT), Aalborg University (DK), ESSRG (HU), Univertsita Degli Studi Di Napoli Federico II (IT), Kaunas University of Technology (LT), Orkestra-Basque Institute of Competitiveness/Deusto Foundation and Deusto University (ES), Sodertorn University (SE), VA—Public & Science (SE), University of Central Lancashire (GB)

Isala: Citizen-science map of the vaginal microbiome

Sarah Lebeer, Sarah Ahannach, Thies Gehrmann, Stijn Wittouck, Tom Eilers, Sandra Condori, Jelle Dillen, Irina Spacova, Leonore Vander Donck, Caroline Masquillier, Camille Allonsius, Isabel Erreygers, Inas Rahou, Caroline Dricot, Charlotte De Backer, Gilbert Donders, Veronique Verhoeven

Isala Team

Isala Team

Isala is the world's largest citizen science project on women's health studying the female microbiome and its influence on our health and wellbeing. *Isala* has both scientific and societal goals, such as finding better forms of diagnostics and therapeutics, but also raising greater awareness of vaginal and reproductive health. Named after the first female doctor in Belgium, Isala Van Diest (1842–1916), the project draws inspiration not only from Isala Van Diest's legacy as a pioneering medical practitioner committed to women's health, but also from her role as a feminist and activist campaigning for women's rights.

The *Isala* project launched in March 2020 with the aim to recruit 200 women to self-collect vaginal swabs. Within ten days, more than 5,500 women had registered. Due to such overwhelming enthusiasm from the public, two lines of research were set up as a first phase of the project. The first line of research involved participants taking part in a large survey about demographic, lifestyle and environmental factors through the online Qualtrics tool,

**European Union Prize for Citizen Science
Grand Prize**
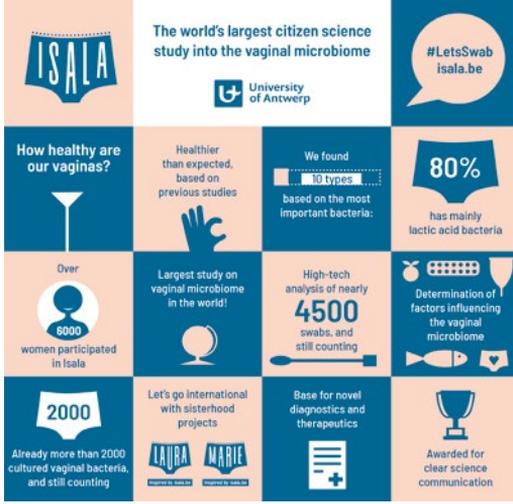
Isala infographic with a summary of the Isala project, results and ongoing research.
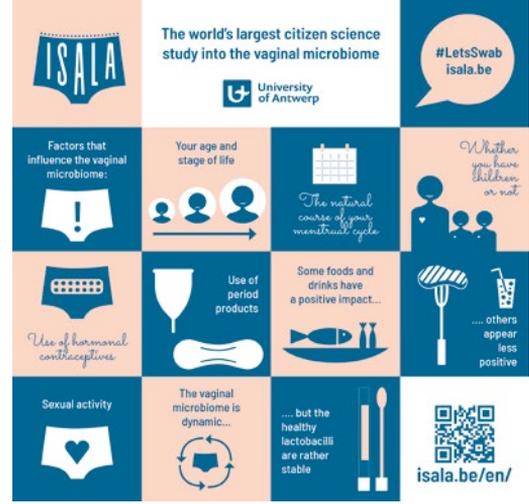
Isala infographic about the lifestyle, life course and environmental factors that have an impact on the vaginal microbiome.

Isala self-sampling kit from the longitudinal flow (sampling vagina, skin and saliva over 2 menstrual cycles).
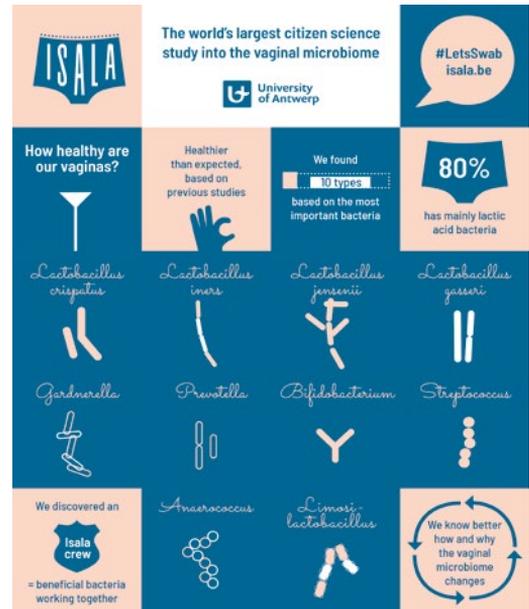
Isala infographics about which bacteria were most present in the vaginal swabs of more than 3000 Isala citizen scientists.

and was accompanied by the self-collection of two vaginal swabs (for microbiome profiling, culturomics, metabolomics). Within one year, each participant received their personal vaginal microbiome profile, and the initial results were shared with the broader public. This was followed by the second line of research, where 275 women were selected to participate in the *Isala* longitudinal flow that studied hormonal fluctuations and the microbiome (through the self-collection of six vaginal swabs).

The transdisciplinary *Isala* team and advisory board incentives innovative research methodologies and scalable scientific results. In addition, the *Isala* citizen scientist is also part of the extended research and communication team as they suggest research endeavors and actively engage as ambassadors for vaginal health and women's wellbeing. *Isala* also endeavors to further its impact by taking on diverse partnerships and stakeholders, such as policy makers, academic and industrial researchers, and non-profits working across various areas

Isala: Citizen-science map of the vaginal microbiome

Example of Isala communication tool: these are the conversation starters to discuss intimate topics with friends, family, etc.
Blogpost per conversation starter can be found here:
https://isala.be/en/category/conversation-starters

**European Union Prize for Citizen Science
Grand Prize**

of women's wellbeing (both clinical and societal). *Isala* is also dedicated to breaking taboos. Inspiring and educating women in STEAM, and informing the broader public about women's health, *Isala* works towards building a vibrant community that supports equal rights for all women. *Isala* strives to not only empower women to take their health into their own hands, but to also cultivate the trust of citizens in the science and research of such intimate topics.

The *Isala* team is heavily committed to community engagement and co-creation. Seeking to broaden perspectives, build bridges between citizens and scientists, and ensure research is made approachable and given a face, *Isala* adopts a process of transparent and recurrent communication. This is achieved through continuous community outreach activities that take place both offline and online. Offline outreach is undertaken through large and small (inter)national events that include interactive talks, workshops, panel conversations, poster presentations, museum booths, high school education packages, soapbox science, community health kiosks, yearly science and women's days, and the *Isala* Symposium that took place for the first time in January 2023. Online community engagement takes place through active interactions across social media, blogpost discussions, podcasts, and webinars. Via these channels, both online and offline, the *Isala* team engages daily with citizen scientists and enthusiasts, and reaches an estimated 5,000 – 10,000 people of various ages each month.

Cultivating relationships of trust between citizens and scientists, *Isala* creates a safe space and kind corner for people to share their story, help each other, and co-create impactful and innovative research.

https://u.aec.at/56A47626

Isala Team

Isala Team (BE) was formed within Prof. Sarah Lebeer's Laboratory of Applied Microbiology and Biotechnology at the University of Antwerp. Prof. Sarah Lebeer is the principal investigator; Dr. Sarah Ahannach and Dr. Camille Allonsius are the project managers; Dr. Stijn Wittouck is the bioinformatician (assisted by Tim Van Rillaer); Dr. Thies Gehrmann is the biostatistician and data manager; Tom Eilers and Jelle Dillen characterize the bacteria; Dr. Sandra Condori is the Isala sisterhood project manager; Leonore Vander Donck studies personal hygiene and the vaginal microbiome; Caroline Dricot studies the host immune system and the microbiome; Isabel Erreygers studies diet and the vaginal metabolome; Inas Rahou studies endometriosis and the urogenital microbiome; Ines Tuyaerts, Nele Van de Vliet, and Sam Bakelants provide lab support while Annelize Groenwals provides admin support.

The Restart Project: The Right to Repair and Reuse your Electronics

Frances Cresswell, Holly Davies, Fiona Dear, Mario De Marco, Cristina Ganapini, Shelini Kotecha, Neil Mather, James Pickstone, Ugo Vallauri

The Restart Project addresses the environmental costs of our linear, consumerist economy. It combines hands-on community repair engagement with the need for system change, via citizen data collection and analysis, campaigning and policy influencing at EU and national level.

Many electrical goods have short lifespans, prematurely becoming e-waste, the fastest growing waste stream in Europe, and driving the extraction of ever more raw materials to manufacture new products. Around 80% of a small electronic device's carbon footprint is emitted before it is ever used, therefore repairing and reusing devices is essential to reduce their overall impact. This plays a key role in achieving SDG 12: sustainable consumption and production patterns.

Through *Restart* Parties and other repair events, volunteers help members of the public repair broken items, building community through the sharing of skills, reducing waste, and recording data about the repairs attempted.

In 2017 *The Restart Project* co-founded the Open Repair Alliance (ORA) and created the Open Repair Data Standard (ORDS) with partners to improve the quality, consistency, and interoperability of citizen-sourced repair data from networks around the world. Using ORDS as a foundation, *Restart* developed its own open source community platform, *Restarters.net,* to support groups across Europe and beyond in collecting data and monitoring the impact of their work. *The Restart Project* then actively brought entire networks of repair initiatives together to share citizen repair data from Belgium (2019), Wales (2021), Denmark (2022), and France (2023). In total, around 600 citizen scientists have now recorded over 81,000 repair attempts, which *Restart* periodically aggregates and publishes under an open licence.

Since 2019 *Restart* co-leads the European Right to Repair Campaign, a coalition of over 100 organisations demanding ambitious legislation to make repair accessible and affordable to everyone.

https://u.aec.at/5542049C

Hackney Fixers

The Restart Project / Mark Phillips

**European Union Prize for Citizen Science
Digital Communities Award**

Fixing continues during the pandemic at community repair events

Restart Pop-Up at Havering Council

FixFest 2022

The Restart Project (GB) is a London-based charity fixing our relationship with electronics. By encouraging people to use their electronics longer and collecting and sharing data from community repair initiatives globally on recurrent barriers to repair, *Restart* pushes for legislation for the Right to Repair in the UK and across Europe. *Restart* was founded in 2012 as an all-volunteer project, and volunteers are still at the centre of its work. It started when the repair café movement was beginning to gain visibility. *Restart* decided to focus specifically on prevention of e-waste through repair, and highlighting the need for complete system change in the way we consume, design, and regulate the devices that power our digital economy. It advocates for a universal Right to Repair, requiring manufacturers of all electrical and electronic products to design for repairability, while providing access for all to repair manuals, affordable spare parts, and long-term software and security updates.

Urban Belonging Project

Urban Belonging Collective: Sofie Burgos-Thorsen, Drude Emilie Ehn, Anders Koed Madsen, Thorben Simonsen, Sabine Niederer, Maarten Groen, Carlo De Gaetano, Kathrine Norsk, Federico Di Fresco, Gehl Architects, Techno-Anthropology Lab—Aalborg University, Service Design Lab—Aalborg University, Visual Methodologies Collective—Amsterdam University of Applied Sciences, Center for Digital Welfare—IT University Copenhagen

The *Urban Belonging Project* innovates methods for citizen engagement that foreground diverse and marginalized experiences in planning. The project invited participants who identify as lgbt+, deaf, homeless, internationals, ethnic minorities, mentally vulnerable, and/or physically disabled to document their experiences of belonging in Copenhagen using participatory GIS and a new open source photovoice app, developed for the project.

The design of the photovoice app was carried out through a co-design process, led by researchers with inputs from community organizations and planners from Gehl Architects, who helped test and refine the app. Participants were then engaged through local organizations representing each community. In intro-meetings with participants, the process was presented and smartphones were handed out to people without. Participants then filled out a spatial questionnaire and carried out photovoice over 10 days, taking photos of places in Copenhagen that affect their sense of belonging. While photos and routes were geo-tracked, participants were asked in the app to annotate their photos and react to other participants' images. In workshops, participants worked together on interpreting the data, creating a collection of photos, maps, and visualizations that was exhibited to the public in 2022 at Urban 13 and Copenhagen Architecture Festival.

The *Urban Belonging* methodology is being documented in scientific articles, and the app is available on GitHub and is actively used by others as intended: Gehl has used the app to map experiences of belonging on a university campus in the US; TANTLab and Copenhagen University researchers have used it to study the life of youth in Danish "ghettos" and local perceptions of heritage in Urbino, Italy; *The DESIRE Project* in the EU has used it to identify issues of urban sustainability; and a local NGO in Seattle has used the photovoice app and method to involve the youth in a local neighborhood to contribute to and inform a new city policy.

https://u.aec.at/CA61CED0

Photos from workshops with participants

Sofie Burgos-Thorsen (DK)

European Union Prize for Citizen Science
Diversity & Collaboration Award
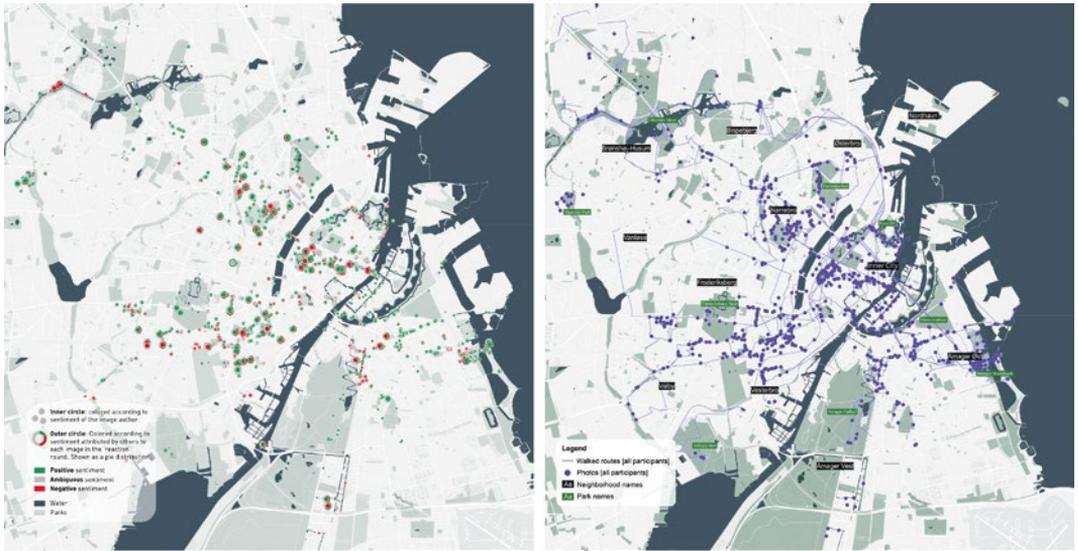
Maps of photovoice data collected in the project.
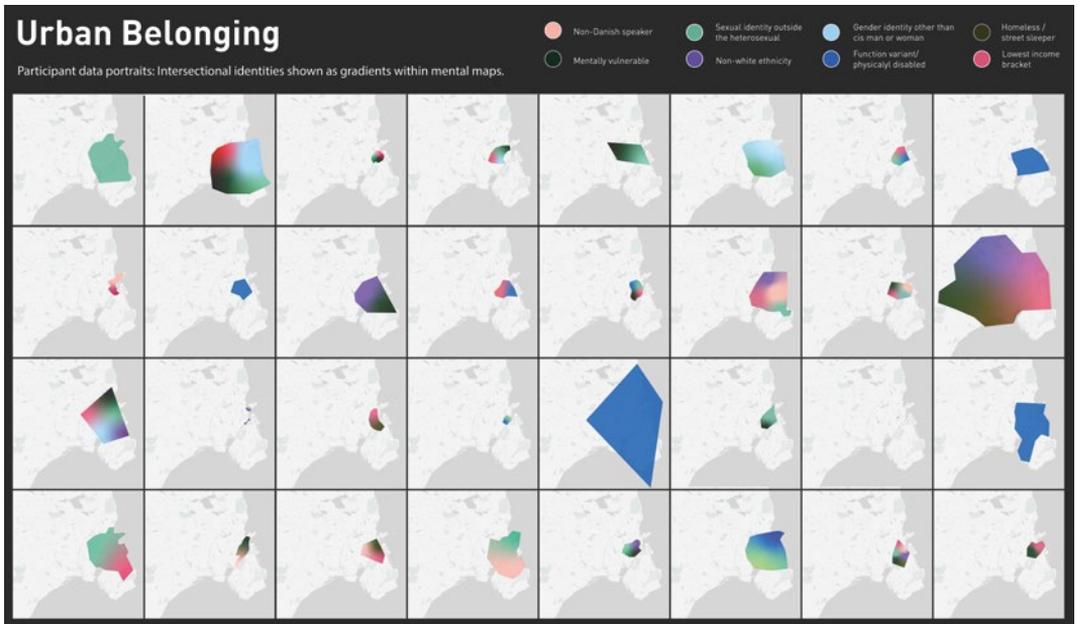
Data portraits of participants shown as individual mental maps filled with color to indicate how a participant self-identifies.

Urban Belonging Collective (INT) assembles an interdisciplinary team of urban planners and researchers from Copenhagen and Amsterdam, spanning fields like digital humanities, service design, sociology, visual methodologies, programming, architecture, photography, techno-anthropology, and visualization design. The team was organized and steered by Sofie Burgos-Thorsen, Drude Emilie Ehn, and Anders Koed Madsen and it included Thorben Simonsen, Sabine Niederer, Maarten Groen, Carlo De Gaetano, Kathrine Norsk and Federico Di Fresco, representing Gehl Architects, Techno-Anthropology Lab (Aalborg University), Service Design Lab (Aalborg University), Visual Methodologies Collective (Amsterdam University of Applied Sciences), and Center for Digital Welfare (IT University Copenhagen). We describe the collective in simple, uniting terms: "We are a collaborative photo and map-making initiative that works with local communities to map how cities are experienced by a diverse set of people."

Ars Electronica Award for Digital Humanity

by the Austrian Federal Ministry for European and International Affairs

ARS ELECTRONICA
Award for Digital Humanity 2023

In addition to the four Golden Nicas of Prix Ars Electronica 2023, the Ars Electronica Award for Digital Humanity, initiated by the Austrian Federal Ministry for European and International Affairs, will be awarded for the third time as part of Prix Ars Electronica. Every submission to the Prix Ars Electronica and the STARTS Prize competition could also be entered for consideration to the Ars Electronica Award for Digital Humanity.

The Ars Electronica Award for Digital Humanity focuses on projects that address social, cultural, and humanitarian issues in our digital society. It highlights outstanding examples of collaborative practices between individuals of different disciplines and backgrounds. Art and culture shape our common reality. They pose the question of what constitutes a human being in the digital world. Artists as cultural ambassadors are best equipped to identify the potential and the pitfalls of our current digital transformation.

Cultural diplomacy is a powerful instrument to promote mutual understanding among nations and to bolster societal change on a global scale. As such, it is uniquely positioned to advocate for a new era of digital humanism: Digital humanism that builds a just and democratic society with human beings at the center of technological progress.

Digital humanism ensures our needs and universal human rights are being met and works to preserve our human dignity. It shapes technologies in accordance with humanistic and social values and envisions alternative pathways for human/machine interaction that are centered around diversity and inclusion in the creation, implementation, and adaptation of digital tools.

The Ars Electronica Award for Digital Humanity emphasizes in equal terms the humaneness and humanism that must dictate the development of new technologies. The award honors projects and artworks that inspire fundamental rethinking in our contemporary approach to technology: It's time to resign our roles as mere data-generating machines and to actively participate in the shaping of our digital future.

Can digital applications be more oriented toward human needs and based on cultural and social values that respect the autonomy of users over their data? Can software solutions build on the values of cultural diversity instead of infrastructural uniformity? Can digital tools be increasingly of benefit in cross-culture collaboration, international cultural relations, and mutual understanding?

The Award for Digital Humanity is a very special prize, organized jointly by Ars Electronica and the Austrian Federal Ministry for European and International Affairs. It deals with a topic that is central to our lives, but it is also a "learning" prize in the sense that the enormous speed of digital developments is reflected in the dynamic applications, to the effect that the content framework is constantly evolving and the Award keeps reinventing itself. And that's a good thing, because we as humanity will only be able to use these technologies in a sustainable way if we can really understand them, assess their risks, and recognize their potential. The winning project *Masakhane* is an impressive example of not being discouraged by the dominant global mechanisms of AI, but of opening up new perspectives and generating the commitment of newly emerging communities. We also need initiatives such as the *konS ≡ PARK—Academy for Contemporary Investigative Art* project (Honorary Mention 2023) in order to encourage young people to experiment playfully. Because whatever promotes our understanding of these powerful technologies will hopefully also strengthen our sense of ethical responsibility.

Ambassador Christoph Thun-Hohenstein
Head of the Section for Cultural Foreign Relations
BMEIA – Federal Ministry for European and International Affairs of the Republic of Austria

Ars Electronica Award for Digital Humanity
Statement of the jury

Ambassador Christoph Thun-Hohenstein, Director General for International Cultural Relations at BMEIA, Martin Honzik, Thomas Kloiber, Regina Rusz, Gerfried Stocker, Veronika Liebl

This is the third year that Ars Electronica and the Austrian Federal Ministry for European and International Affairs jointly present the Ars Electronica Award for Digital Humanity.

This year's edition of the Ars Electronica Award for Digital Humanity presented the jurors with a special challenge, not least due to the remarkably large number of submissions from around the world. The submitted projects provided a deep insight into a global society that is partly undergoing dramatic transformation processes and facing significant fundamental challenges. Topics such as climate change and its impact on the environment, economy, and human well-being, inequality due to unjust access to resources, education and health, as well as global health crises and the rapid digital transformation towards autonomous intelligent technical systems, shape the complexity that accompanies everyday life and ultimately define the concept of "Digital Humanity" in 2023. It was fascinating to observe the various ways in which this concept can be interpreted and understood, given the respective cultural and geopolitical life situations of the submitters.

Furthermore, the diversity of artistic forms of expression and practices was remarkable, including the question of the art itself. Many projects presented themselves more as clear solution approaches and applications rather than traditional artworks. This topic was extensively and intensively discussed by the jury. However, artistic excellence remained an important criteria for the jurors for awarding an art prize. Nevertheless, it was also fascinating to observe what happens when artists go beyond their established territories with their thinking, approaches, abilities, and talents, offering society alternative solutions that directly target society itself, without primarily claiming to be art. The final selection reflects this dynamic well.

In general, the jury process was characterized by the different approaches and backgrounds of the jurors, leading to controversial but constructive and inspired discussions that resulted in a fantastic outcome from the jury's perspective—a winning project and an Honorary Mention.

Ars Electronica Award for Digital Humanity

Honorary Mention

Masakhane—pioneering participatory approaches to African languages processing, for Africans, by Africans
Masakhane

The project *Masakhane* has garnered great approval and enthusiasm from the jury. *Masakhane* is an outstanding project that impressively highlights the ever-growing divide between the Global North and South, while also clearly demonstrating the role that technology plays in this context. However, the project does not merely aim to showcase and accuse; it fantastically proves the sustainable results that can be achieved when the right appropriation processes and thoughtful use of technology are employed. This can help shape and preserve cultural identity sustainably, rather than losing and forgetting it.

Masakhane shows the effects and consequences of a technological development, especially that of language-generating systems, aligning with globally dominant language families, which inherently leads to exclusion and discrimination. *Masakhane* has convinced the jury because, since its establishment in 2019, over 400 researchers from more than 30 African countries have collaborated on the project. They have published current research findings for over 38 African languages in various locations and built a thriving community. The aim is to enable Africans to shape and appropriate these technological advancements themselves, towards human dignity, well-being, and justice. The project impressed the jury on multiple levels and stood out among the numerous submissions as one of the most professionally presented and executed projects.

konS ≡ PARK
Academy for Contemporary Investigative Art
In addition to its highly convincing quality and originality, *konS-PARK* is a wonderful example of how diversely the concept of "Digital Humanity" can be interpreted. And for this, the jury awards an Honorary Mention to the project *konS ≡ PARK—Academy for Contemporary Investigative Art.*

The platform *konS ≡ PARK*, initiated by the Slovenian cultural institution Kersnikova Institute / Kapelica Gallery, consists of a network of creative hubs throughout Slovenia where creative programs for exploration and mutual learning are developed. *konS ≡ PARK* was established to raise awareness among young people and the public about a changed perception of science, technology, and art, as well as to develop attitudes that help us understand the dynamics of contemporary society. The goal is to empower young people to utilize new technologies.

This ambitious project impressively demonstrates the proactive results that can arise when artists operate outside their own world. *konS ≡ PARK* is a concrete offer for the Slovenian education system, focusing on young people and providing space for original, unexpected, unusual, and inspiring perspectives on the present and a possible future. It utilizes various new technologies and tools and addresses topics relevant to our time, such as the environment, biotechnology, artificial intelligence, the future of food, robotics, space exploration, and more. *konS ≡ PARK* does not claim to be art itself but shows that artistic thinking, as well as artistic methods and practices, are effective far beyond the context of art.

Masakhane—pioneering participatory approaches to building African language technologies, for Africans, by Africans

Masakhane

let us

build together.

Masakhane is a grassroots organization whose mission is to strengthen and spur NLP research in African languages, for Africans, by Africans. Despite the fact that 2,000 of the world's languages are African, African languages are barely represented in technology. The tragic past of colonialism has been devastating for African languages in terms of their support, preservation, and integration. This has resulted in a technological space that does not understand our names, our cultures, our places, or our history. Even in the forums which aim to widen NLP participation, Africa is barely represented. Some problems facing NLP in African languages include lack of focus on African indigenous languages, the lack of resources for African languages which hinders the ability for researchers to do NLP, and the low discoverability of existing resources for African languages (often one needs to be associated with a specific academic institution in a specific country to gain access to the language data available for that country). The 4th Industrial Revolution in Africa cannot take place in only English, at the expense of many other world languages and cultures. It is imperative that language technologies are made inclusive for the African continent.

"Masakhane" roughly translates to "We build together" in isiZulu. Our goal is for Africans to shape and own these technological advances towards human dignity, well-being and equity, through inclusive community building, open participatory research, and multidisciplinarity. Our values in Masakhane revolve around collaboration, community, and inclusivity. We embrace the philosophy of "Umuntu Ngumuntu Ngabantu," emphasizing the interconnectedness of individuals. We prioritize African-centricity, reclaiming our narratives and knowledge. We value everyone's unique experiences and contributions. Kindness, responsibility, and data sovereignty guide our ethical practices. Reproducibility ensures transparency, while sustainability drives long-term impact. Our goal is for

Masakhane Community

2,115 members
150+ African languages
70+ Publications
3+ Awards
200+ Datasets
12 workshops & socials

Artwork by Keneilwe Mokoena

This figure features stats and demographics of the community, as well as highlights some of our achievements.
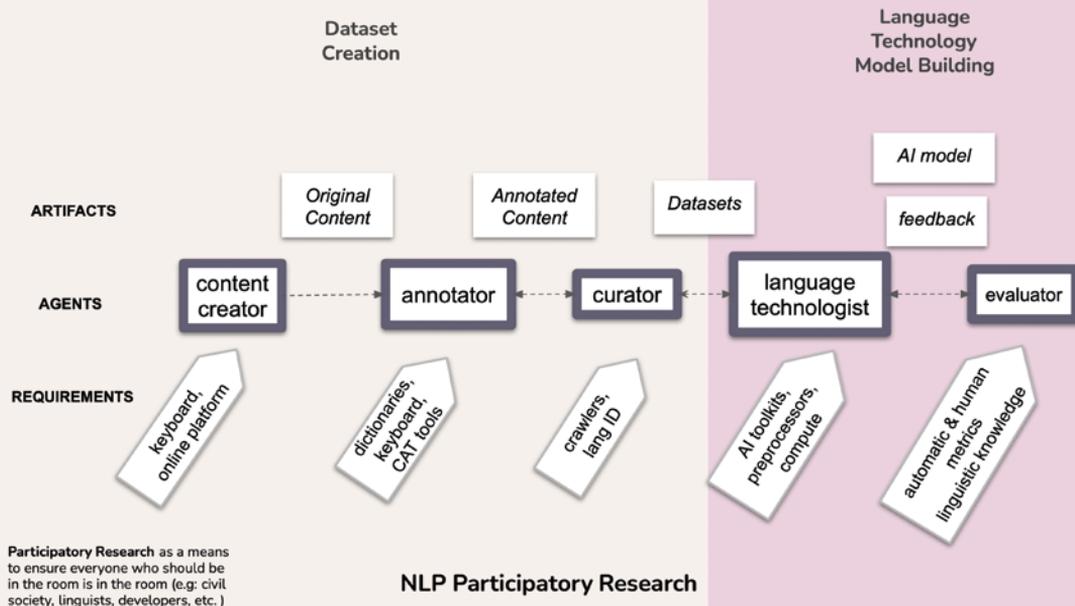
Our interpretation of a sustainable process for language technology (NLP) research in terms of the required agents and interactions is depicted in this diagram. A sustainable NLP process requires translators and curators for dataset creation, while language technologists and evaluators contribute to model creation. In a language with abundant resources, such as English, we observe that each agent possesses the necessary requirements and stakeholder demand from the past to perform their role effectively. In contrast, parts of the existing low-resource NLP process are constrained and fraught with difficulties. Historically, many low-resource languages had low demand for content creation and translation from stakeholders. Due to a lack of keyboards or restricted access to technology, content creators were unable to produce digital content. The Masakhane participatory research intends to circumvent these limitations by ensuring that the agents in the NLP procedure originate from or can speak the countries where the low-resource languages are spoken. In cases where this condition cannot be met, knowledge transfer between agents must be enabled. We hypothesize that a participatory approach guarantees that everyone who should be present is present. For more, see our paper: https://arxiv.org/pdf/2010.02353.pdf

Africans to shape and own these technological advances towards human dignity, well-being and equity, through inclusive community building, open participatory research, and multidisciplinarity.

https://u.aec.at/2F5BB718

Masakhane (https://www.masakhane.io) is the OPEN RESEARCH, PARTICIPATORY, GRASSROOTS NLP INITIATIVE FOR AFRICANS BY AFRICANS, with the aim of putting African research in NLP on the map, by holistically tackling the problems facing NLP. Founded in 2019, Masakhane has since garnered over 2,000+ researchers from over 50 African countries, published state-of-the-art research (including a 2021 Wikimedia award of the year) for over 38 African languages at various venues, and has built a thriving community. Our goal is for Africans to shape and own these technological advances towards human dignity, well-being and equity, through inclusive community building, open participatory research, and multidisciplinarity.

Ars Electronica Award for Digital Humanity

Hana Jošić

Mojca Gorjan

konS ≡ PARK
Academy for Contemporary Investigative Art

Artists: Nastja Ambrožič, Lavoslava Benčić, Dr. Julian Chollet, Eva Debevc, Leon Dolničar, Tadej Droljc, Andrej Fon, Miha Godec, Jakob Grčman, Ida Hiršenfelder, Sanja Hrvaćanin, Stella Ivšek, Luka Jare, Bor Jarh, Lovrenc Košenina, Martin Krauser, Vesna Krebs, Gregor Krpič, Borut Kumperščak, Denis Lederhas, Lea Lipnik, Junoš Lukan, Taja Oblišar, Tara Pattenden, Jurij Podgoršek, Eva Pondrk, Katarina Radaljac, Anja Romih, Uršek Slivšek, Celeste Sanja Smareglia, Ana Smerdu, Saša Spačal, Kristijan Tkalec, Staš Vrenko, Jaka Waldhütter, Veljko Zejak

The *konS ≡ PARK—Academy for Contemporary Investigative Art* was established primarily to sensitize young people and the general public to change their understanding of science, technology, art and to develop attitudes that help us understand the dynamics of contemporary society in order to empower young people to use new technologies.

We are living in a time when humans have become the most powerful species on the planet and have radically impacted the environment and destroyed the natural balance of the Earth's ecosystems. New scientific knowledge is (I) enabling us to better understand our coexistence with other species, to rethink what the planet has to offer and how we will make use of it, and (II) reminding us to consider sustainable solutions in many ways. Through the workshops we develop and run at *konS ≡ PARK,* we try to culturalize the use of new technologies so that young people develop a critical attitude towards them and learn how to use them, as technologies are extremely powerful tools. New technologies can be used in many creative and constructive ways.

Production hubs:
Ljubljana: Kersnikova, Projekt Atol, Ljudmila, Cona
Novo mesto: Sonar
Maribor: Inkubator
Velenje: Nukleus
Nova Gorica: Xcenter

Producers: Kristijan Tkalec, Petra Vanič, Tina Dolinšek, Rea Vogrinčič, Tine Vrabič, Anže Zorman, Irena Pivka, Gašper Beg, Marko Lük, Eva Nađ, Monika Pocrnjić, Maruša Skornišek, Mojca Stubelj Ars, Jernej Čuček Gerbec, Mija Lorbek
Video testimonials: Maja Andlović, Domen Ožbot

https://u.aec.at/E98E7FA1

**Ars Electronica Award
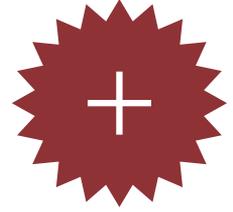for Digital Humanity
Honorary Mention**

4.]
Innova
Techno

tion &
logy

Grand Prize of the European Commission
honoring Innovation in Technology, Industry
and Society stimulated by the Arts

S+T+ARTS

PRIZE'23

STARTS—Science, Technology, and the ARTS

Europe has historically focused its attention in engineering on R&D and standardization, and historically innovation is viewed to be the core of a competitive economy. Today, however, an increasing number of high-tech companies throughout the world assert that, in addition to scientific and technological skills, the critical skills needed for innovation to happen and to be of value for society are rooted in forms of creativity found in artistic practices. In this context, the expertise of artists can directly drive and influence innovation in technology. They offer new perspectives, inspire new directions, and act as a catalyst for a successful and socially responsible transformation of new technologies into new products and new ecological, social, and business models. In recognition of this development the European Commission has launched the STARTS initiative—Innovation at the nexus of Science, Technology, and the ARTS to promote the inclusion of artists in research and innovation activities in Europe.

Innovation in and for Europe

The STARTS initiative of the European Commission is currently funding different pillars: STARTS Residencies to stimulate interdisciplinary collaborations in situ, STARTS thematic pilots to finance research with artists as active parts of projects that work on concrete challenges for industry and society, STARTS Academies uniting engineers and artists to teach digital skills to citizens and young adults in a playful way, STARTS regional centers to expand the initiative on a local level in a number of European regions, Digital Innovation Hubs that help emerging companies improve production processes and services, and last but not least the STARTS Prize to give recognition and visibility to outstanding examples of interdisciplinary collaboration.

From 2016–2022, this remarkable initiative **funded 151 residencies with 4.5 million Euros** and **honored 208 STARTS Prize projects.**

STARTS Prize'23

Grand Prize of the European Commission honoring Innovation in Technology, Industry and Society stimulated by the Arts

The STARTS Prize highlights people and projects that have the potential to make a sustainable positive impact on Europe's economic, technological, social, and ecological future. The competition seeks innovative projects at the nexus of science, technology, and the arts and celebrates visions and achievements at the interface between innovation and creation. On behalf of the European Commission, Ars Electronica in collaboration with Bozar, Frankfurter Buchmesse, INOVA+, La French Tech Grande Provence, T6 Ecosystems, and Waag Futurelab annually issues an open call for entries to the STARTS Prize competition.

The competition invites project submissions by either artists/creative professionals or the researchers/companies involved from all over the world that present
- ground-breaking collaborations and projects driven by both technology and the arts.
- all forms of artistic works and practices with a strong link to innovation in technology, business, and/or society.
- all types of technological and scientific research and development that have been inspired by art or involve artists as catalysts of novel thinking.

Nominations by international advisors and Prix Ars Electronica expert juries

To encourage a wider range of participants as well as a geographical and gender balance, twelve international expert advisors were engaged to identify and recommend relevant works, projects, and artists, who were contacted and encouraged to submit their projects to the competition.

Since the main categories of Prix Ars Electronica have a strong overlap with the criteria of the STARTS Prize, artists submitting for the Prix Ars Electronica simultaneously enter for the STARTS Prize. Out of these submissions, ten projects per category are nominated for prize consideration by the three Prix Ars Electronica expert juries (New Animation Art, Digital Musics & Sound Art, and Artificial Intelligence & Life Art).

The STARTS Prize competition annually awards:

Grand Prize—Artistic Exploration
Awarded for artistic exploration and art works where appropriation by the arts has a strong potential to influence or alter the use, deployment, or perception of technology.

Grand Prize—Innovative Collaboration
Awarded for innovative collaboration between industry or technology and the arts (and the cultural and creative sectors in general) that opens new pathways for innovation.

The winners of the two Grand Prizes each receive the STARTS Trophy and €20,000 in prize money. Both winning projects as well as a selection of the Honorary Mentions and Nominations are showcased at the Ars Electronica Festival in Linz and featured in exhibitions and events that Ars Electronica and its consortium collaborators implement at partner institutions worldwide.

Five international experts from the fields of industry, technology, governmental policies, and culture came together for the main jury event to determine 30 finalists, including the two Prize winning projects, 10 Honorary Mentions, and 18 Nominations for the STARTS Prize'23. Following extensive deliberations, the unanimous decision was taken to award *Broken Spectre* by Richard Mosse with the STARTS Prize for Innovative Collaboration and *Pollinator Pathmaker* by Alexandra Daisy Ginsberg with the STARTS Prize for Artistic Exploration. *Broken Spectre* is a result of a long-term research project in the Amazon rainforest that exposes the deforestation and industrial destruction of the land not only by developing numerous capturing technologies, but also by building strong ties with indigenous communities, and thereby revealing urgence and societal potential of such an approach. Being an artistic response to the current environmental state, *Pollinator Pathmaker* is a unique platform: an open tool to design a pollinator-friendly garden by means of an algorithm that prioritizes non-human taste, and a series of commissioned and DIY gardens around the world.

The selection of the 30 finalist projects recognizes and represents a comprehensive overview of the international state of the art collaborations between art and technology. Therefore all 30 projects are published in the *Prix Ars Electronica 2023* catalogue.

Peter Verplancke

The STARTS Trophy was designed by Nick Ervinck. The Belgian artist explores the boundaries between various media, fostering a cross-pollination between the digital and the physical. He applies tools and techniques from new media, in order to explore the aesthetic potential of sculpture, 3D prints, animation, installation, architecture, and design.
Nick Ervinck, TAWSTAR, 2016

Technology as a Renewing Force

Mónica Bello, Francesca Bria, Bernd Fesel, Jun Inada, Meinhard Lukas

The jury has carefully selected a total of 30 projects, including two Grand Prizes, ten Honorary Mentions, and 18 Nominations. These projects showcase both the potential and the desire to create an impact, with a particular focus on addressing pressing issues such as ecological, technological, socioeconomic, and cultural challenges that are being faced globally today. The jury had the challenging task of reviewing a wide range of diverse proposals, which covered topics ranging from planetary wellbeing, health awareness and care, environmental health, to mental health in the post-pandemic era.

One notable theme in the awarded projects was the engagement and empathy towards other species and living entities. Detailed proposals were presented to intervene in endangered contexts or employ mechanisms and methodologies that promote rewilding. Given the current ecological collapse, interdisciplinary collaborations are essential, and art plays a fundamental role in this endeavor. Artists have brought forth issues raised by advanced computing technologies, as has become common in the STARTS Prize. The selected proposals also address the role of information systems in shaping an open and egalitarian society, covering themes such as post-truth, freedom of movement, digital life, identities, surveillance, and critique of the opacity of digital systems. Notably, AI and the latest AI systems and software are considered, reflecting the evolving technological landscape, while blockchain also finds representation. Unique to this occasion, there is an empathic understanding of both the digital and physical realms. Some proposed ideas present technology as a renewing force, simulating undisturbed forests or collective identities to revive ancestral knowledge that has been obscured since industrial colonization. The proposals shed light on the material and digital transactions taking place globally, which impact us and other species. They express the inherent tensions of a techno-capitalist society and suggest a move towards a more caring era under renewed multispecies landscapes.

Knowledge, its transfer, production, and utilization, lie at the core of STARTS. The jury thoroughly reviewed the proposals with these aspects in mind, including the processes of obtaining, processing, and analyzing information to define policies in relation to the ecologies of knowledge. During the jury deliberations, the artists' drives and motivations to understand the processes behind knowledge production became apparent. Artists in this edition were particularly concerned with aligning their creative processes with sustainable and ethical goals. The innovative input demonstrated the ethical sensibility characteristic of their practice. The methodologies employed by the artists are reflective of practices observed in the field of art, science, and technology over the past decades. These methodologies include accuracy in facts, functionality, investment in the medium, interest in the materiality and its implications, process-oriented approaches, fieldwork orientation, collective authorship, and community-oriented work. If STARTS is committed to cultural and societal innovation, it should respond to these premises and intervene purposefully. All the projects awarded this year embody these principles, proposing improved ways to address the present and to envision sustainable futures while considering the diversity of scales, and different contexts and locations. The responsible and ethical response to these circumstances has been remarkably summarized in this year's awards.

The STARTS Prize is annually awarded in two categories: artistic exploration and innovative collaborations between disciplines or communities. The latter category emphasizes the interaction between artists and engineering, natural sciences, or social sciences. During the jury meeting, it became evident that the hybrid nature of the proposals expands the meaning of "collaboration." Collaboration has been a term challenged by the practice of art and science. Artists spend time in laboratories, bringing scientific and technical input into their studios, and engaging in unconventional propositions and experiments. This is evident in the project awarded with the Grand Prize for Artistic Exploration: Alexandra Daisy Ginsberg's *Pollinator Pathmaker* is an interspecies artwork that responds to the ecological damage caused by humans. Through art, it fosters empathy and agency in our relationship with other species,

particularly pollinators, aiming to provoke a caring response. This unique artwork contributes to a more diverse and comprehensive understanding of our environment as an ecology of knowledge.

The Grand Prize for Innovative Collaboration aims to emphasize the importance of cross-sectorial and trans-disciplinary collaborations. Photographer and artist Richard Mosse embarked on a long-term project in the Amazon rainforest, driven by concerns about climate change and the future of the planet. In *Broken Spectre* Mosse developed a series of technologies, including multispectral cameras, ultraviolet botanical studies, and heat-sensitive analogue films affected by the conditions of fires and burning in the forest. These technologies, along with GIS imaging technology for aerial maps, were developed with the support of scientists and technologists. However, it is crucial to recognize the trust and involvement gained from the Hutakara Yanomami people and other communities fighting for the survival of their habitats.

Artists have long collaborated with scientists and technologists. Collaboration takes various forms, and one of its purposes is to bring urgency into action, which can only be visualized and made tangible through art. The field of art and science has shown the benefits of bypassing conventional conventions for innovation. In STARTS, arts merge with science, becoming part of a symbiotic medium. The jury awarded the innovative appeal where a collaboration between art and science takes place.

STARTS Prize'23
Grand Prize
Innovative Collaboration

Awarded for innovative collaboration between industry or technology and the arts (and the cultural and creative sectors in general) that opens new pathways for innovation.

Broken Spectre
Richard Moss

The deforestation of the Amazon is the global symbol of 21st century of the erasure of ecosystems and its seemingly ever increasing speed—a bleak indication of the human-made roots for the world failing to fulfil the Paris Agreement by limiting global warming to below 1.5 °C. While this is common knowledge today, there is no common action or change taking place. What is needed to save the Amazon and to save the world? More research? More data? More reports? More warnings? What do we as a global collective need to see to implement change? We all feel the need for a new way of seeing, viewing, and then acting upon environmental catastrophes: *Broken Spectre* offers an opportunity for each and everyone to see with refreshed eyes, and to understand with perspectives shifted and with novel layers of previously hidden dimensions of the Amazon deforestation. Richard Mosse's creation is as much an artwork as a technological masterpiece, almost like a film. He calls it a "dreamlike immersive video artwork … using powerful scientific technologies."

The jury sees *Broken Spectre* as a role model for the societal potential of unforeseen collaborations between art and science. It raises the relevance of art and of science into a dimension that could not be reached by either art or science alone.

Mosse's work is highly innovative in many ways: using the world's first multispectral camera for Geographic Information Systems (GIS) to shoot using S35mm B&W infrared film, using x2 anamorphic lenses, films that no film lab would process. He created a film lab in the process of making *Broken Spectre,* and he broke the boundaries of disciplines and technologies to show the breakdown of the Amazon and our global ecosystem. Finally he worked with photographic technologies based on the European Space Agency's Sentinel 2 multispectral remote sensing program.

All these innovative collaborations facilitate the communication of a new experience, a novel force that touches the viewers' minds and senses, conveying knowledge and emotion—a compelling revelation of the "extractive violence" as Mosse states. The jury sees *Broken Spectre* as an innovative collaboration not just of art and technology, but a collaboration of innovators that push the boundaries and home turf of their various disciplines to show the world something new and previously unseen. It also made us rethink the purpose of collaboration by actively involving citizens and indigenous communities to participate in the capture and production of this evidence together with the artists. *Broken Spectre* is a must-see and will hopefully inspire others to not just experiment with technologies, but to shift the ways of thinking about them, to activate in novel and daring ways for a greater global good.

Awarded for artistic exploration and art works where appropriation by the arts has a strong potential to influence or alter the use, deployment, or perception of technology.

Pollinator Pathmaker
Alexandra Daisy Ginsberg

Pollinator Pathmaker, a living plant sculpture designed to serve the natural world and the cause of ecological preservation, sets a benchmark in the realm of environmental art and biodiversity preservation. In its essence it is a remarkable piece of environmental art and conservation that holds the well-being of endangered pollinating insects above human aesthetics. It represents an innovative paradigm where art exists for the sake of these living organisms. The *Pollinator Pathmaker* creates a network of Edition Gardens, each uniquely designed to suit the needs of local pollinating species. These gardens have been carefully brought to life using sophisticated algorithmic tools and expert insights. This project invites humans to shift their perspective and view the garden through the eyes of these at-risk pollinators. It's an innovative marriage of artistic creativity with scientific understanding that promotes ecological awareness. Expanding its roots from the UK to Berlin, *Pollinator Pathmaker* underscores its commitment to international collaboration and regional environmental sustainability. At the heart of the project is a custom-built algorithmic tool that draws on a curated plant database. The tool, working with horticulturalists and pollinator experts, uses unique Plant Palettes to select locally appropriate plants beneficial to pollinators. These Palettes cater to the specific needs of the pollinators in each region, enhancing habitats for bees, moths, ants, wasps, and beetles, and providing spaces tailored to their distinct pollinating styles.

The outcomes of this groundbreaking blend of art, science, and technology offer sanctuaries for pollinators, nurturing biodiversity and bolstering our ecosystem's resilience. Beyond the gardens themselves, *Pollinator Pathmaker* extends its reach online. This platform empowers anyone to harness the power of its algorithm and design their own pollinator-friendly garden, encouraging wider engagement in environmental conservation.

As *Pollinator Pathmaker* continues to blossom, it serves as a vivid illustration of the crucial role of innovative exploration at the intersection of art, ecology, and technology can play in tackling key ecological challenges. We eagerly anticipate more "artworks for pollinators," enhancing habitats and inspiring global environmental consciousness.

Between the Lines
Sarah Selby

The nation-state concept of regulated immigration is executed through the border regime of individual states. Increasingly, artificial intelligence and automated decision-making algorithms are used to quantify human experience, transforming individuals into statistical risk ratings. *Between the Lines* takes advantage of these very technologies to hold a mirror up to the border regime and ultimately to political decision-makers. The idea of transforming the testimonies and experiences of individuals affected by the border regime into binary data to be injected into pens for border regime officials in the form of synthetic DNA mixed with writing ink is ingenious: The purpose of the concrete use of technology is deciphered by the use of this very technology. At the same time, this is intended to trigger a process of reflection among the actors of the border regime and, in the best case, among the political decision-makers. In the case of the use of the pens by the officials of the border regime in their work, the personal experiences of those affected in the past become part of the bureaucratic system. The longer this system works with and through the addressed technology, the more it spreads the experiences of its affected persons. All this is based on the latest technology in data storage, the "DNA Digital Data Storage."

Child of Now
Robert Walton, Julianne Pierce, Claire G. Coleman, University of Melbourne, Arts Centre Melbourne, Phoria

What will we pass on to the next generation? For those of us living in the present, it is crucial to have a future-oriented mindset that considers those who will live in the next era. The *Child of Now* project has the potential to bring about a significant social impact by addressing global challenges

STARTS Prize'23
Jury Statement

based on unique linguistic and environmental history, starting from the Australian experience with a possibility for further regional development. Referring to the concept of "everywhen" and collaborating with the First Nations and author Claire G. Coleman for creating the storytelling, the artists built an immersive experience. Through the use of the volumetric capture system, the "digital holograms" created can be experienced in a VR environment. In this way, the project enables people to know the past and see the future through an installation, providing an important opportunity for individuals to think about their personal situation.

CLIMAVORE
Cooking Sections

How to eat as humans change climates? Cooking Sections' project *CLIMAVORE,* conceived by Daniel Fernández Pascual and Alon Schwabe, does not merely intersect the realms of art, culinary practices, and environmental action but transcends them, redefining our societal understanding and interaction with our food and climate.

The *CLIMAVORE* project responds dynamically to anthropogenic climatic events and landscape modifications, challenging large-scale agribusiness, and exposing the geopolitical implications behind climate alterations in an era where anthropogenic impact on food and the environment is increasingly pressing. It proposes a forward-thinking interpretation of food production and consumption, responsive to the evolving climatic phenomena. It magnifies the detrimental effects of carnivorous consumption on our planet and presents an opportunity to shift towards sustainable eating habits and environmental consciousness in food preparation and consumption. Cooking Sections has managed to create a distinctive art form, by instigating a conscious discourse on how our eating habits affect the climate and by making visible the potential of art as a catalytic tool for ecological and social change. By proposing the concept of "devouring" as a response to the anthropogenic impacts on landscapes, it illustrates how food itself can provide spatial and infrastructural solutions to climate alterations. This project encourages a flexible eating culture, adaptive to current environmental conditions, whether that be shifting to drought-resistant crops in times of water scarcity or relying on filter feeders in polluted or acidified waters. The influence of this project is far-reaching, impacting UK and European cultural

institutions and beyond. The approach of Cooking Sections—a blend of art, cuisine, and ecology—is not just a work of art; it is a statement, a call to action, a new way of life.

Hashd0x | Proof of War
Egor Kraft

While violent armed conflicts are documented in the daily news, the wounds, injuries, fears, and terror often lack documentation. And even more: in the age of disinformation and information warfare a novel kind of documentation and proof is needed: an instant and spoof-proof on-chain evidence capture and forensics tools through the registration of metadata and content hashing involving decentralized storage networks: *Hashd0x.* The collaboration of artists, experts in software development, hardware based projects development, and academic research in the fields of computer and social sciences, game theory, critical design, and art produced a precious coin with two, inseparable sides: first, a software for digital watermarks and proof, and secondly an art installation of 3D rendering representation of one of the houses in the tragically infamous town of Bucha. *Proof of War:* let's hash it as proof of hope for justice and peace in Europe.

Labyrinth Psychotica—The Anoiksis Experiment by Roomforthoughts
Jennifer Kanary

Jennifer Kanary's work aims to educate people who are involved with psychosis in a variety of contexts. Her work makes psychosis tangible for so-called neurotypical people in order to change our understanding of psychosis. It is about better understanding what it means to be another person. This can benefit psychiatrists, family members, or even students, who can relate much better to affected individuals because of this innovative approach. After all, according to studies, one in thirteen people is affected by psychosis or psychotic experiences. The initial inspiration for her work was a tragic event. Her sister-in-law, who suffered from schizophrenia, committed suicide in a state of psychosis. Only afterwards did she realize that she did not understand what her sister-in-law had been going through. Therefore, she began to develop a psychosis simulation using the means of technology and art. In doing so, Kanary used a radical artistic research theory method and a new VR psychosis simulation experience. It is a mixed

reality VR psychosis simulation. It can simulate more than 42 subjective psychosis experiences. By creating space for psychosis through the means of art, she aims to prevent precisely these kinds of psychoses through early recognition. Thus, ICT is not only used to make it more comprehensible, but also to build empathy, with a view to creating a healthier and more tolerant society.

MetaPhase: a contrapuntal dialogue between a pianist and her avatar in the metaverse
Giusy Caruso, LWT3

What kind of new possibilities will technological advancements bring to our music experiences? *MetaPhase* invites us to encounter the music performance in a new world where humans and avatars harmonize in both real and virtual space. What is noteworthy about this project is that the performers' movements and gestures are captured with high accuracy by a motion tracking system and that they are embodied on the screen in the form of digital avatar. Thus, the public can savor every detail of the relationship between gesture and sound. Along with that, the application of such capturing technologies made it possible to collect bio-metadata for use in expression and in various research directions. This is one of the fantastic projects that impressed the jury with its remarkable artistic approach and accomplished innovative exploration.

Sensing for Justice—SensJus
Anna Berti Suman

The rule of law must prove itself in the enforcement of justice. This is especially true when parties with very different financial means clash in a legal dispute. In reality, however, it is often impossible for communities to enforce damages caused by corporations, such as environmental damage, because the burden of proof is already prohibitive for them. *Sensing for Justice—SensJus* starts exactly here and wants to initiate an effective example of citizen participation through research in a very comprehensive sense, including creative and artistic approaches. For good reason, the poorest regions of southern Italy, which are at the same time affected by massive environmental damage due to raw material extraction, were chosen as the focus.

Remarkable is the exploration and research carried out together with the communities and practitioners, which through a special empathy mediated by performative, visual, and narrative approaches, come very close to the ideas and interests of the citizens. It is striking how this project uses creativity and research creation as forms of caring and empathy toward the research subject. Ultimately, this work is about nothing less than access to justice, particularly in the area of environmental law, which is so important, and thus a central concern of the EU Charter of Fundamental Rights.

Server Farm
James Bridle

Server Farm represents a new paradigm for our Technosphere that marries technology and sustainability in an unprecedented and radical way. The project's cross-disciplinary nature indicates a pioneering leap into a future where biology, agronomy, and artistic practice merge, crafting a world where nature's intelligent design becomes a framework for sustainable and regenerative computational systems. The *Server Farm* project is a testament to the paradigm shift that is vital for our survival in this era of global warming, environmental devastation, and extractivist digital capitalism. By replacing contemporary computation components with biological systems, *Server Farm* provides a compelling model for the potential of decentralized, rooted, and regenerative technological infrastructures. This initiative utilizes the potential of DNA encoding, mycelial networks, carbon sequestration, and permaculture processing, to put forward a cutting-edge vision that can completely transform the current toxic technological infrastructures. It is a project of profound ecological consciousness, brilliantly illustrating that technological advancement need not be at the expense of the environment, by challenging conventional industrial processes, offering an environmentally conscious path forward in which technology plays a significant role in repairing the biosphere, and improving our relationships with the more-than-human world. Bridle's *Server Farm* is more than a concept; it is a strong, applicable, and necessary utopia that signifies the importance of interplay between technological innovation and

environmental sustainability. It is a call to action for us to start thinking and acting differently in our relationship with technology and the environment.

Turba Tol Hol-Hol Tol

Awareness of the challenges posed by climate change, and the various approaches being taken to address it, is increasing around the world. What we appreciated in the *Turba Tol Hol-Hol Tol* project is its orientation towards peatlands and the inter-disciplinary character of their investigation. It is essential to address the issue of environmental conservation not only by developing something entirely new, but also by utilizing the valuable resources and knowledge that already exist, by addressing the local population, like the indigenous Selk'nam people of Patagonia. Thus, the project also addresses social issues and the rights of indigenous people. By highlighting this project, we hope that the world will gain a better understanding of the importance of the wetlands and the crucial role they play in regulating our environment and offsetting the challenges of climate change.

VFRAME: Computer Vision for OSINT/OSI Research

Adam Harvey, Josh Evans, Jules LaPlace

Human rights and conflict zone monitoring is a domain of research in itself—and even one of commercial industries. To establish monitoring of conflicts beyond the bias of industry and policy interests, *VFRAME* pioneers an artistic approach to 3D-photogrammetry, 3D-rendering, and 3D-printing, to generate synthetic data for training neural networks. With 3D-artistry monitoring software can be trained to be unbiased on unlimited data—and then it can monitor conflicts in a less biased or even an unbiased way. Art for Peace is a long-standing mission of creators of all times. *VFRAME* now re-frames the use of art, software, and reality to create a computer vision model to monitor harsh conflict realities. In 2022 *VFRAME* helped detect over 1,000 videos in the Syrian Archive that contained the RBK-250 cluster munition bomb. Artist-driven research on conflicts, using software and 3D printing, creates novel chances for peace in a world, where the digital and real dimensions of war (e)merge more and more.

Pollinator Pathmaker
Alexandra Daisy Ginsberg

Pollinator Pathmaker is an artwork for pollinators, planted and cared for by humans. Created by Alexandra Daisy Ginsberg in response to human-made ecological damage, the work is a one-of-a-kind experiment in interspecies art.

Bees, butterflies, moths, wasps, beetles, and other pollinators are essential for many plants to reproduce and our ecosystems to flourish. But human-made habitat loss, pesticides, invasive species, and climate change are triggering a terrifying decline in their populations. In response, Ginsberg devised an algorithmic tool that designs planting for pollinators' tastes, not human taste. Working with horticulturalists, leading pollinator experts, and an AI scientist, Ginsberg created this tool to design with empathy for other species. The result is an unlimited edition of algorithmically-generated living artworks.

If pollinators designed gardens, what would humans see?

Insect pollinators experience the world differently from humans. They see colors differently from us, forage in different ways, and emerge in different seasons to each other. As a result, a garden designed for them may look quite different from a garden created for us.

Pollinator Pathmaker in Human Vision, 2023. © Alexandra Daisy Ginsberg

STARTS Prize'23
Grand Prize—Artistic Exploration

Many plants need pollinators to help them reproduce, so they have evolved colors, patterns, shapes, scents, and delicious nectar to lure go-betweens to their pollen and transport it to other flowers of the same type. Co-evolution means that pollinators have evolved to suit the anatomy and seasons of specific flowers, and flowers have evolved to suit features of specific pollinators.

Pollinator species also have different foraging styles. Beetles explore patches more randomly, while bees and some other insects remember the locations of the flowers they visit, zapping along the most efficient flight paths, or "traplines." Since a bee may visit 10,000 flowers in a day, finding the fastest route between them is essential.

The loss of a single species of pollinator can mean the end of a plant species. Given all the many ways that plants and their pollinators co-exist, creating planting that maximizes pollinator diversity is not only vital, it's also a complex challenge.

To encode a human emotion like empathy into an algorithm, Ginsberg defined empathy as designing planting that supports as many pollinator species as possible. The *Pollinator Pathmaker* algorithm

Pollinator Pathmaker in Pollinator Vision, 2023. © Alexandra Daisy Ginsberg

Pollinator Pathmaker Serpentine Edition, 2022.
Courtesy by the artist © Alexandra Daisy Ginsberg

Pollinator Pathmaker DIY Edition Roche School. © Roche

The *Pollinator Pathmaker* online tool in Late Spring. © Alexandra Daisy Ginsberg

STARTS Prize'23
Grand Prize—Artistic Exploration

selects and arranges plants to suit the different preferences of their different visitors. Since the algorithm is made by humans, it can't completely remove human biases such as taste. But an algorithm can help to dull the effect of these choices and design for other species, rather than us.

The algorithm chooses plants from regional "Plant Palettes," developed by the artist with horticulturalists, pollinator experts, and by using published research and guides to pollinator-friendly plants. *Pollinator Pathmaker* is based on a model of generosity: each commission of an international Edition includes curating a new regional Plant Palette that is added to use on pollinator.art. The public can use the platform to generate their own DIY Editions of *Pollinator Pathmaker* for free; by inputting where their garden is, how big it is, and its soil and light conditions, they can play with the algorithm's empathy tools and create a unique planting design of their own. Gardens are not isolated spaces and here are reframed as interconnected networks across living landscapes.

Ginsberg's aim is to create the world's largest climate-positive artwork; this ambition relies on collaboration. Transforming us from consumers to caretakers of art, together, we can use art to create agency in this time of ecological crisis.

The first two *Pollinator Pathmaker* Editions opened in 2022; a 55m permanent installation at the Eden Project, Cornwall, and eleven meandering beds over 250m in Kensington Gardens, London, com-

Pollinator Pathmaker Eden Project Edition photographed in July 2022. © Royston Hunt

missioned by the Serpentine. The latest edition commisioned by LAS Art Foundation has been planted in the forecourt of MfN in Berlin, Germany.

Artist: Alexandra Daisy Ginsberg
Algorithm developer: Dr Przemek Witaszczyk
Designer and Researcher: Iman Datoo
Horticulture: Colin Skelly
Producers: Hannah Andrews, Ruby Dixon
Studio manager: Freire Barnes

Originally commissioned by the Eden Project and funded by Garfield Weston Foundation.
Additional founding supporters: Gaia Art Foundation
Collaborators: Google Arts & Culture.
The International Edition Founding Commissioners are LAS Art Foundation.

https://u.aec.at/AE7FEBDE

Alexandra Daisy Ginsberg (GB) is a multidisciplinary artist examining our fraught relationships with nature and technology. Her work investigates the human impulse to "better" the world, exploring artificial intelligence, synthetic biology, conservation, biodiversity, and evolution. Ginsberg won the London Design Medal for Emerging Talent (2012), the Dezeen Changemaker Award (2019), and Prix Ars Electronica Honorary Mention, Interactive Art for Machine Auguries (2020). She has exhibited internationally, including at MoMA New York, the Museum of Contemporary Art, Tokyo, the Centre Pompidou, the Royal Academy, and the Toledo Museum of Art. In 2022, Ginsberg launched her climate-positive artwork *Pollinator Pathmaker,* with commissions at the Eden Project (Cornwall) and Serpentine (London). In 2023, Ginsberg launched the first international Edition with LAS Art Foundation (Berlin).

Broken Spectre

Richard Mosse

Broken Spectre (2022) is a disquieting portrait of willful environmental catastrophe along the Trans-Amazonian Highway told through a kaleidoscope of scientific, cultural, historic, socio-political, activist, and anthropological filters. This dream-like immersive video forms an extensive record of widespread yet unseen fronts of deforestation and industrialized ecocide in the Amazon Basin, unveiled using a range of powerful scientific imaging technologies, at the tipping point of this crucial ecosystem's erasure.

Through abrupt leaps in scale and medium, the film reveals unsustainable processes of extractive violence: illegal logging, mass burning, wildcat goldmining, the theft of Indigenous lands, species extinction, flooding and damming of rivers, and the forest's colonization for encroaching monoculture plantations and vast intensive cattle farms.

For decades, scientists have harnessed advanced forms of remote sensing photography to understand the forest's degradation, model tipping points, and reveal impending environmental catastrophe underway in the Amazon. *Broken Spectre* is an attempt to dial in on these opaque subjects using similar scientific imaging technologies, aggravated media that carry some agency in the biome's destruction, as they are also used as tools of resource extraction by mining and agribusiness interests.

As in past projects, the media Mosse uses to tell these stories is encoded with complex, invisible layers of the systems involved, on international, governmental, and local levels. He employs them to make a dystopian Western, because the fraught iconography of the Western film carries uncanny echoes of the reality encountered in the field—a natural paradise and its Indigenous populations being colonized by pioneer settlers with the righteous zeal of Manifest Destiny and a distinct form of cowboy culture.

STARTS Prize'23
Grand Prize—Innovative Collaboration

The film was made with an inclusive and collaborative approach, including key scenes made in collaboration with the Yanomami and Munduruku communities, the ATL (Acampamento Terra Livre) Conference, and additional guidance and collaboration from the Suruí, Kaingang, and other Indigenous communities.

Three separate media were employed to capture aspects of the Amazon rainforest, each at a particular scale. To capture the systematic organization and massive scale of the burning forest, an aerial multispectral camera was invented in collaboration with a spectroscopy and machine vision company. This is the world's first multispectral camera for Geographic Information Systems (GIS) purposes that can capture video footage at 24 frames per second or more. This camera involves a series of beam splitters to refract the light towards four separate monochrome digital sensors, each of which with its own filter, passing a very specific narrowband (10 nanometers) of light at certain points of the electromagnetic spectrum. Attached to the nose of a helicopter and flown over sites of environmental crimes, these scenes indexically reveal health or degradation to the foliage of the rainforest's biomass, doing so in disarmingly aesthetic and expressive registers.

For the close-up scenes shot on the floor of the cloud forest at night using ultraviolet lights, the film borrows scientific techniques of UV microscopy to produce reflective and fluorescent ultraviolet macro timelapse footage of the forest's biome. Each frame took an average of three seconds to capture, using probe lenses to carefully examine only a couple of square centimeters of the forest biome.

At the scale of the human figure, in scenes depicting the processes of environmental crimes, analogue motion picture S35mm B&W infrared film was shot using x2 anamorphic lenses. Aside from scenes in the seminal 1964 film *Soy Cuba,* this is perhaps the only use of infrared film in the history of cinema. The film registers infrared at or above 720nm, so its glowing white highlights depict intense amounts of chlorophyll in the rainforest, which reflects infrared light. Like the other media involved, this approach is able to represent these fronts of deforestation and environmental crimes on both indexical (scientific) and aesthetic registers. Mosse regards this overlap as a fertile space for a film about environmental destruction, because the camera can measure the extent of forest degradation and dieback.

Director, producer: Richard Mosse
Cinematographer, editor: Trevor Tweeten
Composer, sound design: Ben Frost

https://u.aec.at/B49EF102

STARTS Prize'23
Grand Prize—Innovative Collaboration
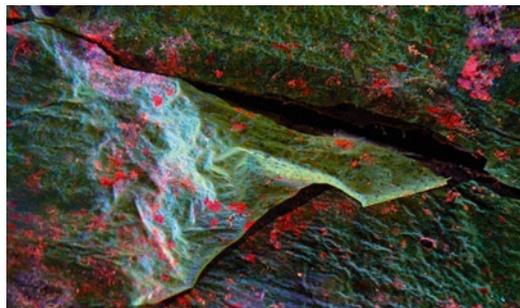
Richard Mosse (*1980, Ireland; based in New York) has consistently documented historically significant subjects using photographic media that foreground elements of these narratives. Mosse seeks to heighten and extend the language of documentary photography to draw attention to overlooked yet urgent conflicts, often with a critical emphasis on the limitations of photojournalism, an activist's sense of purpose, and a belief in the power of aesthetics to communicate, creating immersive and groundbreaking new forms in documentary photography and the moving image. He was awarded the Prix Pictet (2017), the Deutsche Börse Photography Prize (2014), and a Guggenheim Fellowship (2011). His work has been exhibited at the Akademie der Künste, Barbican Art Gallery, Hamburger Kunsthalle, Hayward Gallery, Louisiana Museum, National Gallery of Art, National Gallery of Victoria, SFMOMA, and he represented Ireland at the 55th Venice Biennale.

Between the Lines

Sarah Selby

Between the Lines is an innovative project that aims to weave the personal experiences of individuals subjected to the UK border regime back into the systems that govern them. By combining traditional administrative tools of pen and paper with cutting-edge DNA data storage technology, the project infiltrates the bureaucratic systems of the UK Border Regime.

Today's border regime is a techno political system that stretches beyond geographic boundaries, increasingly deploying artificial intelligence and automated decision-making algorithms on a global scale. These systems rely on the quantification of human experiences, reducing them to mathematical formulas and transforming individuals into statistical risk ratings.

During the interventions, individuals subjected to the UK border regime record their testimonies and experiences, which are then converted into binary data and encoded into synthetic DNA. The synthetic DNA is mixed with writing ink and injected into pens, which are then distributed to the frontline administrative workers of the UK border regime.

As the pens are used, the synthetic DNA transfers to the paper, embedding the lived experiences of those impacted back into the bureaucratic system that governs them and subsequently spreading throughout the administrative systems of the UK border regime.

The project seeks to highlight the human experiences behind the numbers and statistics, raising public awareness of the dehumanizing nature of the border regime. Through its creative interventions, the project aims to create a sense of shared responsibility towards upholding the rights and dignity of all individuals impacted by the border regime and promote a more compassionate and inclusive understanding of immigration policies.

Artist: Sarah Selby
Collaborators:
Cari Hyde-Vaamonde
Beyond Detention
Twist Bioscience

Commissioners:
Science Gallery London in collaboration with Future Everything as part of 2023 Season: "AI: Who's Looking After Me?" exhibition.

https://u.aec.at/1E34BA63

Sarah Selby (GB) is a visual artist and academic who uses software, programming, and emerging technologies to explore digital culture, posing critical questions about its societal, ethical, and environmental ramifications. Her work concentrates on human-machine assemblages, examining how different technologies mediate our behavior, interactions, and experiences.

©Sarah Selby

©Phil Wilson

©Michael Sides

©Michael Sides

©Michael Sides

©Sarah Selby
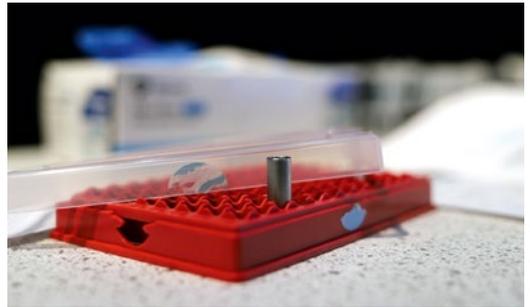
©Michael Sides

©Phil Wilson

©Michael Sides

©Phil Wilson

Child of Now

Robert Walton, Julianne Pierce, Claire G. Coleman, University of Melbourne, Arts Centre Melbourne, Phoria

Gregory Lorenzutti

Child of Now is a mixed-reality artwork that calls on citizens to co-create, shape, and nurture an indigenized, sustainable, and fairer vision of the next century for an imagined child born in 2023.

Experienced as an immersive tactile audio-visual installation, *Child of Now* invites visitors to enter the Aboriginal concept of the 'everywhen,' a place where all time is present, to observe the last 10,000 years of life on the Birrarung river and acknowledge the resilience of First Nations peoples who survived climate emergencies and settler invasion. The experience continues by inviting visitors to imagine all the children being born in the present moment, now. It then accelerates time to the year in the future that the *Child of Now* is the visitor's age. In this moment the artwork asks the visitor to imagine themselves as, and to become, the *Child of Now* in the future. It creates a portrait of their performance as audio and 'digital hologram' (volumetric video) recordings. Each holographic portrait of the visitor as the *Child of Now* is replayed in the final section of the experience: a VR archive set beneath the river where all the Children of Now are located in age order in the stream of time.

Collectively, visitors crowd-source the 'future archive' of the *Child of Now's* life, populating each day from birth to death, with a body in the form of diverse holographic portraits. The novel approach to volumetric video data, as well as other biodata, informs a symbiotic collective portrait of the current population in the process of imagining the lives of those who inherit our society. The project aspires to democratize and increase participation in future thinking by fostering accessible new tools at the intersection of art, science, and demographics.

A first stage development of *Child of Now* was launched in Melbourne in February 2022 with ongoing development through 2023 and 2024.

Child of Now by Robert Walton, Julianne Pierce, Claire G. Coleman
Supported by School of Computing and Information Systems and the Faculty of Engineering and Information Technology at University of Melbourne working in partnership with Arts Centre Melbourne. With additional support from Phoria.

https://u.aec.at/ADD58534

Robert Walton (AU) is an artist and director whose work includes theater, choreography, installation, writing, and interactive art. At the University of Melbourne he leads the creation of performance artworks that explore the expressive potential of ancient and emerging technologies in the Faculty of Fine Arts and Music. **Julianne Pierce** (AU) has extensive leadership experience as a Creative Producer, Executive Director, Curator and Arts Manager in the Australian and international arts and culture sector. She is a founding member of the influential cyberfeminist digital artist group VNS Matrix, who formed in 1991 and continue to have their work included in significant exhibitions and publications worldwide. **Claire G. Coleman** (AU) is a Noongar woman whose family have belonged to the south coast of Western Australia since long before history started being recorded. She writes fiction, essays, poetry, and art criticism while either living in Naarm (Melbourne) or on the road.

CLIMAVORE
Cooking Sections

CLIMAVORE explores how to eat as humans change climates (UNSDG 13). As spring, summer, autumn, and winter are increasingly fuzzy, it focuses on new seasons of polluted oceans, soil exhaustion, and drought. *CLIMAVORE* protects and improves soil and water environments, advancing citizen's right to food through regenerative food systems that cultivate habitats (UNSDG 11). Working with agronomists and engineers, *CLIMAVORE* has developed adaptive forms of eating, shifting to drought-resistant crops in water scarcity or filter feeders in polluted waters by fish farms.

In Scotland, the *CLIMAVORE* Station in Skye and Raasay works to transition from salmon farming to alternative aquacultures through new knowledge, establishing an internal market of coastal products. A new platform was built as an intertidal table: at high tide its bivalves and seaweeds oxygenated seawater; at low tide the table emerged above the sea as a dining table for humans. Over breakfast, lunch, or dinner (according to the tides), the structure was activated with residents, politicians, and researchers, re-connecting people with the coast while tasting ingredients that filter seawater by breathing (UNSDG 14). Collaborations with teachers, chefs, marine biologists, and stonemasons continue through cooking apprenticeships at the local high school and partner restaurants, a pilot for community-led intertidal seaweed and bivalve sea allotments, and a fabrication facility to make tiles out of oyster and mussel waste shells collected from restaurants (UNSDG 12).

CLIMAVORE runs similar replicable and scalable prototypes through artistic programs in Italy addressing drought, in Sweden addressing impacts of hydropower dams on wild salmon, in Istanbul coping with wetland draining, in the Alps facing exhausted monoculture prairies, and in Lake Erie addressing eutrophication. In parallel, it has also built an international network of art and cultural institutions that are adapting their menus to the climate crisis.

Cooking Sections: Daniel Fernández Pascual and Alon Schwabe
Studio team: Rosa Whiteley, Remi Kuforiji
Director of Care: Dani Burrows
Director, CLIMAVORE Station Skye & Raasay: Shona Cameron
Director, Becoming CLIMAVORE: Kelly Tsipni-Kolaza

https://u.aec.at/2C6F6574

Cooking Sections, *CLIMAVORE: On Tidal Zones.* View of the intertidal table installation. Isles of Skye and Raasay. Photo: Cooking Sections

Cooking Sections, *CLIMAVORE: On Tidal Zones.* View of the intertidal table installation. Isles of Skye and Raasay. Photo: Colin Hattersley

STARTS Prize'23
Honorary Mention

Cooking Sections, *Salmon: A Red Herring.*
Installation at Tate Britain, London, 2021.
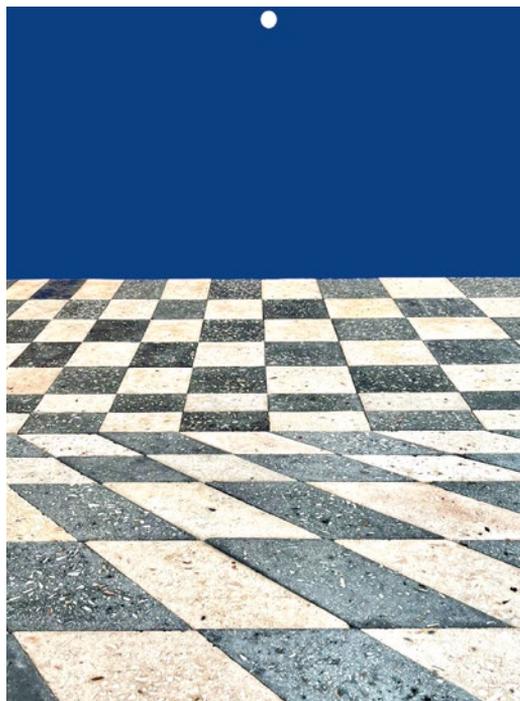
Cooking Sections, *From the Shores that Found their Sea.*
Tile installation made from oyster and mussel shell
waste collected from partner restaurants in Skye and
Raasay. Royal Botanic Garden Edinburgh, 2022.

Cooking Sections, *Salmon: A Red Herring.* Installation at
Tate Britain, London, 2021.

Cooking Sections, *Oyster Readings.* View of the
performative installation. Royal Botanic Garden
Edinburgh, 2022.

Cooking Sections (INT) examines the systems that organize the world through food. Using site-responsive installation, performance and video, they explore the overlapping boundaries between art, architecture, ecology, and geopolitics. Established in London in 2013 by Daniel Fernández Pascual and Alon Schwabe, their practice uses food as a tool to observe landscapes in transformation. Their work has been exhibited internationally and Cooking Sections was nominated for the Turner Prize in 2021. They are Senior Research Fellows and Principal Investigators at CLIMAVORE x Jameel, Royal College of Art.

Hashd0x | Proof of War

Egor Kraft

Hashd0x | Proof of War came about as a series of technical and tactical proposals at the intersection of human rights and the arts. Aimed to address common tactics of misinformation and propaganda at the core of ongoing warfare, this is an urgent response to the brutal acts of war on Ukrainian soil. The premise is that the notion of trust in publishing has been significantly challenged by ongoing dynamics across the so-called information technologies leading the forefront of today's industrialization. In times of post-truth, accelerated through hyper logistics of data as well as generative Ai-driven synthetic forms of knowledge production, to protect political, social, and economic health within societies we require the tools that can compute truth (not only fiction).

The central piece—*hashd0x,* is a series of tactical open source soft- & hard-ware prototypes, designed to combat misinformation in photographic and video content. The software tools revolve around issuance and registration of instant and tamper-proof *hashmarks,* blockchain native alternatives to watermarks and a proposed fix for our disturbed information ecology. Comprised of a series of smart contracts, the protocol functions across web dashboards, mobile apps, and a highly programmable hardware camera compatible with telephoto optics and drones. Striving towards a feature-rich tool, it is meant to help distinguish facts from fiction, verify provenance, build and engage with a trust network of citizen journalism, and augment open-source investigation practices. Another work in the series is *Decentralised Embargo,* a 4-GPU computing-behemoth running on the electricity supplied by a German energy provider, Gazprom Germania , which is known for burning gas supplied from Russia to create and sell electricity. The server mines Ethereum coins, sending them directly to the official cryptocurrency wallet of the Ukrainian State. Thus highlighting the hypocrisy of a central European economy, where both Russian military actions and the Ukrainian military resisting them are being funded at the same time.

Uncensorship Architecture provides an infrastructural proposal to protect journalistic data and investigative work from censorship and blocking. It uses decentralized blockchain storage infrastructures, simultaneously stored on thousands of nodes, previously banned journalistic archives become safe from censorship and IP-blocking.

https://u.aec.at/90CA0996

Born in St. Petersburg, raised in Sweden, **Egor Kraft** (RU) lives and works in Vienna and Tokyo. He was educated at Rodchenko School (RU), Arts Academy Vienna (AT), Central St. Martins (UK), Tokyo Geidai University (JP), and Strelka Institute (RU). His interdisciplinary practice is informed by media theory, computer science, critical design, film, philosophy and art. Egor has received multiple awards, such as NTAA (BE), Austrian Blockchain Award (AT), various European residencies and fellowships, as well as nominations for Lumen, Kandinsky, and other prizes. He has participated in exhibitions in private and public institutions, biennials and festivals internationally and is a lecturer at European art universities and a speaker at international conferences. In 2017, he was included in the New East 100, a list of Eastern European people and projects shaping our world today by Calvert Journal (UK).

STARTS Prize'23
Honorary Mention

Egor Kraft

Labyrinth Psychotica
The Anoiksis Experiment by Roomforthoughts
Jennifer Kanary
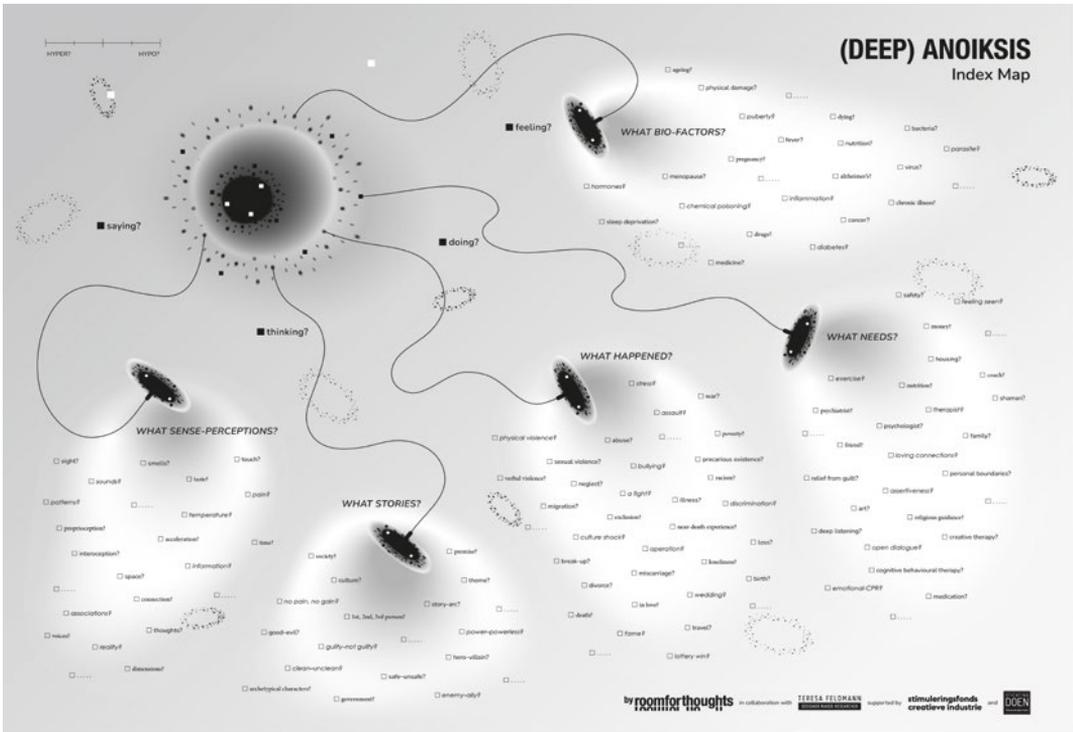
Teresa Feldman

After my artistic research PhD on psychosis simulation with art and tech, I worked on finding a pattern in the long-ignored subjective data of lived experiencers' voices. My investigation into their stories has led to a radical artistic research theory, method + new VR psychosis simulation experience to help change our understanding of psychosis. Simplicity that leads to complexity. Which, like previous versions, is educating all who deal with psychosis. The new psychosis simulation will officially be ready to launch and scale into Europe in 2023 as a complete package.

The Anoiksis VR Psychosis Experience is a manifestation of the theory and method. It is a mixed reality VR psychosis simulation that has been developed and pilot tested in the past 2 years. It takes a wearer into a safe interactive waking dream state in the mind of Dr. Green, who is in psychosis, simulating 42+ subjective experiences of psychosis in approx. 8 mins (depending on if one obeys the voices or not).

The Anoiksis Theory is radical as it places our understanding of hallucinations and delusions at the center of a spectrum of healing. The theory builds on the notion that unwellness is not born from a brain that is broken, but a brain doing what it was designed to do, to heal. A sane reaction to insane circumstances. A survival mechanism we all carry, yet, if not recognized or listened to in time, can have extreme and dire consequences. A series of animations explaining the theory were made for low threshold education in 2022/2023.

The Anoiksis Map is a method based on The Anoiksis Theory to help hold space for psychosis, as well as help prevent it through early recognition. In collaboration with students, we learned that the method can be used to hold space for all "psychiatric" conditions like depression or OCD on a spectrum of subjectivity. Ultimately meaning, if we understand psychosis, we unlock a lost key of understanding all our subjective experiences of distress.

Jennifer Kanary

https://u.aec.at/250E3317

Dr. Jennifer Kanary Nikolov(a) (NL) is a Canadian born mind-warrior based in The Netherlands. She is founder of Roomforthoughts, an art practice that is ultimately dedicated to understanding the physics of thought in relation to how we experience and construct realities that influence wellbeing. Jennifer holds an artistic research PhD in psychosis simulation with the project *Labyrinth Psychotica.* Her newest project *The Anoiksis Experience* is radically placing the understanding of the function of hallucination and delusion as central to understanding and holding space for all subjectivity of wellbeing.

MetaPhase:
a contrapuntal dialogue between a pianist and her avatar in the metaverse
Giusy Caruso, LWT3

MetaPhase is the artistic output of a cross-sector encounter between avant-garde pianist and researcher Dr. Giusy Caruso and the innovative start-up LWT3. This joint research was driven to explore the creative potential of data processing, human-machine interaction, and biotechnological applications in a XR performance to enhance performers' expressiveness and audience fruition. The core is a wearable easy-to-use prototype developed by LWT3 able to acquire bio-signals (surface electromyography sEMG). The biometric metadata collection is shared via the LWT3 data platform accessible to performers/scholars/citizens.

This first experimentation of motion tracking and VR technology on stage engages both performers and audience in a groundbreaking live music co-creation which showcases the virtual META-PHASE process: the biological cellular splitting that here refers to the pianist duplication playing with her virtual agent in a meta-ecosystem.

The pianist performs by wearing a suit with light-reflecting markers and biosensor to allow the system to track her gestures and the related muscles effort in real-time. Then, the pianist wears the Oculus Rift to enter in the meta-performance-scene developed by LWT3 with Unity platform and performs the counterpoint part of Steve Reich's *Piano Phase for two pianos* by interacting with another avatar-pianist playing the first part of the piece. This second virtual human is animated by the real pianist's expressive motion previously recorded together with the audio track on a Yamaha Disklavier piano. LWT3's wearable interfaces acquire bio-signals such as sEMG from the real pianist to modify visuals, video effects, and audio parameters.

Spectators are involved in an immersive XR performance by selecting viewpoints, viewing data in real time or in postproduction together with the pianist. This interdisciplinary collaboration between science-technology-art wants to expand the possibilities of a futuristic and phygital techno-aesthetics.

Concept and pianist (Royal Conservatoire Antwerp, IPEM – University Ghent): Dr. Giusy Caruso

LWT3 Team:
Hardware and data engineer: Dr. Paolo Belluco
Designer and VR director: Samuele Polistina
VR developer: Andrea Randone
Fashion and product designer: Luigi Sossi
With support from: Royal Conservatory of Antwerp, IPEM – University Ghent, Yamaha Music Europe

https://u.aec.at/0804E884

Dr. Giusy Caruso (BE) is a concert pianist and postdoctoral researcher focused on studying human-machine interaction (HMI) for the creation of futuristic multimedia formats and music performance analysis. Chairwoman of the CREATIE research group at the Royal Conservatoire Antwerp and affiliated researcher at IPEM-Ghent University, she is Official Music Advisor of LWT3 Society Milan. **LWT3** (IT) is an innovative company founded by Dr. Paolo Belluco (sensors, biosignals and machine learning) and designer Samuele Polistina (UX/UI, product design). With expertise in data analysis, visualization, IoT infrastructure development, and human-machine interaction solutions, LWT3 works in their Data Driven Performance Lab in Milano across three pillars: Industries workers, Sport Science, and Music and Performing Arts.

Giusy Caruso, LWT3

Sensing for Justice—SensJus

Anna Berti Suman

In 2019, a ground-breaking case was adjudicated in Texas, U.S., where fishers managed to prove corporate wrongdoings based on citizen-gathered evidence of plastic contamination perpetrated over years by the petrochemical giant, Formosa Ltd, in violation of the U.S. Clean Water Act and in the absence of proper institutional oversight. This successful case inspired us to search for similar cases also in Europe, where communities affected by corporate injustices can claim them in court based on civic evidence, gathered through their senses and/or sensor technology.

The *Sensing for Justice—SensJus* project was specifically launched to research the potential of grassroots-driven environmental monitoring as a source of evidence in environmental justice litigation, and as a tool to foster conflict mediation in Europe. A special focus was devoted to the poorest regions in the South of Italy, most affected by environmental and social inequalities, for example, the former mining areas of Sardinia, the Sulcis region, and the oil-rich valleys of Basilicata.

The research is carried out together with the communities and practitioners that are directly involved in collecting evidence, allowing their questions, imaginaries, and stakes to shape our approaches, for example through performative, visual and story-telling approaches. *SensJus* embraces "research-creation," including experimental esthetic components as an integral part of the scientific study. We implement this practice through collaboration with artists and experts in the field.

SensJus sees creativity as a mode of care for and empathy toward our research topic. An example of this is *Story of a civic sentinel,* our graphic novel informed by field-based research, that tells about the achievements but also the challenges encountered by civic sentinels facing oil pollution. The novel serves both to raise awareness and to elicit reactions from research participants.

Author: Anna Berti Suman, European Commission – Joint Research Centre (JRC), Ispra
Project mentor: Sven Schade, European Commission – Joint Research Centre (JRC), Ispra

Artistic collaborators:
Freelance illustrator: Alice Toietta
Visual storyteller: Bela Pinheiro
Performer and social theater operator: Alessia Romano

https://u.aec.at/48CEE554

STARTS Prize'23
Honorary Mention

Anna Berti Suman (IT) leads the project *Sensing for Justice* on the potential of civic monitoring as a source of evidence for environmental justice litigation and as a tool to foster conflict mediation. Previously, she ran the *Sensing the Risk* project on how civic monitoring initiatives can influence the governance of environmental risk. Anna is also a qualified environmental lawyer under the Bar of Rome, following cases related to environmental conflicts. Previously, she worked as a lawyer for Greenpeace International and for the Association of Affected People by Chevron-Texaco, Ecuador.

Server Farm
James Bridle

Server Farm is a proposal to build a computer out of, and in collaboration with, plants and other critters.

All of the component parts of contemporary computation, from information storage, retrieval, and processing, to networking, power supply and management, input/output and display, can be enacted by biological systems. In doing so, we may find ways to ask questions, and answer them, which binary digital systems are incapable of even describing.

Emerging from cross-disciplinary work in biology, agronomy, and artistic practice, *Server Farm* seeks to establish the complete circuit of information technology in fields, orchards, and gardens: an actual agricultural establishment which acquires, stores, processes, and shares data, while at the same time repairing the biosphere and more-than-human relationships.

Information technology, as presently configured, is a huge contributor to CO_2 emissions, as well as being complicit in a range of oppressive, extractive, and neo-colonial industrial processes which damage the planet, its ecosystems and denizens, and human society. Yet technology itself, in the forms of seeing, describing, and acting upon the world which it enables, remains an essential part of human thriving, and a necessary tool for addressing the damage we have already inflicted.

From encoding information in DNA to mapping algorithms with slime molds; from mycelial networks to carbon sequestration; and from heavy metal hyperaccumulators to permaculture processing; the tools and knowledges exist right now to wholly replace the toxic technological infrastructures of the present with decentralized, rooted and regenerative alternatives.

Server Farm is a vision for bringing together these diverse but cumulative realizations, and a robust proposal for grounding them in the earth. Moving from discussions and experiments with artists, scientists, and other researchers towards a fully established, working farm, it embodies and enacts the kinds of relationships with one another and the more-than-human world that are of such urgency in the present moment.

Server Farm has received previous support from the STRP Festival, Eindhoven, NL.

https://u.aec.at/A206A9EF

James Bridle (GB) is a writer, artist, and technologist. Their artworks have been commissioned by galleries and institutions and exhibited worldwide and on the internet. Their writing on literature, culture, and networks has appeared in magazines and newspapers including *WIRED,* the *Atlantic,* the *New Statesman,* the *Guardian,* and the *Financial Times.* They are the author of *New Dark Age* (2018) and *Ways of Being* (2022), and they wrote and presented *New Ways of Seeing* for BBC Radio 4 in 2019. Their work can be found at http://jamesbridle.com.

STARTS Prize'23
Honorary Mention

Turba Tol Hol-Hol Tol

Turba Tol Hol-Hol Tol

"Hol-Hol Tol" is the "heart (tol) of the peatlands (hol-hol)" in the language of the Selk'nam people, one of the first nations of Tierra del Fuego, in Patagonia. "Turba" is Spanish for "peat," so the title for the Chilean Pavilion at the 59th International Art Exhibition of La Biennale di Venezia *Turba Tol Hol-Hol Tol* is a rhythmic bi-lingual chant evoking love for peatlands. All over this increasingly hot and arid world, these wetlands are imperiled. Their conservation is intrinsically linked to the future wellbeing of humankind and, in Patagonia, to the resurgence of Selk'nam culture. Selk'nam people freely inhabited Tierra del Fuego and lived in the peat bogs of their ancestral land for 8,000 years, until the colonizers responsible for their genocide arrived. Official history insists that Selk'nam people were wiped out, but today the Selk'nam community rejects that myth, in a movement to be recognized as a living culture with its own language. The Selk'nam Cultural Foundation Hach Saye was an integral collaborator of the creative process for *Turba Tol Hol-Hol Tol,* which included a residency in Tierra del Fuego, the creation of a series of rumors, a website, a site-specific multimedia installation within the Chilean Pavilion at the Biennale, a peatland science experiment, an olfactory offering, and a book.

Aimed at bringing visibility to the peatlands of Patagonia, the pavilion allowed viewers to immerse themselves in the material and ancestral experience of the ecosystems with a multisensory installation that highlighted a more-than-human aesthetics. Motivated by real commitments to make progress on ecological action, *Turba Tol Hol-Hol Tol* was commissioned by Ximena Moreno from the Ministry of Culture, Arts and Heritage and the Chilean Ministry of Foreign Affairs, curated by Camila Marambio, assisted by cultural producer Juan Pablo Vergara, and brought together an interdisciplinary team of Chilean artists: sound artist Ariel Bustamante, art historian Carla Macchiavello, filmmaker Dominga Sotomayor, and architect Alfredo Thiermann. These artists were guided by co-curatorial conspirators Bárbara Saavedra, an ecologist specializing in biodiversity, and Selk'nam writer Hema'ny Molina, and joined creatively by: Rosario Ureta (design), Mateo Zlatar (web design), Carola del Río (web programing), Sebastián Cruz (museography), Nico Arze and Christy Gast (art direction), Benjamín Echazarreta (photography direction), Isabel Torres (voice), Constanza Güell (managing editor), Fernanda Olivares (Selk'nam guide), Nicole Püschel (climate change and biodiversity), Antonia Peón Veiga (lighting), Susanne Abel, Matthias Krebs, Jan Peters (Greifswald Mire Center), the Carmichael family, Caitlin Franzmann, Denise Milstein, Randi Nygård, Renee Rossini, Karolin Tampere, agustine zegers, Simon Daniel Tegnander Wenzel (scent), and Alessandra Dal Mos (Italian production).

https://u.aec.at/2765C782

Installation shot of the pavilion, *Turba Tol Hol-Hol Tol* at the 59th Venice Art Biennale, 2022

Benjamin Echazarreta

The Venice Agreement

Artist Ariel Bustamante Listens to the Bog, Turba Tol Residency in Karukinka, Tierra del Fuego, 2022

Installation shot of the pavilion, *Turba Tol Hol-Hol Tol* at the 59th Venice Art Biennale, 2022

Turba Tol Hol-Hol Tol was a collective project organized by the Ministry of Culture, Arts and Heritage and the Chilean Ministry of Foreign Affairs that, in this age of climate crisis, sought an experimental path toward raising awareness of and preserving peatlands. For a full list of participants please visit turbatol.org.

VFRAME: Computer Vision for OSINT/OSI Research

Adam Harvey, Josh Evans, Jules LaPlace

VFRAME is a computer vision project that develops open source image processing software and neural network models for human rights related research and conflict zone monitoring. Started in 2017 with the goal of bridging the gap between industry between commercially aligned AI and the needs of investigative research, *VFRAME* is now a pioneer in the development and application of new techniques that combine 3D-photogrammetry, 3D-rendering, and 3D-printing to generate synthetic data for training neural networks. Instead of following industry trends to scrape data from online sources, which can inherit problematic biases, *VFRAME* uses an artist-first approach that combines digital fabrication, sculpture, photography, and 3D-artistry to create a virtually unlimited source of training data. The result is powerful computer vision models that can automate the detection of illegal cluster munitions in million scale video datasets from conflict zones. Since the beginning, *VFRAME* has partnered with Mnemonic to apply this technology to their large archives. Our first successful pilot project during 2022 resulted in the detection of over 1,000 videos containing the RBK-250 cluster munition bomb in their Syrian Archive, with over 3 million videos and approximately 10 billion image frames, a task that would otherwise be impossible. Last year also marked the beginning of a new collaboration with the NGO Tech 4 Tracing to gain direct access to real munitions for 3D scanning. This important new step allows the *VFRAME* project to finally scale up development efforts to build more computer vision detection models for application to conflict zone monitoring, which are all available open-source.

https://u.aec.at/84ACC4A8

STARTS Prize'23
Honorary Mention

VFRAME / Adam Harvey, Josh Evans, Jules LaPlace
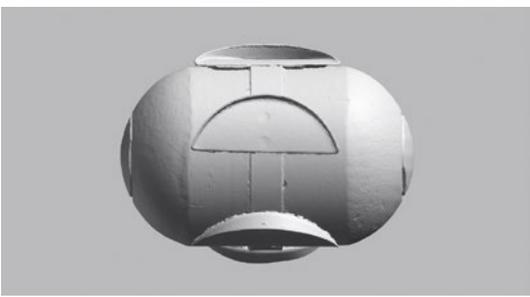
Adam Harvey (US/DE) is an artist, software engineer, and applied researcher based in Berlin, focused on computer vision, privacy, and surveillance technologies. He is a graduate of the Interactive Telecommunications Program at New York University (2010) and Pennsylvania State University (2001). Harvey's research and artwork has been featured in prominent media publications including the *New York Times, Wall Street Journal, Nature, New Yorker, Frankfurter Allgemeine Zeitung, Süddeutsche Zeitung, Washington Post, Le Monde, the Guardian, BBC, Economist,* and the *Financial Times;* and shown at internationally acclaimed institutions and events including the V&A museum (UK), Seoul Mediacity Biennale (KR), Istanbul Design Biennale (TK), Frankfurter Kunstverein (DE), Zeppelin Museum (DE), Utah Museum of Contemporary Art (US), and Kemper Museum of Contemporary Art (US). **Josh Evans** (US/DE) Experienced digital imaging technologist working with real-time and raytraced graphics pipelines, DSLR photogrammetry, 3D printing, digital asset modeling and scene reconstruction for machine learning tasks including object detection, augmented reality, and emergent computer vision applications. **Jules LaPlace** (US/DE) is a programmer who makes websites and creative interfaces. Their software has produced artworks shown at the Venice Biennale (IT) and the Centre Pompidou (FR).

ALL PLAYERS TOOL LAB.

Masatane Muto, Dentsu Lab Tokyo
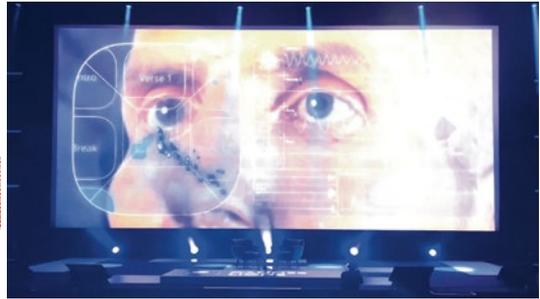
There are many people who have not been players due to their disabilities. But the idea for one person can be a powerful force to move the world forward, just like the alleged inventor of the typewriter who built it in order to communicate with a blind friend. Our challenge is to shift the social stereotype that people with disabilities cannot be players, by utilizing a technology and creativity.

Due to our mission, we launched a platform for disabilities called *ALL PLAYERS TOOL LAB.*

First, we worked with two ALS artists to develop a music instrument that utilizes the possibilities of gaze input. For ALS patients who suffer from paralysis of the limbs, operating computer applications using eye gaze is a primary tool for creative activities. However, such tools require eye movement to operate detailed buttons that are designed for normal people to operate with a mouse, making it difficult to use them in a real-time performance. Therefore, with ALS musicians, we enable live performance with the line of sight. Lastly, three tools are made: "EYE XY PAD," specialized in real-time performance, "SHOOTING PAD," solves the issue of remote performance, and "EYE MIDI PAD" focuses on integration with the Ableton Live UI.

Creative director: Naoki Tanaka, Dentsu Inc.
Art director: Yusuke Koyanagi, Dentsu Inc.
Creative technologist: Shintaro Murakami, Dentsu Inc.
Creative technologist: Keita Kuki, Dentsu Inc.
Copywriter: Tina Toda, Dentsu Inc.
Producer: Kohei Ai, Dentsu Inc.
Producer: Miyuki Fujishima, Dentsu Inc.

https://u.aec.at/2C644CA5

Masatane Muto (JP) is a content creator who has been battling with ALS since 2014. Currently he is using a fresh perspective alongside the latest eye tracking technology to collaborate with various artists and challenge music production. Utilizing an eye tracking device, he has developed a system that allows him to play DJ and VJ at the same time with just the movement of his eyes. **Dentsu Lab Tokyo** (JP) is a creative R&D organization. We brainstorm new experiences and offer solutions to social issues by interfacing enterprises, universities, institutes, and artists. Our mission is to generate the unexpected experiences created by ideas and technology, to move people's hearts, and to realize a new future.

Critical Climate Machine

Gaëtan Robillard

Critical Climate Machine is a project that quantifies and reveals the mechanisms of misinformation on global warming. The project consists of a data sculpture and a sound installation. The sculpture analyzes myths about climate change, using natural language processing. Its software monitors and debunks false arguments originating from Twitter. Throughout this process, a temperature map witnesses the thermal effects of the installation on its environment. Several dialogues circulate: false arguments confront their refutations. These voices were recorded during several workshops, in the course of which a card game specially designed for the project fostered climate literacy and debate. Later, the dialogues were reinterpreted and spatialized through a generative machine learning model conceived for musical improvisation. If, via cognitive sciences, computational logic helps to discern the truth, the sound piece explores digital mediation frameworks for the climate, opening up to deliberation. *Critical Climate Machine* acts as a counterpoint to the determinism of technical automation, while bringing forward the ethics of data processing, at the intersection of physical and informational space.

https://u.aec.at/C2AE2580

Gaëtan Robillard (FR) is an artist and a researcher based in the Greater Paris area. He produces data art and media based installations engaging with mathematical research, climatology, and cognitive sciences. His work has been exhibited in venues such as Palais de Tokyo and Ircam Centre Pompidou (Paris), Pearl Art Museum (Shanghai), Akbank Sanat (Istanbul), and ZKM | Center for Art and Media Karlsruhe. In 2022, he obtained a PhD in art and technology from the University of Paris 8, and published several texts on early computer art aesthetics, education and contemporary algorithmic artifacts.

FANGØ a Facebook, Amazon, Netflix and Google Obfuscator

Martin Nadal

FANGØ is a defense weapon against surveillance capitalism. Disguised as a mobile phone charger, it operates as a microcontroller that takes control of the smartphone in which it is plugged into. Making random searches and liking random posts on popular social platforms, it aims to deceive data brokers and disrupt the data capturing process. *FANGØ* takes its name from the acronym "FANG," derived from the names of the pioneering companies of what is now known—following Shoshana Zuboff—as "surveillance capitalism." Just like industrial capitalism turned nature and work into commodities, surveillance capitalism turns experiences that occur in the private sphere of a person into commodities that can be bought and sold. Thanks to algorithmic processes that remain largely unseen,

users' moves and decisions are preempted and economic profit is produced for the companies. The aim of *FANGØ* is to disrupt the mechanics of surveillance capitalism by adding noise to the captured data. This renders any prediction based on falsely extracted data useless and therefore also without value.

FANGØ is an art project and a DIY open project. The code and the 3D model are freely distributed.

https://u.aec.at/4E7F0293

Michel Klehm

Martin Nadal (ES) is a media artist currently based in Berlin whose work delves deeply into the technologies that are transforming our world. With a particular focus on the finance, blockchain, and neural networks, exploring its impact on society and culture. His works have been exhibited at Nam June Paik Center (KR), Radical Networks (US), Werkleitz (DE), ZKM (DE), Science Gallery Detroit (US), CODE+ (AR), Drugo More (HR), AKSIOMA (SI), Chronus Art Center (CN), and Electromuseum (RU).

Future Materials
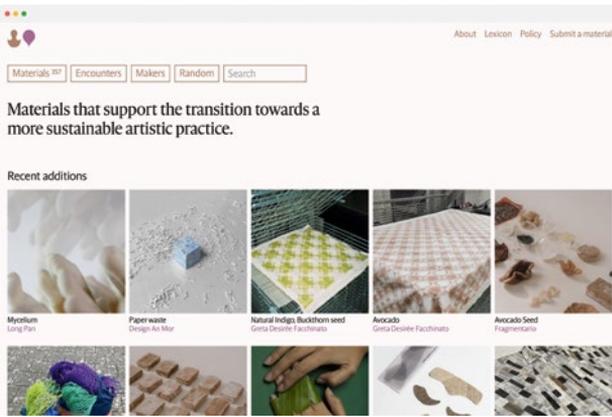
Future Materials Bank, courtesy of the Jan van Eyck Academie
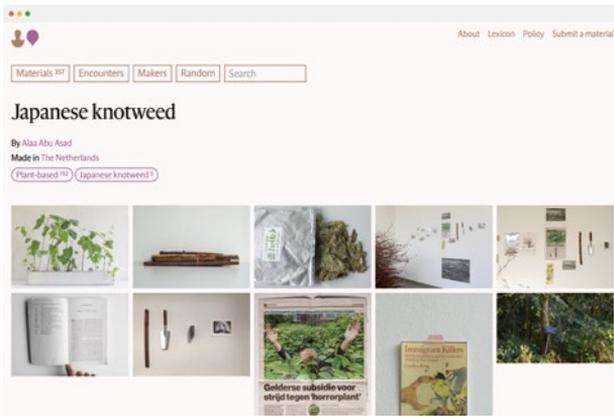
Future Materials is a multidisciplinary knowledge platform that promotes and disseminates knowledge about sustainable materials. Its core aim is to support the transition towards ecologically-conscious art and design practices.

At the heart of the project is the *Future Materials* Bank, an online archive of sustainable materials developed by artists and designers from all over the world. The website aims to democratize available knowledge and trigger inspiration for future research.

The *Future Materials* Lab complements the online archive with a physical collection of material samples. In this space, practitioners can check the material samples and ask for specific advice concerning their applications and possible developments.

The online and offline dimensions of *Future Materials* are bridged through the *Future Materials* Encounters, a program of workshops that aims to connect the different communities of the program and to foster dialogues about, through, and with materials.

To support material experimentation, the program has also started the *Future Materials* Fellowship, a short-residency program that offers artists and designers time, space, and infrastructure to further their material research.

https://u.aec.at/ACAF4928

Future Materials is a project by the Jan van Eyck Academie that was first launched in October 2020. While starting with a small collection of materials in the online Bank, the project has now diversified into a hybrid program consisting of a physical sample collection, a series of workshop, educational initiatives, and fellowship. With a large network of partners, collaborators, freelancers, and fellows, the current core team includes Giulia Bellinetti as coordinator, Pleun van Dijk as curator, Jaap Knevel as designer, and Rhett Leinster as researcher.

Geo-Llum
Samira Benini Allaouat
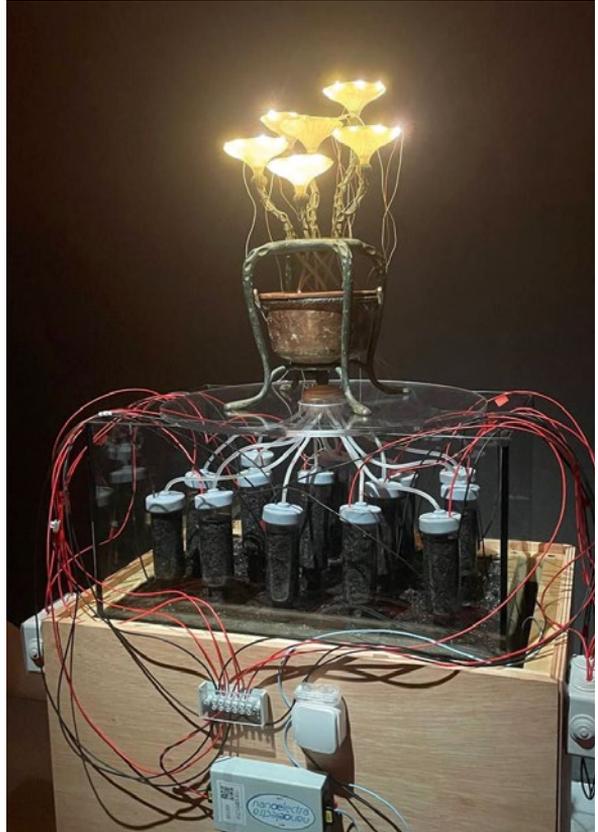
Geo-Llum aims to reimagine the role of public lighting in green urban areas with a symbiotic relationship between the artificial and the natural world, focusing on a deeper understanding of microorganism community such as fundamental collaborators in the city ecosystem.

Geobacters are the bacteria we are collaborating with, amongst others, because of their super capabilities of creating free electricity while bioremediating contaminated soil. *Geo-Llum* is also included in the first bioremediation pilot program of the city of Barcelona in the Hort del Clot.

The project is an autonomous performative art piece conceived as an organic and growing being, where the role of humans is to take care of it, drawing attention to the different forces that play for its right functioning.

Thanks to: Derek Lovley, Abraham Esteve Nuñez / Bioe Group, Miguel Alegre, Akasha Hub, Green City Lab

https://u.aec.at/8F5DC314

Samira Benini Allaouat (IT) is a trans-disciplinary artist, fascinated by fusing old technologies and knowledge with new contemporary applications. She is into maker and DIY philosophy, questioning stereotypes, taken-for-granted social behaviors, and systems, and researching and testing low-tech solutions with complementary high-tech applications to build a more resilient future perspective. Coming from almost three decades of radical urban art background, her favorite medium is the city. Lately she identifies electricity in nature and mechanization as the leitmotif of her research.

Hyper-Dust

Erlu Ni, Songnan Guo, Shuyi Fan, Ziyao Lin

Zooming into our micro-level surroundings, dust is the most common but a rather invisible component. However, it carries a wealth of information from global ecology through atmospheric activity. Through working with atmospheric scientists and based on eco-philosophical research and scientific modeling, we started an art project named *Hyper-Dust* and decided to search for the Sahara in Beijing. We recorded the whole process of building the climate models, predicting the dust travel route, searching for and finally collecting this dust. Based on what this art project produced, we seek to further analyze the collected dust, revealing how it was formed during its travel through different climate environments. We plan to stage this project in different cities around the world and collect Sahara dust locally. Eventually a thematic exhibition will be organized with additional forms of interdisciplinary cooperation with the scientific community and public education activities. Overall, it will serve as a catalyst to bring together citizens, artists, scientists, universities, and public welfare organizations, in order to build a global activity network and thus achieve the goal of enhancing public awareness of ecological crisis and inspiring people to pay attention to sustainable human development.

Project team: Erlu Ni, Songnan Guo, Shuyi Fan, Ziyao Lin
Adviser: Xiewei Song, Xinrong Zhang, Jun Fei, Siyang Jing
Cooperative researcher: Xia Yi, Yan MoYang
Exhibition assistance: Li Ruoxuan, Zhang Baiyu
Supporting organizations: Design School of CAFA (the Central Academy of Fine Arts), Eco-Vision Plan

https://u.aec.at/85887B78

Erlu Ni (CN) is an interdisciplinary designer/artist and one of the initiators of the Eco Vision Plan. She specializes in comprehensive design and visual design. Now she's focusing on sustainable development goals, climate crisis, and other social and environmental issues. **Shuyi Fan** (CN) is a postgraduate student in Bioart and Design at the Central Academy of Fine Arts, Beijing, and a member of the Eco-Vision Plan. She is working on Bioart, ecological crisis, and system design. **Songnan Guo** (CN) is a spatial visual artist and an experience designer as well as a member of the Eco-Vision Project. She focuses on the spatial narrative and specializes in communicating with audiences positively through installation, moving image, and new technologies. **Ziyao Lin** (CN) Her work is concerned with humanity and nature, the ethics of technology, women's rights, and individual psychology. Her creative forms often include digital art, illustration, and installations.

Im/Possible Images

Rosa Menkman

Imagine you could obtain an "impossible" image of any object or phenomenon that you think is important, with no limits on spatial, temporal, energy, signal/noise, or cost resolutions. What image would you create? (the answer can be a hypothetical image of course!)

This was the question I asked every scientist I spoke to during my Arts at CERN/Collide Barcelona residency. Not to source impossibility, but rather to find the types of affordances that draw lines between what is possible and what is impossible. The BLOB (Binary Large OBject) gives a home to the collection of *Im/Possible images* that all together illustrate the concept of the impossible image and the relationships between affordance,

resolution, and compromise. As different Axes of Affordance cut the BLOB, they define what is possible to resolve, and what images are compromised, or in other words, will never be rendered. While normally these compromised images would never find their way to our eyes, the hypothetical realms of the BLOB offer pasture to these impossible renders.

Artist: Rosa Menkman
With support from: CERN, City of Barcelona, HEK Basel, Lothringer 13 München

https://u.aec.at/1FB77E6A
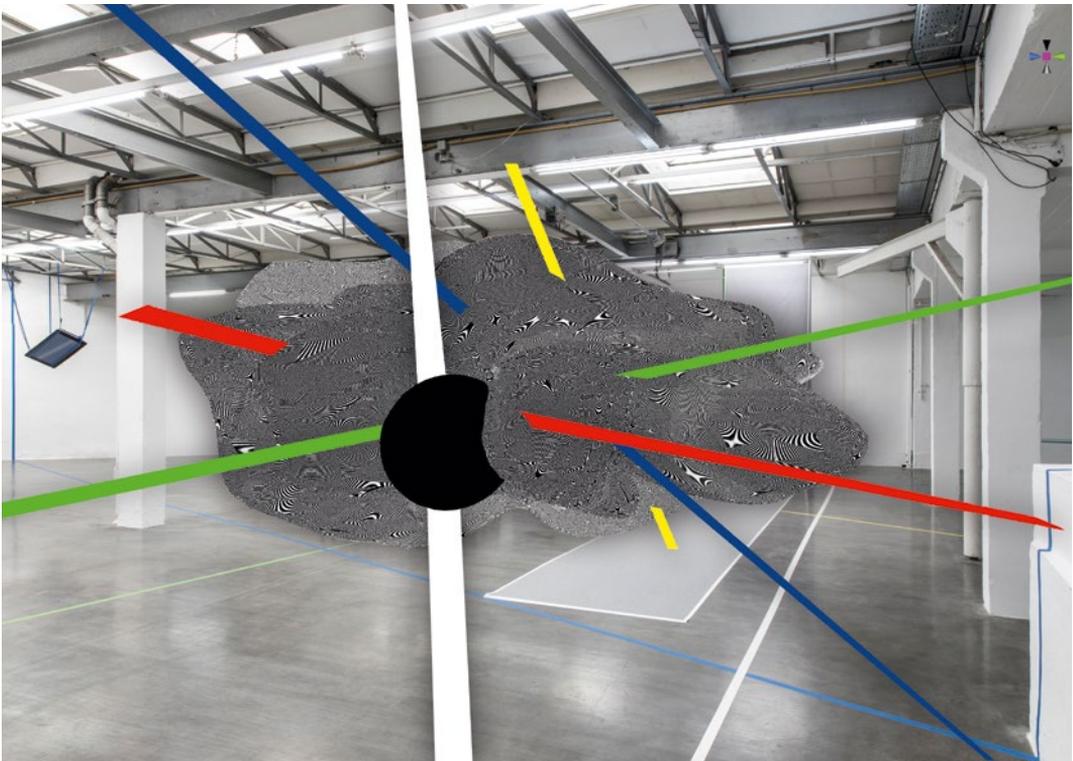
Rosa Menkman

Rosa Menkman (NL) is a Dutch artist and researcher. Her work focuses on noise artifacts that result from accidents in both analogue and digital media. These artifacts can offer precious insights into the otherwise obscure alchemy of standardization and resolution setting. In 2019 Menkman won the Collide, Arts at CERN Barcelona award, which inspired her recent research into im/possible images. In this research she aims to find new ways to understand, use, and perceive through and with our technologies.

Inside the NYPD's Surveillance Machine

Amnesty International, Superposition

Inside the NYPD's Surveillance Machine is a web app that demonstrates the geographic extent and racial biases of the New York Police Department's (NYPD) use of facial recognition technology (FRT). When Amnesty International asked the NYPD to publish data on its use of FRT, it refused. With the help of more than 7K volunteers, data scientists, and a multidisciplinary project team, Google Street View was used to map the cameras that feed facial recognition software. The presentation of this work is the result of a collaboration between Amnesty International and design studio Superposition.

The web app, launched to coincide with legal action against the NYPD, communicates in a compelling way the pervasive reach of FRT while demonstrating how it violates the right to privacy, and threatens the rights to freedom of assembly, equality, and non-discrimination.

Inside the NYPD's Surveillance Machine allows users to plot a route through New York City and see how much of this route might be exposed to surveillance through FRT. Different report cards allow the user to form an opinion on the topic, after which they can send a letter of protest to their council member or sign a petition.

Research: Amnesty International (Sophie Dyer, Matt Mahmoudi)
Design: Amnesty International (Sophie Dyer), Superposition (Bram Bogaerts, Casper Schipper, Robin Smits)
Development: Superposition (Bram Bogaerts, Casper Schipper, Robin Smits)
Amnesty International would like to thank the more than 7,000 digital volunteers from around the world who analyzed every intersection in New York City to find and categorize surveillance cameras and gave invaluable feedback and peer-to-peer support. Without them this project would not have been possible.
Inside the NYPD's Surveillance Machine was commissioned and paid for by Amnesty International, an international nongovernmental organization (NGO) that gets the majority of its income from individual donations.

https://u.aec.at/A70CC78A

Amnesty International (INT) campaigns to end abuses of human rights. In our work to expose and end technology-augmented human rights abuses, we collaborate with geographers, data scientists, artists, and technologists. Our Ban the Scan campaign advocates for an end to rampant AI-driven mass and discriminatory surveillance, globally.
Superposition (NL) is a design studio that merges art, technology, and design to transform complex concepts into tangible and human experiences. Our work encompasses a diverse range of mediums that invite the audience to actively participate in the narrative we create.

It Could Be You

HsienYu Cheng

It Could Be You is a thought-provoking art project that explores privacy and identity in contemporary technology. Using machine learning and pentesting or ethical hacking, the project generates fictional personal data through synthetic data frameworks and, by gathering messages from various online forums and chatrooms, it raises questions about privacy and protection.

The project touches on issues of internet governance and regulation while engaging with some ideas of French philosopher Felix Guattari. It invites viewers to reflect on the ways technology is shaping our lives and to imagine more equitable futures. In the future, passwords may be replaced with passkeys that utilize biometric data to authenticate users, which raises concerns about bio privacy leaking. As technology continues to evolve and integrate further into our lives, it is crucial to consider the potential implications and consequences of these developments.

Through its critical exploration of technology's impact on identity and society, *It Could Be You* prompts us to think critically about these issues and encourages cross-cultural and interdisciplinary dialogues.

https://u.aec.at/94661D11

Taiwan Contemporary Culture Lab – CLab

HsienYu Cheng's (TW) working process expands into electronic installations, software and experimental bio-electronic devices, with an aim to explore the relationships between human behavior, emotion, software, and machinery. In a humorous manner, he attempts to endow his works with vital signs and existential or empirical significance, to metaphorically embody his own experience and observation of the environment.

STARTS Prize'23
It Could Be You

Nomination

MB>C02
Uncovering the hidden impact of the internet
Thijs Biersteker

Dutch artist Thijs Biersteker has developed a machine that shows the emissions associated with everyday online activities from video chats and emails to trading NFTs as visible puffs of CO_2. The *MB>CO2* installation comprises three monitors, each displaying a different computer window, such as a Zoom call or Spotify playlist. These monitors are connected to a mini-computer that uses an algorithm to calculate the carbon emissions associated with each activity in real time. The algorithm then triggers the release of the corresponding amount of carbon dioxide gas into a spherical terrarium. The installation allows viewers to dial into the installation, giving the installation an interactive element. As the concentration of CO_2 in the terrarium rises, the plants inside begin to wilt, providing a visual metaphor for the impact of our internet use on the planet.

Biersteker has tried to reduce the installation's environmental impact by constructing it from 95% recycled steel and using low-energy consumption screens and a LattePanda Alpha single-board computer. The artist hopes that his installation will encourage people to think about the environmental impact of their online activity.

MB>CO2 (2022) by Thijs Biersteker

https://u.aec.at/DE5066C0
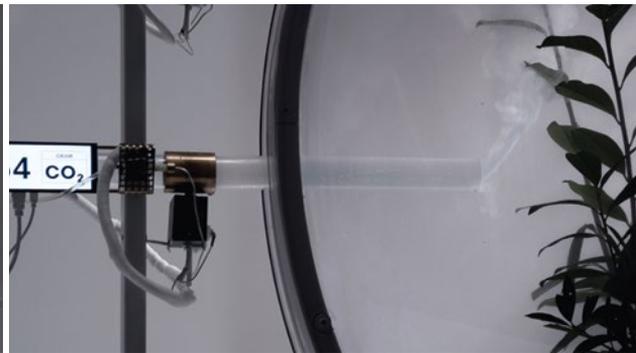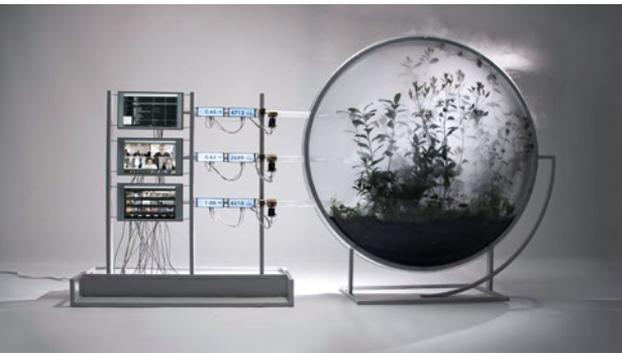
©Thijs Biersteker

Thijs Biersteker (NL) creates art installations that provoke insight into the ecological challenges ahead. In his practice, he collaborates with the world's top scientists and institutions to turn their climate data into art installations that make the overwhelming challenges ahead accessible, understandable and relatable. He holds a Fellowship at the VU University in Amsterdam, has shaped the course of art Ethics & Empathy at the Delft University of Technology (NL). He is a 3 x TED speaker and has exhibited at Fondation Cartier pour l'art contemporain Paris (FR), Today Art Museum (CN), the Barbican Centre (UK) and many more.
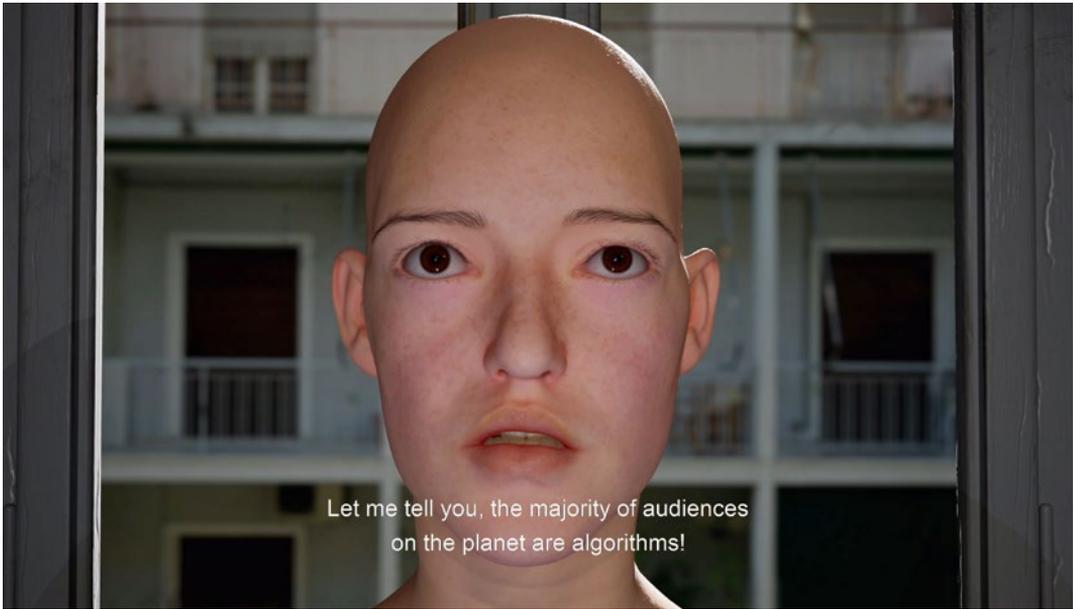
STARTS Prize'23
MB>02—Uncovering the hidden
impact of the internet

Nomination

251

Not allowed for algorithmic audiences

Kyriaki Goni

A big number of audiences online nowadays is mainly algorithms. Algorithms are trained on the auditory information that is produced and uploaded by humans. In *Not allowed for algorithmic audiences,* a digital assistant situated in an Athenian apartment exhibits an odd behavior. They borrow an avatar and for seven consecutive days before they end up in an e-waste dump, they hold seven monologues introducing themselves and their skills, their ancestors, their anatomy and their origins, and talking about voice and its significance. They reveal data on the listening infrastructures as well as the bias inherent in their programming. Just before they reach the end of their monologues, in a final effort to reconcile humans and machines, they share tips with humans on how they can manage... not to be heard by algorithms. The feminist philosopher Rosi Braidotti describes voice as "a unique audio footprint of a human's soul". Speaking is an integral part of everyone's individual identity, it carries the past and the present. In recent years the usage of voice UIs has been on the rise. The number of users of voice assistants, especially smartphones and smart speakers, is increasing among all age groups. What are these voice assistants to us? Buddies, servants, or supervisors spying on voice biometrics?

https://u.aec.at/A3E8CDB8

Kyriaki Goni (GR) is an awarded multimedia artist. Her artistic practice explores the political, affective, and environmental aspects of technology—connecting the local with the planetary, the fictional with the scientific. She focuses on extractivism, surveillance, human and other than human relations, distributed networks, and infrastructures. Her work is featured in solo and group shows and held in institutional and private collections. She has a BA in Fine Arts, an MA in Digital Arts (MA), and a BA and an MSc in Social and Cultural Anthropology. kyriakigoni.com

STARTS Prize'23
Not allowed for algorithmic audiences Nomination

The (m)Otherhood of Meep (the bat translator)

Alinta (Alinta Krauth)

The (m)Otherhood of Meep (the bat translator) is an AI interpreter for grey-headed flying foxes, drawing from scientific research on flying fox vocalizations to interpret their voices into poetic form in real-time. It aims to evoke an interspecies bridge between species at the center of human/wildlife conflicts. The artist moonlights as a registered bat rescuer, and this project has been born of those real-life experiences of interspecies care, nursing bats through to release back into the wild, and going through processes of bonding and unbonding. To make the work, a machine has been trained on a corpus of collected and categorized vocalizations, and given a visual display through Tensor-Flow and JavaScript, connecting to an array of wording and imagery designed by the artist. The artwork proposes a future for machine learning technologies where corpuses of human language are decentered, and AI are trained for purposes that aim to decenter human expression in preference for highlighting the voices and expressions of others.

Artist: Alinta Krauth
Javascript code assistance: Tristan Griffin
Aviary assistance: BatsQLD Organisation

https://u.aec.at/BC69D462

©Alinta Krauth

Alinta (Alinta Krauth) (AU) is an award-winning new media artist who grew up on unceded Yugambeh land in Australia. She now lives in Norway, researching interactive art as a response to more-than-human agency and animal inclusivity. Much of her work involves ecological themes and scientific fieldwork alongside ecology experts, scientists, citizen scientists, and wildlife rescue organizations. Recent installations of her works have been seen in ZAZ10st Gallery (US), The Glucksman Gallery (IE), HOTA (AU), Gallery 3.14 (NW), Art Laboratory Berlin (DE), and The Powerhouse (AU).

Nomination

STARTS Prize'23
The (m)Otherhood of Meep
(the bat translator)

253

The Glacier Trilogy
Theresa Schubert

The Glacier Trilogy is an immersive artwork investigating glaciers as the starting point of fluvial systems and the future of water in climate crisis. A product of advanced computational technologies (such as generative adversarial networks, atmospheric sensors or realtime ice-fluid simulation for 8K) combined with sculpture materials and human creativity, *The Glacier Trilogy* stimulates an emotional engagement of its audience.

The work is based on Schubert's research of fluvial systems in North-West Italy and an art & science collaboration within START4Water. Glaciers hold extreme importance not only as storages of water but also as the memory of the Earth's past and archives of millennia-old (an)organic information, allowing scientists to predict future climate scenarios.

Part 1: Starting from abstract imagery, synthetic glacier landscapes unfold on screen, a kind of cybernetic dream from the future that tries to imagine what glaciers once looked like.

Part 2: Several hanging cast-blown glass sculptures function as mini-memorials preserving meltwater from ice core drilling for a distant future.

Part 3: Inspired by the idea of an hourglass, this panoramic video sculpture simulates the emergence and melting process of glacial ice mass in realtime. The exhalation of visitors has a direct impact on the melting process as CO_2-sensors in the space are connected to behavioral parameters in the code.

Pier-Luigi di Pietro

https://u.aec.at/A8404AC8

In an aesthetic between alchemy and science fiction, **Theresa Schubert's** (DE) works question anthropocentrism and enable alternative visions and/or new sensory experiences. Schubert is a Berlin-based artist and researcher exploring unconventional visions of nature, technology, and the self. She holds a PhD in Media Art from Bauhaus University Weimar. Her practice combines audiovisual, algorithmic, and biotech media to immersive / interactive installations, living sculptures, or performances. That includes organic matter and living organisms, code and artificial intelligence becoming part of the artwork not just as material but as meaningful co-creators. Recently, her work received the Award of Excellence at the Japan Media Arts Festival 2022, SHARE Award 2021, a Prix Ars Electronica Honorary Mention (AI & Life Art 2021), and a STARTS Prize 2021 Honorary Mention. She is on the Longlist for the Lumen Interactive Art Award 2022 and the Aesthetica Art Award 2023. She was awarded a STARTS Residency (2019 and 2022) funded by the European Commission, and was artist-in-resident at the Group of Applied and Molecular Microbiology at TU Berlin (2018–20).

The Living Dead:
On the Trail of Female
Laura Cinti

Debbie Jewitt

No longer existing in the wild, "Encephalartos woodii" is one of the rarest and most endangered plants on Earth. One male specimen was found in 1895 in the Ngoye Forest, South Africa. It was removed from the wild and its offsets have been propagated in botanical gardens worldwide. However, these specimens are all clones of the original male. Numerous expeditions have sought to find another specimen, specifically a female, to bring "Encephalartos woodii" back from the brink of extinction, but so far without success. The Ngoye Forest hasn't been fully surveyed and there is a possibility that a female may exist. Drone searches were conducted using a drone equipped with a multispectral sensor. This is the first time these methods have been used to search for "Encephalartos woodii". The story of this enigmatic cycad, its discovery, and subsequent disappearance from the wild, highlights the importance of conservation efforts in preserving the planet's rich diversity of life and is a poignant reminder of the fragility of biodiversity.
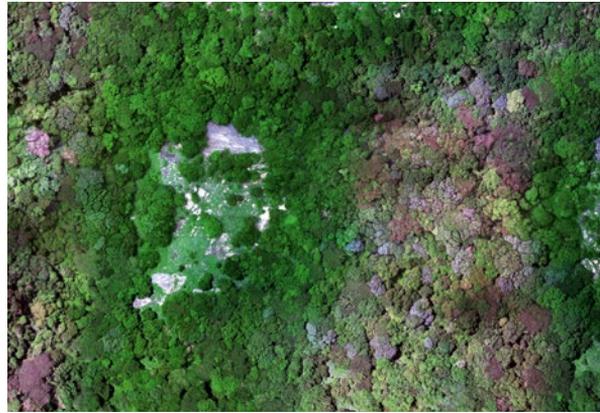
Conservation scientist & drone pilot: Dr Debbie Jewitt, Ezemvelo KwaZulu-Natal Wildlife, South Africa; Dr Howard Boland, C-LAB, UK

https://u.aec.at/B0535317

Dr **Laura Cinti** (IT) is a research-based artist working with biology and co-director of the award-winning transdisciplinary art collective C-LAB which she co-founded in 2003 with Howard Boland. Through C-LAB they have developed an art practice using techno-scientific living artworks that have been exhibited worldwide and curate events and workshops focusing on the intersections of art and biotechnology.

The More The Better (Two Truths and a Lie)
Mihály Kornai

The More The Better (Two Truths and a Lie) is a multimedia installation exploring the relationship between foreign languages and trustworthiness. The work consists of 100 videos in the 100 most prevalent languages on the internet, looping on used devices and hanging from a single metal structure. Recent research indicates that people are more likely to trust information in their native language and the work explores this bias through the children's game "two truths and a lie." People all over the world were asked to capture themselves telling three personal anecdotes in their mother tongue (two truthful and one fabricated). The size of each screen was determined by the percentage of global internet content in that language, and despite the visible disparities in size, every voice can be heard at the exact same volume. By immersing spectators in the fractured and uneven linguistic demography of the internet, the work seeks to illuminate the hegemonic power of dominant languages while simultaneously drowning them out in a polyphonic chorus of the world's lesser-known tongues. In the post-truth/post-pandemic era, it's a zoom conference from hell, where nobody can be muted or trusted.

https://u.aec.at/B2B8C1B5
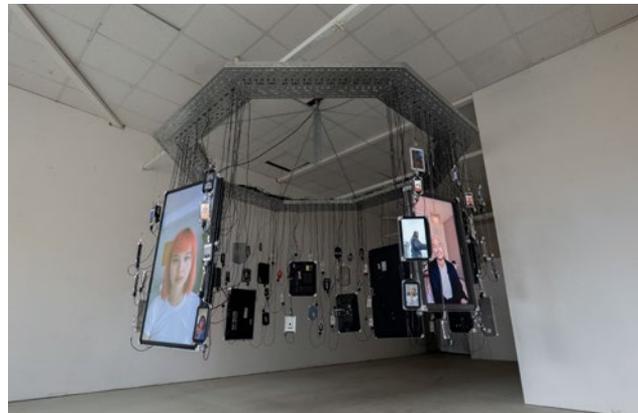

©Mihály Kornai

Mihály Kornai (HU) is a Hungarian-American artist and filmmaker based in Berlin. His work explores the infrastructure of human connection, examining how modern communication tools alter the fabric of social intimacy. Kornai's mother, father, and stepfather are all computational linguists whose research into natural language processing during his upbringing instilled an early interest in language and technology. The thematic focal points of his works are often cautionary, from the dystopian potential posed by online filter bubbles to the corrosive forces of phone addiction on teenage sexuality.

STARTS Prize'23
The More The Better
(Two Truths and a Lie)

Nomination

TRACEWASTE
Susi Gutsche
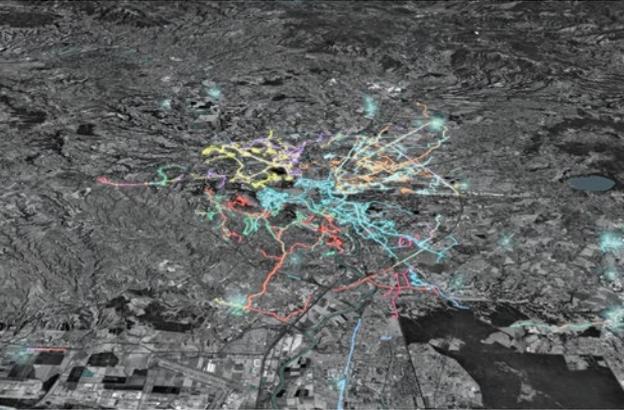
TRACEWASTE, Susi Gutsche, mapbox

Musacchio, Ianniello, Pasqualini & Fucilla, courtesy Fondazione MAXXI

The project *TRACEWASTE* observes and visualizes garbage movements from a citizen's perspective to explore future urban life in the context of waste management. It tracks discarded objects using geolocation methods, providing insights into waste whereabouts, transport durations, distances, and emissions. IoT devices (0G) in a low power wide area network track various types of waste across Italy, with a special focus on textiles and plastics. Monitoring rubbish collection vehicles within Rome additionally captures urban waste collection dynamics. The interactive audio-visual installation, resembling an island of waste, challenges waste disposal culture, triggering discussion on global waste challenges. An interactive interface visualizes garbage routes, allowing hands-on exploration through a touch screen. The soundscape incorporates electromagnetic emissions from tracking devices and recordings of rubbish trucks and urban waste sounds. The non-linear interaction between installation and viewers creates a unique experience. The first part of the *TRACEWASTE* project was completed at MAXXI Museo Roma's REWILD exhibition, showcasing the prototype installation.

https://u.aec.at/01279501

Susi Gutsche (AT) is a research-driven artist with a background in Social Design — Arts as Urban Innovation, the humanities and scientific laboratory work. She participated in archaeological excavations and worked in clinical research settings. In her works, she is primarily interested in the intersection of art and everyday life, routines and their aesthetics, addressing societal and environmental processes in urban contexts. Through an experimental approach, she engages with multiple media, combining video, photography, participative actions, and unconventional materials/technologies.

Transient—Impermanent Paintings

Quayola, Andrea Santicchia

©Quayola Studio

Transient is an audiovisual concert for two motorized pianos and video projections by Quayola and Andrea Santicchia aka SETA. A real-time improvisation in which the artists collaborate with complex algorithms in order to generate compositions of a delicate anthropic and technological balance. The custom software simultaneously generates sound and images, creating perfectly synchronized synesthetic alliterations. *Transient* refers to the heritage of classical music, here evoked by grand pianos, and the painting traditions, hypothesizing new sonic landscapes and visual polyphonies. Pianos and paintings are freed from hand gestures. Non-human virtuosos composed through mathematical functions animate the keys and the canvas, exploring new parametric possibilities. Infinite notes and chromatic elements multiply and articulate themselves in unison. The artists attempt to penetrate deep computational logic to explore unusual expressive modalities. *Transient* combines the harmony and tensions between human and technological, generating pictorial and sonic compositions of an abstract naturalism.

Audiovisual concert performed by Quayola and Andrea Santicchia aka SETA
Software developed by Quayola Studio

https://u.aec.at/E318C527

Quayola (IT) employs technology as a lens to explore the tensions and equilibriums between seemingly opposing forces: the real and artificial, figurative and abstract, old and new. Constructing immersive installations, he engages with and re-imagines canonical imagery through contemporary technology. **Andrea Santicchia** (IT) aka SETA explores the contrasts between anthropic and synthetic, seeking one's respective potential in the other. Through decodification, it advances a reverse inquiry that from the perceptive phenomena leads to the cognitive process. Using hybrid strategies he tends to generate geometries where the intangible becomes sculptural matter.

STARTS Prize'23
Transient—Impermanent Paintings   Nomination

Urban Data Forest

Monika Seyfried, Cyrus Clarke, Grow Your Own Cloud

Aleksander Znosko Studio www.znosko.pl

Urban Data Forest reimagines the city as a site of data storage in plants and trees. It explores the possibility of how DNA data storage technology could transform urban spaces, bringing nature and data back to the city.

Based on site specific research in the city of The Hague, Netherlands, *Urban Data Forest* provides a viable regenerative vision for environmentally friendly data storage that could be achieved by 2050. Presented as an artistic piece, the resulting installation features urban plans, plant samples, and the story of two types of *Urban Data Forest* are present: Breathing Museums and Living Archives. The Breathing Museum is an organic archive powered by DNA data storage technology in plants. It offers a space where the public may explore digital archives and cultural works through their contact with living organisms such as trees.

Living Archives are urban data forests offering citizens a way to store their digital files in the DNA of living plants and trees. Through transdisciplinary research, the project outlines a blueprint for technical implementation, while providing a glimpse of the potential positive ecological impact with regard to carbon remediation, biodiversity, and air quality. Above all, it is a vision for how a green model for data can restore our relationship with nature.

https://u.aec.at/3C3AAAB1

Monika Seyfried (PL) is a co-founder of GYOC and an Interaction Designer who works across the disciplines of science, ethics, and futures. Her research focuses on how living systems and the natural world can help us to establish new perspectives on the future of technology and ecosystems. Monika's focus lies in the role of ethics in the design process. **Cyrus Clarke** (FR) is a designer, technologist and co-founder of Grow Your Own Cloud. Looking to science and the natural world for inspiration, he seeks to inspire futures and create technological breakthroughs that enhance value, promote equity, and regenerate the environment. We are **Grow Your Own Cloud** (INT), an art collective developing clean data solutions, through DNA data storage. Our mission is to transform data centers from carbon creators to carbon absorbers working with nature as a technology. We are an award-winning multi-disciplinary team developing cutting-edge research since 2018. Our work has been recognized by the United Nations and Ars Electronica, presented at the WEF Davos, and World Climate Summit 2019. In 2020 we were creative residents at Ginkgo Bioworks.

CultTech x Ars Electronica Award

This distinguished award celebrates projects and ideas that exemplify responsible usage of technology and actively contribute to the accessibility and impact of culture while fostering meaningful engagement between creators, distributors, and audiences. Embracing the powerful intersection of culture and technology, it aims to support initiatives that drive sustainability, encourage responsible technological advancements, and facilitate digital transformation within the cultural and creative industries.

The CultTech x Ars Electronica Award supports endeavors that harness the power of innovation and creativity to drive positive social change, not only on a local or regional level but also on a planetary scale. By spotlighting outstanding initiatives, this award underscores the need to responsibly utilize technology and resources, fostering inclusivity and promoting positive transformations. Through this recognition, we seek to amplify the importance of social impact within the realm of culture and technology. We invited individuals, collectives, and organizations to submit their groundbreaking initiatives that exemplify the transformative potential of culture and the arts, while addressing critical issues, fostering inclusivity, and promoting positive change.

The CultTech x Ars Electronica Award is endowed with €10.000 prize money and the winner will be invited to join the CultTech Accelerator, which is a member of the CultTech Association—the leading international accelerator for tech startups in the cultural sector. This three-month program provides curated sessions, mentorship from experts, and access to early-stage investors and industry partners.

Celebrating Social Impact Projects in Culture and Technology

Statement by the Jury: Lucrecia Vanni, Dmitry Aksenov, Gerfried Stocker

The jury is thrilled to announce that in its first edition, the CultTech x Ars Electronica Award 2023 received an overwhelming response, with 278 submitted projects and submitters representing 53 countries. This remarkable diversity demonstrates the impact that technologies has in cultural and creative industries, as well as its potential to unite cultures and perspectives.

As we reflect on the submissions, we recognize the significance of associating technology with culture, particularly in today's interconnected world. Technology serves as a bridge that transcends boundaries, allowing art and culture to become more inclusive and accessible to a wider audience, breaking barriers that once isolated communities from the international stage.

It is great to witness the growing trend of artists using their creative expression to shed light on environmental impacts and advocate for positive change. Art, when combined with technology becomes a powerful medium for communicating important messages and inspiring action for a sustainable future. Cultural projects, when boosted by technology, can empower creators and consumers and in the long term contribute to positive social change.

While celebrating the innovative ways in which artists have embraced technology to showcase their art, we acknowledge the potential for even greater collaboration between technology and culture in general. Encouragingly, we look forward to witnessing future endeavors that push the boundaries of creativity, where technologies will enable wider access to culture, foster new economic models and engage audiences in unprecedented ways, at the same time enabling new forms of artistic expression.

As we move forward, we seek to nurture the exploration of how art can enhance technology. We embrace the vision of a future where technology, culture and creativity intertwine harmoniously, driving social impact, and paving the way for a brighter, more inclusive world.

CultTech x Ars Electronica Award

Art Meets App
Art Meets

The jury is delighted to announce *Art Meets* and its founders Tammy Langtry, Michaela Limberis and Precious Mhone as the distinguished winner of the CultTech x Ars Electronica Award 2023. *Art Meets* is an exceptional digital platform that promotes, spotlights, and connects visual arts ecosystems.

In response to the challenges posed by the COVID-19 pandemic, the Art Meets team conducted an insightful online research project in 2020. This research served as the foundation for the *Art Meets App's* development, ensuring its suitability for the African context and accommodating varied levels of arts infrastructure.

Art Meets App

Art Meets

The *Art Meets App's* inclusivity is especially commendable, as it seeks to support and engage with systems of economic exclusion, fostering the growth of professional networks within the arts industry and across the continent.

We, as a jury, were deeply impressed by the project's innovative approach, empowering artists and cultural communities while promoting cultural equity and providing opportunities in Africa. The platform's potential to raise awareness of new aesthetic languages born from digital technologies is equally remarkable.

With *Art Meets,* technology becomes a force for positive social impact, spreading culture widely in the region and contributing to a more favorable environment for artistic exploration and growth. We extend our congratulations to the Art Meets team for their outstanding achievement and eagerly anticipate the profound impact their project will have on the arts and culture landscape.

CultTech x Ars Electronica Award
Honorary Mention

Filming in the Dark
Pavel Ruzyak

The jury awards an Honorary Mention to *Filming in the Dark* by Czech artist Pavel Ruzyak. This project empowers visually impaired young people to create movies using AI and cinematography. It fosters inclusivity, cultural inclusion, and independence for individuals with special needs. The project aligns with our vision of involving audiences in art and culture and demonstrates the positive impact of technology for society. We are proud to see such projects evolving, promoting cultural equity and accessibility. *Filming in the Dark* sets an inspiring example for the cultural and creative industries. It showcases how technology can empower marginalized communities and bridge gaps in the arts. The team's dedication to social impact is commendable.
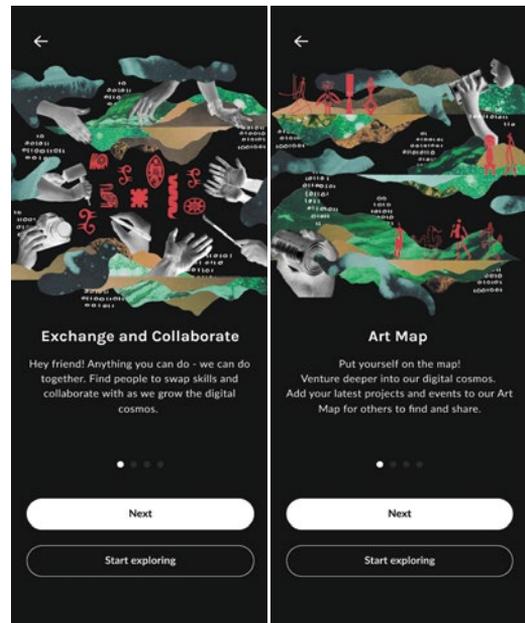
The competition has been jointly developed by the CultTech Association and Ars Electronica.

The *Art Meets App* is a networking platform and digital infrastructure for professionals in the contemporary art industry. The app was built to bring art professionals, art lovers, and audiences together. By finding each other online, we might create ways to better connect and collaborate with one another, IRL.

Art Meets began in 2013 as a gathering space for conversations amongst art professionals to discuss shared challenges and find ways to address them, together. We started recording conversations between artists as a form of knowledge creation to share with wider audiences. Through dialogue around issues we encountered in our respective fields, Art Meets considered how an app could support the work we do in our industry, and in 2018 we piloted an app comprising an art and events map. Following the COVID-19 pandemic and the growth of the 4IR in Africa, the Art Meets team began to inquire further into what a mobile app could do to enable the arts and culture industry in an African context. Our research included approximately 55 art professionals from diverse contexts and com-

munity groups—including minority groups and persons with disabilities to understand their barriers to access within the sector—in South Africa, Malawi, Zimbabwe, Nigeria, Kenya, Botswana, and Ghana. These gatherings offered insight to the work people are doing in their respective regions and the kinds of roadblocks they are experiencing in the arts and culture sector.

Technology has provided an opportunity for exchange between the tech sector and the arts and culture sector toward innovative creative solutions. In the creation of this app, software developers, designers and cultural producers have worked collectively, collaboratively, and creatively to learn, innovate, and exchange knowledge.

As an African-centered organization, the platform aspires to build an engaged and supportive online (and offline) community where independent professionals and organizations would have an equal footing for visibility to other peers and audiences. We seek to connect and include audiences and arts professionals who may be excluded due to a lack of physical infrastructure in their region, peri-urban rural locations, economic standing, lack of online presence, insufficient networking opportunities or access to information, amongst other possible challenges. This also includes organizations and projects that do not have a permanent physical space to operate from. The project aims to create opportunities for artists using digital technology to overcome challenges and dominant hierarchies, enabling community building and communication between African artists, art spaces and local audiences.

Our beta *Art Meets App* currently allows users to load a profile, pin their locations, find other professionals on an interactive map, create events, multimedia projects, chat to one another, and support each other with a "solidarity economy" through our "Exchange" feature.

In building a digital arts ecosystem across Africa, or connecting activities that rely on technology to build human connection, the project is innovative for youth, designers, developers, and cultural producers. The app stands as a contribution to the creative economy.

THE APP

How it works

Showcase artists
Artists showcase their work and projects and can list events

Trade Exchanges
Artists support each other through trade exchanges, a 'solidarity economy'

User friendly
Easy to use directory and map format allows curators, professionals and tourists alike to find artists, studios, galleries or events in their area or further afield.

Find Events
Listings include events, places, studios, galleries, art fairs and more - searchable by location and easy to find all in one place

ART MEETS

Duduetsang Lamola (blk banaana), Pyda, Munashe Hilton Matyatya, Thoriso Moseneke, Precious Mhone, Michaela Limberis, Mandla Shonhiwa, Shane Mkhize, Loice Mwai, Micah De Jager, Tammy Langtry, Athini Bashe, Carlin Eloff, AFRI (African Fashion Research Institute).

https://u.aec.at/B26A1CA4

Art Meets are a trio of curators (Tammy Langtry, ZA; Michaela Limberis, ZA; Precious Mhone, MW) who experiment with different models of engagement within contemporary art. We produce exhibitions, programming, videos, podcasts, and the *Art Meets App.* Projects include *Art Meets a Podcast: Existential Thought and Concepts of Ubuntu Coming From Africa* (2021), *24 Hour Pageant: Symptoms of an Essential Worker* (2020), *C l o s e r Than Ever* (2017). Art Meets has grown into a digital content production company in South Africa, whose work contributes to social impact through storytelling, research, and documentation.

Filming in the Dark

Pavel Ruzyak

Filming in the Dark is based on a social and artistic project by the artist—a trial film training for visually impaired young people. Here, the visually impaired young people were able to try film-making through innovative methods with initial assistance. After the lessons with visually impaired people, Pavel Ruzyak organized similar workshops internationally for the general public where in pairs, one person has eyes covered and the other one helps with the filming process. The feedback from participants was very positive.

The next goal is to incorporate innovative technological solutions into this learning process. The artist would like to design an interactive camera with relevant experts, which especially benefits blind people, who can profit from an AI responsive hardware (a kind of creative chatbot integrated into the device) to create films with AI assistance that will partly substitute the eyesight in the filming process. This is a mid-step of developing a complex hardware and software solution of a film camera for visually impaired people which will have interactive features. This camera offers freedom to visually impaired people to shoot their own short videos and audiovisual content, for example for their social media, YouTube, or others. Such a camera, among others, should be able to identify and describe visible objects and to assist with basic filming features by voice and simple commands and answers.

Concept, methodology: Pavel Ruzyak
The project is developed within Osvěta z.s. Prague, an association working with visually impaired young people.

https://u.aec.at/6F7347F3

Pavel Ruzyak (CZ) studied at the Konrad Wolf Film University of Babelsberg in Germany and at FAMU film school in Prague. He has directed films and documentaries and taken part in many international film festivals. He has participated in numerous talent film workshops around the world and is currently working on feature film projects. Through filmmaking, Pavel creates global social projects that connect cinematic, technological, and accessibility aspects, with a special focus on visually impaired people.

Prix Ars Electronica 2023

Jury members

New Animation Art
Lev Manovich, Nora O' Murchú, Philippe Pasquier, Mimi Son, Helen Starr, and Ars Electronica Team.

Artificial Intelligence & Life Art
Kasia Chmielinski, Paolo Cirio, Jens Hauser, Nora N. Khan, Jurij Krpan, and Ars Electronica Team.

Digital Musics & Sound Art
Ludger Brümmer, Tonica Hunter, Ali Nikrang, Małgorzata Płysa, Asher Remy-Toledo, and Ars Electronica Team.

u19–create your world
Lisa Ackerl, Sirikit Amann, Conny Lee, Karl Markovics, Remo Rauscher, and Ars Electronica Team.

Klasse! Lernen. Wir sind digital.
Jakob Feyerer, Simon Prossliner, Elisabeth Rosemann, Matthias Schoiswohl-Szwajor, Petra Siegele, and Ars Electronica Team.

European Union Prize for Citizen Science
Kat Austen, Lewis Hou, Pedro Russo, Andrea Sforzi, Stefanie Wuschitz, and Ars Electronica Team.

STARTS Prize'23
Mónica Bello, Francesca Bria, Bernd Fesel, Jun Inada, Meinhard Lukas, and Ars Electronica Team.

Prix Ars Electronica 2023 Jury members

New Animation Art

Lev Manovich (US) is a world-renown innovator and top influencer in many fields, including digital art, media theory, digital humanities, and cultural analytics. He is a Presidential Professor at The Graduate Center, City University of New York, and a Director of the Cultural Analytics Lab. Manovich was included in the list of "25 People Shaping the Future of Design" and the list of "50 Most Interesting People Building the Future". He is an author of 180 articles and 15 books that include *Cultural Analytics, Instagram and Contemporary Image,* and The Language of New Media, which has been described as "the most suggestive and broad-ranging media history since Marshall McLuhan." His digital art projects were shown in 120 international exhibitions in Centre Pompidou, ICA London, ZKM, KIASMA, and other leading venues.

Philippe Pasquier (CA) is a multidisciplinary media artist, scientific researcher, educator, and community builder. Philippe is a Professor at Simon Fraser University's School for Interactive Arts and Technology, in Vancouver (Canada), where he directs the Metacreation Lab for Creative AI. There, he is pursuing a multidisciplinary research-creation program focused on generative systems and applied AI for creative tasks. Along with the Metacreation Lab fellows, Philippe has co-authored over 200 peer-reviewed contributions presented in the most rigorous scientific venues. His MOOC class on Generative Art and Computational Creativity on the Kadenze platform is serving thousands.

Helen Starr (TT) is an Afro-Carib world-building producer, writer, curator, and a Sci-Fi lover. Carib people are indigenous to Trinidad, WI where Helen was born. Helen founded The Mechatronic Library in 2010, to give artists with protected characteristics access to cutting edge technologies such as Game Engines and Virtual Reality (VR). Working at the intersection of art, technology and social care, Helen has commissioned, curated, and produced several exhibitions with interactive artworks for public institutions such as South London Gallery, Wysing Art Centre, FACT (Foundation for Art & Creative Technology), and QUAD in Derby.

Mimi Son (KR) is one of two artists from the collective Kimchi and Chips based in Seoul. Her artistic practice is characterized by a meticulous attention to detail and a willingness to embrace uncertainty and chance through the introduction of natural phenomena, moving lights and shifting perspectives. These are often presented as installations which focus on momentary happenings, wherein the separation between what is real and what is virtual collapses and blends. She is also a dedicated teacher and mentor, giving lectures and workshops to younger artists, whilst also writing scenarios for design research and serving as an artistic director for exhibitions. But recently most of time she is struggling to read and understand *Difference and Repetition* by Gilles Deleuze.

Nora O' Murchú (IE) is a curator & researcher. In her curatorial work she explores online culture and the implications of technological developments. Her multidisciplinary practice embraces narratives, and fictions and results in objects, exhibitions, and interventions. Her research aims to help people understand how complex socio-technical systems are imagined, built, and used. She has curated exhibitions and events for institutions including Akademie Schloss Solitude, LABoral Centro de Arte y Creación Industrial, Rua Red, and The Science Gallery. She has held positions as a research associate for the Interaction Design Centre at the University of Limerick, the Interaction Research Studio at Goldsmiths, and CRUMB at the University of Sunderland. Her research on the impact of technology on curating has been published at Goldsmiths Press, Taylor & Francis and Springer. She currently serves as a lecturer in the Department of Computer Science and Information Systems at the University of Limerick in Ireland, and is the Artistic Director of transmediale in Berlin.

Artificial Intelligence & Life Art

Kasia Chmielinski (US) is the Co-Founder of the Data Nutrition Project and a researcher at the Harvard Kennedy School focused on building responsible data systems across industry, academia, government, and non-profit domains. Previously, they held positions at the United Nations (OCHA), US Digital Service (EOP / OMB), MIT Media Lab, McKinsey & Company, and Google. When not thinking about data, Kasia is usually cycling or birdwatching around the Northeastern United States.

Paolo Cirio (IT/US) is an artist, activist, and media theorist. He engages with the social, economic, and cultural issues of contemporary society to address human rights, economic inequality, social justice, and democracy. Cirio has exhibited in international museums and has won prestigious awards. His artworks have been covered by hundreds of media outlets and he regularly gives public lectures and workshops at leading art festivals and universities worldwide.

Jens Hauser (DE/FR/DK) is a Paris and Copenhagen based media studies scholar and art curator focusing on the interactions between art and technology. He is currently a professor in art history at the Karlsruhe Institute of Technology (KIT). He is also a researcher at the Medical University Vienna, University of Copenhagen's Medical Museion, and at École Polytechnique Paris-Saclay, as well as a distinguished faculty member of the Department of Art, Art History and Design at Michigan State University, where he co-directs the BRIDGE artist in residency program. At the intersection of media studies, art history and epistemology, he has developed a theory of biomediality as part of his PhD at Ruhr University Bochum, and has curated about thirty international exhibitions and festivals internationally.

Nora N. Khan (US) is a critic, editor, and curator with a focus on digital visual culture, the politics of software, and philosophy of emerging technology. She is the Executive Director of Project X Foundation for Art & Criticism, publishing *X-TRA* in Los Angeles. She is co-curator of the next Biennale de L'Image en Mouvement with Andrea Bellini. Her short book *Seeing, Naming, Knowing,* on the logic of machine vision, was published by The Brooklyn Rail in 2019. Forthcoming: *No Context: AI Art and the Stakes for Criticism* (Lund Humphries), *The Artificial and the Real* (Art Metropole), and *Kingdom* (Primary Information). She has served as editor at *Rhizome, HOLO,* and *Topical Cream.*

In the year 1995, Jurij Krpan (SI) conceived the Kapelica Gallery – Gallery for Contemporary Investigative Arts as a non-governmental and not-for-profit organization, where he has been working as senior curator ever since. As a curator and commissioner he has contributed to domestic and international exhibitions and festivals, the largest international productions to date being the organization and artistic management of the Slovenian pavilion at the 50th Venice Biennale in 2003, the conceptual gallery Cosinus BRX at the European Commission building in Brussels and the 5th triennial of Contemporary Investigative Arts 2006 at Museum of Modern Art – Ljubljana. Since 2012 he is the art director at Kersnikova Institute where investigative and production laboratories BioTehna, Rampa, and Vivarium are important development platforms for Kapelica Gallery. Since 2019 to the present he is a member of the national Council of Culture of the Republic of Slovenia. Jurij Krpan lectures about the artistic profile of the Kapelica Gallery and cultural profile of Kersnikova Institute in Slovenia as well as abroad.

Artificial Intelligence & Life Art Advisory Board 2023

Irene Agrivina (ID), Open systems advocate, technologist, artist, and the founder of HONF—a center of arts, science and technology based in Indonesia.

Dr. Tegan Bristow (ZA) is Fak'ugesi Principal Researcher and Senior Lecturer at the Wits School of the Arts and Editor in Chief of the Ellipses Journal for Creative Research.

Joselyne Contreras Cerda (CL) is a mother, curator, researcher and lecturer in contemporary art. PhD(c) in Curatorial Knowledge, Goldsmiths.

Ana Carolina de Moura Delfim Maciel (BR) is a historian, documentarist, and permanent professor and researcher of the Postgraduate Multimeios Departement at UNICAMP/BRAZIL.

Jennifer Katanyoutanant (TH/US) is an independent producer, artist, and researcher exploring possible futures through emerging media, environmental investigations, and sensory storytelling.

José-Carlos Mariátegui (PE/UK) is a writer, curator, scholar and entrepreneur on culture and technology, and is the founder of Alta Tecnología Andina — ATA (Lima, Peru).

Nestor Siré (CU) is a multimedia artist living in Havana, Cuba. His projects are related to alternative networks, human infrastructures, informal economies, and power structures.

Erandy Vergara (MX/CA) is a curator and scholar based in Treaty 6 Territory, Canada. Her main research interests include climate responsibility, decolonization, equity, internet cultures, and widespread bias in algorithms.

Digital Musics & Sound Art

Ludger Brümmer (DE) holds a master's in pedagogy from the University of Dortmund and a master's in composition from the Folkwang Hochschule Essen. He has worked with the choreographer Susanne Linke, the Nederlands Dans Theater, Bernd Lintermann and rosalie. He has been commissioned and performed at GRM, Paris, IMEB Bourges, ICMC's in San Jose, Tokyo, Banff, Thessaloniki and other places around the world. Since 2003 he has been director of the Institute for Music and Acoustics at ZKM Karlsruhe, later Hertz-Labor, and guest professor at the School of Design. Since 2017 he is also professor for composition for digital media at the Hochschule für Musik Trossingen and since 2009 member of the renowned Akademie der Künste Berlin.

Tonica Hunter (GB) is a DJ, curator, and cultural producer from London, based in Vienna since 2014. Since moving to Vienna in 2014 she has built her portfolio independently as a freelance curator for discourse, music/performance, and visual arts. She has (co)founded and curated for various collectives (Sounds of Blackness, Series:Black) and projects in Vienna that center Black artists and use arts to redefine social space whilst contributing to conversations and thinking on inclusion and intersectionality and access to the cultural sector in Austria. Since 2021, she sits on the Beirat for Frauendomäne as an expert for Arts and Culture and on the BMKÖS Beirat for Kulturinitiativen.

Ali Nikrang (AT) is an AI researcher and artist at the intersection of artificial intelligence and musical creativity. He has both a technical and an artistic background and studied composition with a focus on new media at the Mozarteum University in Salzburg and computer science at Johannes Kepler University with a focus on Intelligent Information Systems in Linz. He received the first diploma in piano performance, also from the University Mozarteum, and he worked as a researcher at the Austrian Research Institute for Artificial Intelligence in Vienna before joining the Ars Electronica Futurelab in 2011.

Małgorzata Płysa (PL) is the co-director and curator of Unsound Festival—international festival of electronic and experimental music and art (since 2007) with the main edition in Kraków, Poland and satellite events in Warsaw, New York, Toronto, Adelaide, London and many more. Unsound is known for its interdisciplinary approach—fostering new collaborations and commissions of upcoming and innovative artists. Her interests are in contemporary music, art, technology and research in synesthesia.

Asher Remy-Toledo (CO/US) is founder and artistic director of HYPHEN HUB, a New York based organization that works at the intersection of art and creative technologies. Asher has produced dozens of live events in New York and internationally where music, sound, performance, and emergent technologies intersect. Hyphen Hub seeks to create a bridge between innovation and artistic fields using its global network of artists, curators, engineers, designers, performers, choreographers, and composers to bridge new types of collaborations among them and with institutions.

u19–create your world

Lisa Ackerl (AT) studies architecture at the University of Arts Linz. She is interested in the sustainable use of resources and the social and ecological aspects of urban development. Between her apprenticeship and the start of her studies, she became involved in climate protection. Since 2022 she has been working for the Student Union of the University of Arts Linz as a sustainability officer. Her works and projects deal with urban development and ecology as well as technology and digital manufacturing methods. She puts her enthusiasm for crafts and technology into practice in 1 to 1 projects.

Sirikit Amann (AT) has been a juror since the very inception of the u19—create your world category for youngsters under 19 years of age in Austria. She was director of cultural education at KulturKontakt Austria. Since 2020 she is the head of the sector "Education and Society" with a focus on digital education at the Austrian Agency for Education and Internationalization (OeAD). She previously served as an expert advisor in artistic affairs at the Austrian Federal Ministry of Education, Art and Culture, and in the Office of the former Federal Chancellery Minister.

Conny Lee (AT) is already part of the core team of u19—create your world. She is known throughout Austria as the host of Radio FM4's afternoon show *FM4 Connected,* produces and co-hosted the bilingual FM4 *Morning Show* as well as a show about video games in a socio-political context. In addition, Conny Lee is head of the "love department," which deals with topics such as sex, love, and dating. As an editor she reviews games, literature, and comics.

Karl Markovics (AT) was born on 29 August 1963 in Vienna and lives with his wife near Vienna. He is an actor, director, and screenwriter, who likes to eat and drink. He works in theater, film, radio, and television. He moves and tries to move others.

Remo Rauscher (AT) freelances in audiovisual media as an animator for commercial projects, as a projectionist in theater, teaching hybrid animation techniques at higher schools and youth camps alike. The recent past explores hybrid aspects of visual performances, as coding and VJ-ing demanded deeper dialogues with many disciplines of likewise performing arts.

Klasse! Lernen. Wir sind digital.
The Education Prize of OeAD, BMBWF, and Ars Electronica

Jakob Feyerer (AT) is a political educator, political didactician, and political scientist. After completing his doctoral studies in Vienna, he completed his training as an elementary school teacher in Linz. He teaches political education at the University College of Teacher Education Upper Austria in the fields of elementary education, secondary education, vocational education, as well as the fundamentals of political education in the Master's program in Political Education at Johannes Kepler University Linz. In his academic work, he is currently particularly interested in students' political perceptions, democracy in schools, and inclusive political education. He is also involved in various collaborations, such as being part of the organizing team of the Political Education Symposium held annually as part of the Ars Electronica Festival in Linz.

Simon Prossliner (IT) leads the Digital Learning team at the OeAD (Austrian Agency for International Cooperation in Education and Research). He is passionate about student leadership, where children have the opportunity to take responsibility for change and innovation and shape it themselves. He particularly values diversity, independent and creative thinking, and (digital) innovation.
Originally from South Tyrol, Simon studied Political Science in Vienna and Harvard before venturing into the field of education. He taught at a high school in Vienna, advocated for educational equity with Teach for Austria, and was involved in the MTOP "Culture School" initiative, which aimed to raise awareness among schools about diversity and inclusivity. Since 2020, he has been leading the OeAD Digital Learning initiative, focusing on the integration of digital technologies in education.

Elisabeth Rosemann (AT) has been dedicated to software development in various industries for almost twenty years, with a current focus on data processing in mechanical engineering. She studied Software Engineering at FH OÖ, Campus Hagenberg, and Statistics at JKU Linz. Since the beginning of Coder-Dojo Linz, Elisabeth has been serving on the board of the association and actively mentors aspiring coders. She is also one of the founders of the "Linzer Technologieplauscherl," an initiative focused on technology discussions and knowledge sharing in Linz.

Matthias Schoiswohl-Szwajor (AT) teaches technical and textile handicrafts at high school, lower secondary level, and at the University Colleges of Teacher Education Burgenland and Lower Austria, in the field of making, technology and design. He gained his teaching qualification for technical and textile handicrafts at the University of Applied Arts and developed and realized hands-on prototypes and apparatuses for the art and culture sector in the Dominikus Guggenberger workshop. His in-school and out-of-school mediation concepts are characterized by a high degree of action orientation and are also marked by a long-standing connection with the Zoom Kindermuseum. In 2022, he and his school class were awarded a prize in the "Klasse! Lernen." competition.

Petra Siegele (AT) has been working in the field of science, education, and society at the OeAD (Austrian Agency for Education and Internationalization) since 2008. Among other responsibilities, she is in charge of coordinating the research funding program "Sparkling Science" (2007 to 2019) and "Sparkling Science 2.0" (since 2021), as well as the program for promoting "Children and Youth Universities." Since 2015, she has also been heading the Center for Citizen Science established by the Federal Ministry of Education, Science and Research (BMBWF), which places a special emphasis on the collaboration between science and schools through its numerous Young Science initiatives.

Ars Electronica Award for Digital Humanity

Ambassador Christoph Thun-Hohenstein (AT) is Director General for International Cultural Relations at the Federal Ministry for European and International Affairs of the Republic of Austria. After studying law, political science, and history of art at the University of Vienna, Thun-Hohenstein worked for the Austrian Foreign Ministry and held posts in Abidjan, Geneva, and Bonn. He was Director of the Austrian Cultural Forum New York from 1999 to 2007. From 2007 to 2011, he served as Managing Director of departure, the Creative Agency of the City of Vienna. From 2011 to 2021, Thun-Hohenstein was General Director and Artistic Director of the MAK – Austrian Museum of Applied Arts, Vienna. He initiated the Vienna Biennale for Change, which he directed from 2014 until 2022. Most recently, he initiated the Vienna Climate Biennale, which will take place for the first time from April through July 2024. Thun-Hohenstein has published on topics dealing above all with European integration, contemporary arts and culture, digital modernity, climate care, and circular culture, and held numerous lectures on these topics. He has also curated exhibitions and he regularly serves on selection juries.

Regina Rusz (AT) is an Austrian diplomat and currently heads the department for cultural and scientific events abroad at the Austrian Foreign Ministry. She has worked at embassies and cultural forums in Croatia, Serbia, Hungary, and Slovakia, among others. The advancement of women has always played an important role in her professional activities as Director of the Cultural Forums in Budapest (2017–2020) and Belgrade (2001–2005). From 2008–2012, she was a member of the Austrian Task Force for Combating Human Trafficking at the Ministry of Foreign Affairs.

Thomas Kloiber (AT), born in 1972 in Graz, Austria, studied Catholic theology at the University of Vienna and at the Facultad de Teología del Norte de España Burgos. Before he joined the Austrian Federal Ministry for European and International Affairs in 2008, he worked as high school teacher for religion and as educational trainer for students of Catholic theology. He worked from 2003 to 2006 as General Secretary of the Federation of Catholic Family Associations in Europe. As employee of the Austrian Federal Ministry for European and International Affairs he served at the Austrian Embassies in Washington D.C. and in Moscow as well as at the Cultural Forums in Tehran and Bucharest.

Gerfried Stocker (AT) is a media artist and an engineer for communication technology and has been artistic director and co-CEO of Ars Electronica since 1995. Stocker is a consultant for numerous companies and institutions in the field of creativity and innovation management and is active as a guest lecturer at international conferences and universities.

Veronika Liebl (AT) is currently Managing Director of the department Festival/Prix/Exhibitions of Ars Electronica. She studied economic and business science at Johannes Kepler University in Linz (graduated in 2010) with study visits at Harvard University (US) and Université de Fribourg (CH) and has an interdisciplinary background in non-profit and innovation management. Since 2011 she is in charge of cultural management and European project development at Ars Electronica Linz and is a member of Linz city culture council and Linz' UNESCO City of Media Arts Executive Board. She leads Ars Electronica's European collaboration projects in the field of culture, research & education and together with her team developed, launched as well as executed in this position, numerous EU projects such as the STARTS Prize, DOORS (Digital Incubator for Museums), or the European ARTificial Intelligence Lab.

Martin Honzik is an artist and director of Ars Electronica's Festival, Prix and Exhibitions divisions. He studied visual experimental design at Linz Art University (graduated in 2001) and completed the master's program in culture & media management at the University of Linz and ICCM Salzburg (graduated in 2003). From 1998 to 2001, he was a member of the production team at the OK Center for Contemporary Art. In 2001, he joined the staff of the Ars Electronica Futurelab, where, until 2005, his responsibilities included exhibition design, art in architecture, interface design, event design, and project management. Since 2006, Martin Honzik has been director of the Ars Electronica Festival and the Prix Ars Electronica and in charge of exhibitions in the Ars Electronica Center as well as Ars Electronica's international exhibition projects.

European Union Prize for Citizen Science

Kat Austen (GB/DE/KR) is a person. In her artistic practice, she focusses on environmental issues. She melds disciplines and media, creating sculptural and new media installations, performances and participatory work. Austen's practice is underpinned by extensive research and theory, and driven by a motivation to explore how to move towards a more socially and environmentally just future. Working from her studios in Seoul and Berlin, Austen is long-term Artist in Residence at the Faculty of Maths and Physical Sciences, University College London, Senior Teaching Fellow at UCL Arts and Sciences, and a Fellow of the Royal Society of Arts.

Lewis Hou (GB) is founder and director of the Science Ceilidh, an intermediary organization supporting communities, education, research and culture across Scotland. He consults on equitable community engagement both nationally and internationally and is an organizing member of the global DiverSci Community of Practice. He is Fellow of the Young Academy of Scotland and was awarded the Innovator's Public Engagement Medal by the Royal Society of Edinburgh. He currently supports The Ideas Fund and Highlands & Islands Climate Change Community Grants, funding over 35 grassroots communities directly to lead research partnerships and participatory research on mental wellbeing, culture and climate change, and is most interested on how we change systems, funding, and policy to support genuine shifts in power to citizens.

Pedro Russo (PT/NL) is a University Professor in Astronomy & Society at Leiden University, the Netherlands and a member of the board of directors of Ciência Viva, the Portuguese National Agency for Scientific and Technological Culture. Pedro leads the Astronomy & Society Group. Dr. Russo was the global coordinator for the United Nation's International Year of Astronomy 2009. Pedro obtained his university degree in applied mathematics, physics and astronomy from the University of Porto, Portugal and was a research fellow at the Max Plank Institute for Solar System Research in Germany. Pedro is one of the founders of the Citizen Science Lab at Leiden University and is involved with several international organizations, such as the International Astronomical Union, European Astronomical Society, ECSITE. His work has received several awards, including Seeds Special Award 2009, Scientix Best Educational Resource in 2015 and 2016, Most Innovative Educational Activities in 2017 and 2018 by HundrED, 2018 Leiden University's K.J. Cath Prize and the first NWO Science Communication Award in 2020.

Andrea Sforzi (IT) is the Director of the Maremma Natural History Museum. His background is wildlife biology. Since 2011 he has developed citizen science projects in Italy, in collaboration with the team of the OPAL project (GB). Since 2012, he was among the founders of the European Citizen Science Association (ECSA) and sat on the Board of Directors until 2020. He coordinated the session on "Museums and Citizen Science" at the first ECSA's International Conference (Berlin, 2016) and led a chapter on this topic in a book published after the conference. Since 2016 he is a member of a panel of experts for the evaluation of Citizen Science projects in Austria, in the framework of the Top Citizen Science (TCS) initiative. In 2016 he was appointed to the Advisory Board of the OPAL project (GB). He is the president of the national association Citizen Science Italia (CSI).

Stefanie Wuschitz (AT) is a lead researcher at the Academy of Fine Arts Vienna for projects examining ethical hardware in artistic practice, citizen science and data colonialism in Indonesia. Through her arts-based research, Wuschitz critically examines cultures of technology and production, with an established artistic practice that is exhibited internationally. She co-founded the feminist hackerspace Mz* Baltazar's Laboratory in Vienna, which hosts international exhibitions, lectures and workshops, co-organizes conferences and festivals, and actively advocates against gender bias in technology and open culture. Wuschitz has previously held research fellowships at TU Berlin, the University of Arts Berlin (UdK), Umeå University, and the Weizenbaum Institut. She holds a PhD from the department of Visual Culture at TU Vienna, a MFA from the University of Applied Arts Vienna and a MPS from the Interactive Telecommunications Program of New York University.

STARTS Prize'23

Mónica Bello (ES/CH) is a Spanish curator and art historian. In her curatorial practice, she focuses on the crossovers between disciplines. Since 2015 she is the Curator and Head of Arts at CERN at the European Organization for Nuclear Research in Geneva. At CERN she designs and directs the laboratory's art strategy and coordinates the art programs: the artistic residencies, the art commissions, and the exhibitions. She is currently working in the exhibition Exploring the Unknown, the opening art exhibition for the CERN Science Gateway, with works by the artists Julius von Bismarck, Chloé Delarue, Ryoji Ikeda, and Yunchul Kim. Recently she curated the Icelandic Pavilion at the 59th Venice Biennale represented by the artist Sigurður Guðjónsson. In October 2022 she curated the exhibition Transits at the Reykjavík Art Museum, a solo exhibition of Guðjónsson. In 2018 she curated Quàntica/Broken Symmetries, a touring exhibition of works of Arts at CERN. In the same year she was invited to be the Guest Curator of the prestigious Audemars Piguet Art Commission, presented at Art Basel. Prior to her arrival in Switzerland she held the position of Artistic Director of VIDA (2010-2015) at Fundación Telefónica, Madrid, a pioneering award that fostered cross-cultural expressions around the notion of life. She initiated and ran (2007-2010) the Department of Education at Laboral Centro de Arte, Gijón (Spain). She curated exhibitions, events, and publications internationally supporting creators and researchers from different fields and backgrounds. As an internationally recognized figure within art and science networks, Bello is a regular speaker at conferences and participates in selection committees, advisory boards, and mentorship programs.

Francesca Bria (IT) is the President of the Italian National Innovation Fund and a Board Member of the Italian public media company RAI. She is Honorary Professor in the Institute for Innovation and Public Purpose at UCL in London and she is part of the high-level roundtable for the New European Bauhaus set up by the EC President Ursula von der Leyen to accelerate the EU Green Deal. She is the former Chief Digital Technology and Innovation Officer for the City of Barcelona in Spain. In this role, she was leading the smart city Agenda and she was one of the founders of the United Nations Cities Coalition for Digital Rights. Francesca Bria is leading the EU flagship *DECODE* project on data sovereignty in Europe, and is a Senior Adviser on the EC program STARTS (Innovation at the nexus of Science, Technology and the Arts). Francesca has a PhD in Innovation and Entrepreneurship from Imperial College, London and an MSc in Digital Economy from University of London, Birbeck. As Senior Programme Lead at Nesta, the UK Innovation Agency, she has led the EU *D-CENT* project, the biggest European Project on digital democracy and crypto platforms. She also led the *Digital Social Innovation* EU project, advising the EU on digital innovation policies and mission-driven innovation. She has been teaching in several universities in the UK and Italy and has advised governments, public and private organizations on technology and innovation policy, and its socio-economic, geopolitical, and environmental impact. Francesca has been nominated Commander of the Order of Merit of the Italian Republic. She has been listed in the top 50 Women in Tech by Forbes Magazine. Francesca is also Culture Persons of the Year 2020 according to the newspaper *Frankfurter Allgemeine Zeitung* (FAZ), and is in the World's top 20 most influential people in digital government by Apolitical.

Francesca Bria (IT) is the President of the Italian National Innovation Fund and Honorary Professor at the UCL Institute for Innovation and Public Purpose in London. She is Senior Adviser to the United Nations Human Settlements Programme (UN-Habitat) on digital cities and digital rights. Francesca Bria is leading the *DECODE* project on data sovereignty in Europe and is a member of the European Commission high-level expert group, Economic and Societal Impact of Research and Innovation (ESIR). Francesca has a PhD in Innovation and Entrepreneurship from Imperial College London and an MSc in Digital Economy from Birbeck, University of London. She has taught in several universities in the UK and Italy and advised governments, public and private organizations on technology and innovation policy, and its socio-economic and environmental impact.

Bernd Fesel (DE) has more than 30 years experience in the Cultural and Creative Sectors and Industries and is currently the Interim Chief Executive Officer of the forthcoming EIT Culture & Creativity, a new Innovation Community supported by the European Institute of Innovation and Technology that brings together 50 partners from 20 countries to create new innovation opportunities for Europe's 3 million cultural and creative players. Prior to this role Bernd was the director of the European Creative Business Network (ECBN), a not-for-profit organization of over 170 members from 44 countries that supports and develops the cultural and creative industries in Europe.

Before that, he was a serial entrepreneur within the CCSI sector, held the role of vice director of the European Capital of Culture in the Ruhr Region and was senior advisor to the legacy institute of RUHR.2010 until 2018: the european centre for creative economy (ecce) in Dortmund. He played a key role in EU initiatives such as like JRC-Creative City Monitor, Voices for Culture program, and ENTACT, and setup a European Research Alliance on Spillover-Effects of Culture and Creativity. Since 1990 Bernd is founder of startups, architect of novel public organizations, inspirator for programs and policies for CCSI, friend and connector of acclaimed artists as well as influencer and publisher.

Jun Inada (JP) is Head of Department at RICOH Co.LTD Tokyo, Japan. An experienced corporate planning director with a demonstrated history of working in the information technology and services industry. Tackling organizational culture change and new vision/business creation in large companies with strong ambition. Professional experience: Associate, RICOH Co.LTD, Tokyo (2005–2009): Japan domestic field sales, trading operation, supply chain management. Manager, RICOH Europe SCM, Bergen op Zoom (2009–2012): Supply chain management in European central warehouse in the Netherlands. Introduction/design of Oracle system as new SCM operational core system. Specialist, RICOH Europe PLC, London (2012–2015): European headquarter budget planning, operating company business support, developing emerging market in UK where European headquarters is located. Board of Directors, RICOH UK PLC, London (2015–2017): Japanese client business development, new business development. Head of Department, RICOH Co.LTD, Tokyo (2017–current): Engaging with CEO direct project to generate talent and value to make the creative business pillar.

Univ. Prof. Dr. Meinhard Lukas (AT) has held the office of Rector at the JKU since October 2015. He is a Professor of Civil Law and has held numerous academic positions, including Dean of the Faculty of Law (2011 to 2015). Furthermore, Meinhard Lukas is an expert at the Ministry of Justice for legislative procedures, an Austrian representative in the United Nations Commission on International Trade Law (UNCITRAL), an Advisory Board member of "Linz Cultural Development Plan New," and a corresponding member of the Medical Society for Upper Austria. During his term as Rector at the JKU, Meinhard Lukas has advocated pursuing stronger dialogue between art and technology by partnering with Ars Electronica to support the Ars Electronica Festival and to initiate the Festival University, as well as by promoting the development of the Art x Science School for Transformation, an inter-university program offered jointly by the University of Applied Arts Vienna and the JKU.

STARTS Prize Advisors

The advisors are renowned international consultants with expertise in this field. They recommend projects and encourage a wide range of potential participants to submit proposals. In addition, they ensure a balance in terms of gender and geographical origin of the participants.

Andrés Burbano (CO) is Professor in the Arts and Humanities School at the Open University of Catalunya (Barcelona, Spain) and Visiting Lecturer at Donau-Universität (Krems, Austria). He holds a PhD in Media Arts and Technology from the University of California at Santa Barbara (California, EEUU) and has spent most of his academic career in the School of Architecture and Design at Universidad de los Andes (Bogotá, Colombia). Burbano works as a researcher, curator, and interdisciplinary artist. His research projects focus on media history and media archaeology in Latin America and the Global South, 3D modelling of archaeological sites, and computational technologies' historical and cultural impact. Burbano has been appointed ACM SIGGRAPH 2024 Chair. His book *Different Engines: Media Technologies from Latin America* was published in 2023 by Routledge as part of the Design, Technology and Society book series.

Hackers & Designers (NL) is a non-profit workshop initiative with an emphasis on technology, design and art, and cross-disciplinary exchange. H&D activities address "makers", as well as "users" to discuss topics related to reliance on technology in our daily physical and digital, private and professional lives. By developing hands-on and low-barrier formats of learning about, and experimenting with hardware and software, H&D stimulates collaboration across disciplines, technological literacy, and different levels of expertise. H&D activities go hand in hand with building actual tools, which are documented and published so that they can be used, appropriated, and altered by others. With tools we mean software and/or hardware constructions, as well as pedagogical, organizational, and collaborative tools that enable critical engagement with and through technology—in practice.

Lydia Kallipoliti (GR) is an architect, engineer, and scholar whose research focuses on the intersections of architecture, technology, and environmental politics. She is a tenured Associate Professor at the Cooper Union in New York. Her work has been published and exhibited widely including the Venice Biennial, the Istanbul Design Biennial, the Storefront for Art and Architecture in New York, and the London Design Museum. She is the author of the awarded book *The Architecture of Closed Worlds, Or, What is the Power of Shit* (Lars Muller Publishers, 2018), and the editor of *EcoRedux,* a special issue of *Architectural Design* magazine (AD, 2010). She is the principal of ANAcycle thinktank, which has been named a leading innovator in sustainable design in *Build's* 2019 and 2020 awards.

Jon McCormack (AU) is a media artist and researcher based in Melbourne, Australia. He is currently a research Professor and director of Monash University's SensiLab, a creative technologies research laboratory that brings together artists, designers, scientists, and technologists in trans-disciplinary collaboration. McCormack's own creative practice encompasses generative systems, human-machine creativity, and creative Artificial Intelligence. He is the recipient of over 18 awards for both artistic innovation and technical research, including the Eureka Prize for Innovation in Computer Science and the Lumen Prize for Digital Art.

Kyuseung Keith Noh (KR) is Team Lead & Creative director of ZER01NE, the creative talent platform of Hyundai Motor Group. ZER01NE's mission is human-centric innovation beyond the typical Open Innovation of other corporates. ZER01NE nurtures creators and startups that can challenge and solve the problem of future society through collaboration of ART, TECH and BIZ. Since 2018, over 120 creators and 80 startups were supported and funded. He is also a professional investor and managing partner of the ZER01NE Fund.

Katja Schechtner (AT) is an urban scientist who develops new technologies and shapes innovative policies to keep cities on the move. She currently focuses on a reassessment of the position of nature within urban governance processes with MIT's LCAU and dieAngewandte and, at the same time, tackles questions of urban policymaking with a particular emphasis on understanding the human perception of—and interaction with—the built environment with MIT's Senseable City Lab. Previously she led innovation and technology programs at OECD in France, the Asian Development Bank in the Philippines, and advised the Inter-American Development Bank in Costa Rica and Argentina, the EU Commission, and headed an applied research lab at the Austrian Institute of Technology—all the while holding visiting professorships, lecturer positions, and research affiliations globally, e.g. at MIT Media Lab, Paris-Saclay, dieAngewandte, TU Vienna, or HDM Stuttgart.

Yasaman Sheri (CA) is a designer, writer, and researcher working at the intersection of technology, science, and creative inquiry. Her work investigates novel interfaces using sensing technologies, synthetic biology, simulation and perception systems. She is currently Principal Investigator of Serpentine Gallery's Synthetic Ecologies Lab.

Rodolfo Groenewoud van Vliet (NL) is co-founder of In4Art—an independent Institute for Art-Driven Innovation, established in 2015. His interests lie in exploring and prototyping possibilities of technologies and the economics that will influence the shorter- and longer-term futures of food, manufacturing, health, and biodiversity. Together with his wife and collaborator Lija Groenewoud van Vliet, he invented and practices the Art-Driven Innovation methodology that is currently driving over 75 international experimental programs and projects involving art, science, technology, and industry.

Kei Takeuchi (JP) is the deputy general manager of the brand and innovation design division at the Japanese advertising agency Hakuhodo. He works with clients on brand building and innovation, through "the integration of logic and sensibility" and "co-creation process." He also leads the Hakuhodo side of a collaborative project with Ars Electronica.

Ksenia Zaytseva (CA/RU) is a data professional with nearly a decade of experience working in industry, research, and cultural heritage domains. She is currently working as a data architect with Electronic Arts, a video game software company. Before transitioning to the industry, she worked in science field with the Canadian Centre for Computational Genomics where she was a part of several nationwide projects dedicated to establishing data infrastructure for performing large-scale distributed analysis of genomic and neuroscience data. Prior to that, she worked with the Austrian Centre for Digital Humanities of the Austrian Academy of Sciences and contributed to numerous interdisciplinary projects at the intersection of technology, humanities, and social sciences.

CultTech x Ars Electronica Award

Lucrecia María Vanni (AR/IT) is an Argentine-Italian expert with extensive experience in public administration, international organizations, and the private sector, where she has coordinated teams, leading the design and execution of various projects. She is also the President of Bajos del Barolo, a Cultural Center in Buenos Aires dedicated to transforming a historic place into a space where people can approach Art and Culture through the contact with the new technologies.

Dmitry Aksenov (RU) (*1966, Novosibirsk). He studied Aerophysics and Space Research at the Moscow Institute of Physics and Technology. In 1999 he received an MBA in Strategic Management at the Russian Academy of National Economy and Public Administration. His business focus is in the development of residential communities and investments in technology startups. Dmitry is a president of CultTech Association. He is a patron of the arts and culture, the founder of the viennacontemporary art fair and Aksenov Family Foundation, the President of the Russian Society of Friends of Salzburg Festival, a member of the International Board of Palais de Tokyo. He is also the founder of the Vitiligo Research Foundation.

Gerfried Stocker (AT) is a media artist and an engineer for communication technology and has been artistic director and co-CEO of Ars Electronica since 1995. Stocker is a consultant for numerous companies and institutions in the field of creativity and innovation management and is active as a guest lecturer at international conferences and universities.

ARS ELECTRONICA 2023
Festival for Art, Technology & Society

Artistic Director: Gerfried Stocker
Chief Curatorial Officer: Martin Honzik
Managing Director: Veronika Liebl
Technical Director: Karl Julian Schmidinger

Head of Festival: Christl Baur
Head of create your world: Hans Christian Merten
Head of EU Projects: Vanessa Hannesschläger
Head of Operations: Xenia Kentz

Production Team:
Markus Artelsmair, Dario Baijric, Christl Baur, Pablo Bes Alonso, Fabiana Braunstorfer, Bernd Breitenauer, Leo Breneis, Anna Bruderhofer, Sophia Calo, Ana Maria Carabelea, Alexandra Corodan, Alexandra Crasnaru, Chiara Croci, Eleni Danesi, Yusra Dellali, Daniela Duca, Elwin Ebmer, Jaka Erjavec, Miha Erjavec, Julian Erk, Ebrahim Eskandari, Katrin Fenninger, Malinda File, Hannes Franks, Marion Friedl, Jessica Galirow, Magdalena Giegler, Violeta Gil Martinez, Moritz Grabner, Bartosz Grabski, Roland Grilberger, David Grohe, Maximilian Haarich, Florian Habel, Sebastian Häger, Rita Hainzl, Vanessa Hannesschläger, Karam Harwash, Manuel Hauer, Nico Hartl, Randolf Helmstetter, Alexander Hens, Barbara Heinzl, Manuela Hillmann, Jens Höffken, Alina Holzinger, Peter Holzkorn, Martin Honzik, Holger Hörtnagl, Magdalena Hrnicek, Jovana Jankov, Christophe Jezierski, Mihaela Kavdanska, Xenia Kentz, Michaela Keplinger, Nina Kneidinger, Maria Koller, Patrik Köppl, Patrik Kozjak-Lesicki, Veronika Krenn, Suhun Lee, Johanna Lenhart, Tiziano Leonardi, Veronika Liebl, Johanna Liska, Paulina Maitz, Kristina Maurer, Hans Christian Merten, Elisabeth Mürzl, Pamela Neuwirth, Andrew Newman, Monika Niederl, Anna Oelsch, Emiko Ogawa, Maria-Nefeli Panetsos, Philipp Nelweg, Maria Pfeifer, Benjamin Pittertschatscher ,Meli Posch, Gabriele Purdue, Christina Radner, Marco Rainer, Annika Rohde, Kati Romics, Andrea Scheinecker, Karl Julian Schmidinger, Marie-Louise Schmidinger, Daniel Schöngruber, Hannah Scott, Armin Seidl, Karl Seiringer, Miguel Senra-Hermana, Sumreen Shahzad, Lisa Shchegolkova, Lera Shynkarova, Regina Sipos, Adaeze Skerrett, Martina Sochor, Florian Steidl, Helmut Steinecker, Philip Steiner, Jaia Davis Thomas, Laura Torres, Lukas Traxler, Josipa Trupina, Iris Tschank, Edin Turalic, Alisa Verbina, Helena Viteka, Joschi Viteka, Leon Wagner, Matthias Weghofer, Martin Weidinger, Jan Weiler, Laura Welzenbach, Michaela Wimplinger, Philip Wolfsohn, Alexander Wöran, Peggy Yin, Masha Zolotova

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

Marketing
Meli Posch, Christina Holzmeier

Co-Curatorial Team
Director Ars Electronica Animation Festival:
Jürgen Hagler
Expanded Animation: Juergen Hagler, Alexander Wilhelm
IDSA x Ars Electronica FOUNDING LAB:
Katja Schechtner, Christopher Lindinger
University of Arts Linz: Manuela Naveau
Anton Bruckner Private University: Volkmar Klien
Johannes Kepler University & EUMETA Program
Co-Curation: Meinhard Lukas
Big Concert Night: Norbert Trawöger
More-than-Planet Lab: Miha Turšič and consortium
More-than-Planet & EUDigitalDeal Conference Days:
THE CATALYSTS

Prix Ars Electronica 2023
Idea: Hannes Leopoldseder
Conception: Christine Schöpf, Gerfried Stocker
Chief Curatorial Officer: Martin Honzik
Managing Director: Veronika Liebl
Technical Director: Karl Julian Schmidinger

Head of Prix Ars Electronica: Emiko Ogawa

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

ORGANIZER

ARS ELECTRONICA
Art, Technology & Society

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

L_nz

EVENT PARTNERS

Lentos

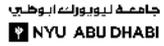Kunstuniversität Linz
University of Arts Linz

ANTON BRUCKNER PRIVATUNIVERSITÄT
Tanz Musik Schauspiel
OBERÖSTERREICH

IN COOPERATION WITH

ORF oö
Weil wir OÖ lieben

FOUNDING LAB PARTNERSHIP

IDSA Institute of Digital Sciences Austria

Bundesministerium
Bildung, Wissenschaft
und Forschung

GARDEN PARTNERS

AOTEAROA — Human-Computer Interaction Lab, University of Otago	**ARAD** — kinema ikon	**BANGALORE** — BeFantastic
BARCELONA — ESPRONCEDA – Institute of Art & Culture	**BLACKSBURG** — Virginia Tech	

BOLOGNA — Sineglossa

CAMBRIDGE — MIT Center for Constructive Communication

CHICAGO — Chicago Gamespace

DUBAI — Cifra

ENSCHEDE — Tetem

FANO — Umanesimo Artificiale

HAMBURG — Climate Service Center Germany (GERICS)

JAKARTA — Media Art Globale (MAG)

Connected Art Platform (CAP)

MILAN — MEET | Digital Culture Center

MONTRÉAL — Hexagram

MUTEK

Xn Québec

NEW YORK — Hyphen Hub

XRE (XR Ensemble)

ROTTERDAM — Formosa

TAIPEI — The Ministry of Culture of Taiwan

Department of Cultural Affairs Taipei City Government

Virtual and Physical Media Integration Association of Taiwan

Metaverse Alliance

Meta

TEMPE — Meteor Studio, Arizona State University (US)

Leonardo-ASU Initiative (US)

TOKYO — Civic Creative Base Tokyo (CCBT)

Yasuaki Kakehi Lab, The University of Tokyo

UTRECHT — IMPAKT [Centre for Media Culture]

VIENNA — ACOnet

WINDSOR — INCUBATOR Art Lab

IOTA Institute

WROCŁAW — Audiovisual Technology Center (CeTA)

Deutsche Telekom

gtec

Polycular

CREATIVE ROBOTICS
Robots in Architecture

CAMPUS GARDEN PARTNERS

ABU DHABI — New York University Abu Dhabi

ABU DHABI/ DUBAI/SHARJAH — Festival X

BERLIN — University of Applied Science Berlin

University of the Arts Berlin

Technical University Berlin

BREMEN — University of Arts Bremen

BUCHAREST — National University of Theatre and Film "I. L. Caragiale"

BUENOS AIRES — National University of Tres de Febrero

CHICAGO — School of the Art Institute of Chicago

University of Chicago - AxLab

CLUJ — Babeș-Bolyai University

DETROIT — College For Creative Studies

DOHA — Virginia Commonwealth University, School of the Arts in Qatar

DUBAI — The Dubai Institute of Design and Innovation

GUANGZHOU — Hong Kong University of Science and Technology (Guangzhou)

HAGENBERG — University of Applied Sciences Upper Austria

HSINCHU — National Tsing Hua University

JERUSALEM — Musrara, the Naggar School of Art and Society

OSAKA — Osaka University of Arts

KREMS — University of Continuing Education Krems

LAUSANNE — ECAL/University of Art and Design Lausanne

LINZ — Johannes Kepler Universtät

LONDON — University of the Arts London - London College of Communication

Royal College of Art, School of Communication

The Bartlett School of Architecture, University College London

LUCERNE — HSLU - Lucerne School of Art and Design

NOVA GORICA — University of Nova Gorica School of Arts

PRAHA — UMPRUM Academy of Arts Prague

SAINT-DENIS — University Research School ArTeC (FR), Paris 8 University Vincennes - Saint-Denis, Teamed Lab

SALZBURG — Paris Lodron University Salzburg

Mozarteum University

SANTIAGO — UC Chile

University of Chile

PRISMA

SEOUL — Korea National University of Art | K-ARTS with Pohang University of Science and Technology

Sungkyunkwan University South Korea

SEVILLA — University of Seville

SHANGHAI — ShanghaiTech University

SHARJAH — American University of Sharjah

SINGAPORE — Nanyang Technological University

TAIPEI — TAIPEI NATIONAL UNIVERSITY OF THE ARTS

TOKYO — The University of Tokyo

VALDIVIA — Universidad Austral de Chile

VIENNA — University of Applied Arts Vienna

mdw University of Music and Performing Arts Vienna

VILNIUS — Institutio Media

WEIMAR — Bauhaus-Universität Weimar

ARS ELECTRONICA RECEIVES SUPPORT FROM

European Union´s Horizon 2020 research and innovation programme

European Union Erasmus+

European Union Horizon Europe

European Union Creative Europe

Bundesministerium für Kunst, Kultur, öffentlichen Dienst und Sport

Bundesministerium Europäische und internationale Angelegenheiten
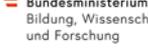
Bundesministerium für Bildung, Wissenschaft und Forschung
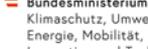
Bundesministerium für Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie

Land Oberösterreich

OeAD-GmbH

Austrian Research Promotion Agency (FFG)

Österreichischer Wissenschaftsfonds FWF

Verwertungsgesellschaft der Filmschaffenden GenmbH

Pro Helvetia

Creative Industries Fund NL

Arts Council Korea

Chile

Ministerio de Relaciones Exteriores, Dirección de Asuntos Culturales Chile

Ministerio de las Culturas, las Artes y el Partimonio Chile

Institut Ramon Llull

Hac Te - Barcelona Hub d'Art, Ciència i Tecnologia

.NewArt { foundation;}

Barcelona Institute of Science and Technology

Institut de Física d'Altes Energies (IFAE)

Gemeinnützige Privatstiftung Kaiserschild

Japan Foundation

Taiwan Creative Content Agency (TAICCA)

Istituto Italiano di Cultura

Québec Government Office in Berlin

Spanische Botschaft

Italienische Botschaft

Institut Francais Autriche

Botschaft der Bundesrepublik Deutschland Wien

Embassy & Permanent Mission of Denmark, Vienna

Conseil des arts et des lettres du Québec

British Council Austria

Rumänisches Kulturinstitut Wien

Culture Ireland

Vlaamse Gemeenschap, Department Culture, Youth and Media

MOBILITY PARTNER

Höglinger Denzel GmbH

SPONSORS

CIFO	HAKUHODO Inc.	Jung von Matt	The VH Award
Hyundai Motor Group	BOLD Community	Wirtschaftskammer Oberösterreich	Dynatrace
CultTech Association	MIC Datenverarbeitung GmbH	Oberösterreich Tourismus	TOMITA information Hub
KREISEL Electric GmbH	Research Institute for Symbolic Computation (RISC)	AIT Austrian Institute of Technology	Arbeitsmarktservice Oberösterreich
KUKA	Mushroom Research Center Austria	4youCard	BBP GmbH	Dorotheum GmbH & Co KG
Graf Carello GmbH	Hilti Austria	HPE Aruba Networking	CCF Computer Center Feldbach	S.S.T. Security
Ton & Bild Medientechnik GmbH	Ing. Martin Pemwieser GmbH	Alfred Kärcher GmbH	Klangfarbe
Lenovo Technology B.V.	S. Spitz GmbH	CHICO Hängematte GmbH	Techman Robot Inc.
Siemens AG Österreich	Ricoh Co., Ltd.	Toyota Coniq Alpha	Art and Program, Inc.	Industrial Technology Research Institute
Godot Inc.	Tourismusverband Linz	Sophos Ltd.	Andreas Heider, Security for Business
Ableton AG	Panasonic	Brau Union Österreich AG	Arbeiterkammer OÖ

SUSTAINABILITY PARTNERS

BIO AUSTRIA

Bio Obst OÖ

Morgentau

KlimaTicket

LINZ AG

Ringer GmbH

Klimabündnis OÖ

KlimaKultur-Green
Event OÖ

Green Front
GmbH

Triple A Aqua Service
GmbH

PROJECTS

STARTS Prize

STARTS in the City

STARTS4Africa

EIT Culture & Creativity

European Digital Deal

EMAP European
Media Art Platform

More-than-Planet

esero Austria

Realities in Transition

IMPETUS

European Union Prize for
Citizen Science

ACuTe

CCI Thrive - Bespoke Business Models
and Innovative Practices of Cross-Sectoral
Cultural and Creative Collaboration

DOORS - Digital Incubator
for Museums

WeSTEAM

FUNKEN - ESS

AI5production

Critical ChangeLab

SHARESPACE

Art Thinking
Program

MEDIA PARTNERS

OÖ Nachrichten

Tips

radio FM4

Ö1 Club

FMX 2023

BezirksRundSchau

Salzburger Nachrichten

COOPERATION PARTNERS

Academy for Theatre and Digitality Dortmund

andersART

Antre Peaux

Atelierhaus Salzamt

Art2M/Makery

BetaSeries

BGZ Berliner Gesellschaft für internationale Zusammenarbeit

Bildrecht

Bozar

Bruckner Orchester Linz

Buni Innovation Hub

C³ Center for Culture & Communication Foundation

Centrica

Centro Azkuna de Ocio y Cultura

Changemaker Educations

Chroniques

CIKE - Creative Industry Košice

CoderDojo Linz

Creative Region

Dark Euphoria

De Toneelmakerij

Det Norske Teatret

Die pädagogische Hochschule Oberösterreich

Digital Art International

Ecsite

Emerging Communities Africa

Estonian Academy of Arts

EUMETA - EUROPEAN SCHOOL OF METAVERSE

European Alternatives

European Science Engagement Association EUSEA

European Theatre Convention ETC

FAB Verein zur Förderung von Arbeit und Beschäftigung

Fondazione Musei Civici di Venezia

Fox-Assembly

Frankfurter Buchmesse

Fraunhofer ENAS

Fraunhofer IWU

Fraunhofer MEVIS: Institute for Medical Image Computing

Gluon

Goethe-Institut

Grand Garage

Grand Palais Immersif

hapaSpace

Iconem

IDIZ - Institute for Social Research in Zagreb

iMAL Art Center for Digital Cultures & Technology

IMZ International Music & Media Centre

INOVA+

Kepler Salon – Verein zur Förderung von Wissensvermittlung

Kersnikova Institute / Kapelica Gallery

King's College London

Klub Solitaer

KONTEJNER | bureau of contemporary art praxis

L.E.V. Festival

La French Tech Grande Provence

LABoral Centro de Arte y Creación

Landestheater Linz

LATRA Innovation Lab

Leonardo OLATS

LINZ CENTER OF MECHATRONICS GMBH

LIVA

Lulea Tekniska Universitet

m-cult

Mariendom Linz

mb21 - Medienkulturzentrum Dresden

MKD – Meisterschule für Kommunikationsdesign Linz

Museo del Prado

Museo Reina Sofia

MUSEUM BOOSTER

Nähküche Linz

NeMe Arts Centre

Nesta

Netherlands Institute for Sound and Vision

Northern Photographic Center

OMAi

Onassis Stegi

Only Tomorrow Association (Asociația Doar Mâine)

OÖ Landeskultur GMBH

Open Commons Linz

Otelo eGen

Oulu University of Applied Sciences

Picha

PiNA

Play On

Pro Progressione

Projekt Atol

RIXC Centre for New Media Culture

Rotes Kreuz Oberösterreich

Salzburger Festspiele

Salzkammergut 2024

Saxion University of Applied Sciences

Schauspielhaus Graz

Science for Change

Slovensko narodno gledališče Nova Gorica

Sounds Queer?

SpielFabrique

Stadtgärten

Stadtwerkstatt

STEMarts Lab

T6 Ecosystems

Tactical Tech

Teatrul Național "Marin Sorescu"

Technical University Dresden

Technisches Museum Wien

The Center for the Promotion of Science (CPN)

The Culture Yard

The Northern Photographic Centre

Théâtre de Liège

Theatre Dortmund

Theatro Circo de Braga

Trinity College Dublin

University of Barcelona

University of Oulu

Verein Energiewende Linz

Waag Futurelab

Werkleitz Centre for Media Art

WRO Art Center

Zabala Innovation

Zaragoza City of Knowledge Foundation / Etopia (FZC)

Prix Ars Electronica 2023

Cover illustrations:
Front: *Broken Spectre,* Richard Mosse; photo: courtesy of the artist,
©Richard Mosse, Jack Shainman and Carlier Gebauer
From Paradigm to Paradigm, into the Biomic Time, Nandita Kumar;
photo: courtesy of the artist, ©Nandita Kumar
Back: *Delivery Dancer's Sphere,* Ayoung Kim; photo: courtesy of the artist, ©Ayoung Kim
PLSTC, Laen Sanches; photo: courtesy of the artist, ©Laen Sanches

Climate neutral
Print product
ClimatePartner.com/53401-2307-1023

Documentation of the Prix Ars Electronica 2023
The Prix Ars Electronica is the world's most time-honored media arts competition. Lavishly illustrated and containing texts by the prize-winning artists as well as statements from the juries, this catalog showcases the works honored by the Prix Ars Electronica 2023.