

# CyberArts 2022

Prix Ars Electronica

S+T+ARTS  
Prize '22

 **ARS ELECTRONICA**  
Art, Technology & Society

**HATJE  
CANTZ**

# CyberArts 2022

Prix Ars Electronica

S+T+ARTS  
Prize'22

Gerfried Stocker · Markus Jandl

# CyberArts 2022

## **Prix Ars Electronica 2022**

Computer Animation · Interactive Art+ · Digital Communities · u19–create your world ·  
Visionary Pioneers of Media Art · Ars Electronica Award for Digital Humanity · Klasse! Lernen.

## **STARTS Prize '22**

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

# Contents

Prix Ars Electronica 2022

- 8 **Prix Ars Electronica 2022**  
Gerfried Stocker, Markus Jandl

## Computer Animation

- 14 **Bodyworks and the Rhythms of Worlding**  
Statement of the  
Computer Animation Jury

Golden Nica

- 20 **Being**  
Rashaad Newsome

Awards of Distinction

- 24 **Absence**  
Marc Hericher

- 26 **Anxious Body**  
Yoriko Mizushiri

Honorary Mentions

- 28 **Ad Hominem**  
Alex Verhaest

- 30 **Cangjie's Poetry**  
Weidi Zhang, Donghao Ren

- 32 **It was a Roadside Picnic /  
Beyond Black Orientalism**  
Salma Noor, Megan Broadmeadow,  
Brandon Covington Sam Sumana,  
Nicholas Delap, Ben Hall, Nayu Kim,  
Kinnari Saraiya

- 34 **Promesa**  
Julián Palacios

- 36 **Radicalization Pipeline**  
Theo Triantafyllidis

- 38 **Samsara**  
Hsin-Chien Huang

- 40 **Tartarus**  
Mariano Fernández Russo

- 42 **The Crow**  
Glenn Marshall

- 44 **Unless**  
Deborah Joyce Holman,  
Yara Dulac Gisler

- 46 **Very, Very, Tremendously**  
Guangli Liu

- 48 **When fox and rabbit say goodnight.**  
Finn Stevenhagen

- 50 **Wisdoms for Love 3.0**  
Keiken w/ Obso1337, Ryan Vautier  
and Sakeema Crook

## Interactive Art +

- 54 **Interactive Art + Radical consciousness**  
Statement of the Interactive Art + Jury

Golden Nica

- 60 **BiOfilm.net: Resist like bacteria**  
Jung Hsu, Natalia Rivera

Awards of Distinction

- 64 **The Eternal Return, pre-Hispanic  
Interactions**  
Cristhian Avila

- 66 **Perfect Sleep**  
Tega Brain, Sam Lavigne

Honorary Mentions

- 68 **Another Moon**  
Kimchi and Chips

- 70 **Behind Shirley**  
Ibiye Camp

- 72 **Brave New Commons**  
Masaki Fujihata

- 74 **BLACKTRANSARCHIVE.COM /  
WE ARE HERE BECAUSE OF THOSE  
THAT ARE NOT**

- Danielle Brathwaite-Shirley

- 76 **Chroma**  
Yunchul Kim

- 78 **How to Make an Ocean**  
Kasia Molga

- 80 **morphecore**

- Daito Manabe + Shingo Oono + MIKIKO

- 82 **NoSearchBar**  
Erik Anton Reinhardt

- 84 **Siempre se tienen 19 años  
en un rincón del corazón**  
Gabriela Munguía, Germán Pérez

- 86 **Technologies of Hope & Fear:  
100 Pandemic Technologies**

- Marek Tuszynski, Stephanie Hankey

# Contents

Prix Ars Electronica 2022

- 88 **The Zizi Show**  
Jake Elwes

- 90 **Voz Pública**  
Dora Bartilotti

## Digital Communities

- 94 **(re)claiming Spaces**  
Statement of the  
Digital Communities Jury

Golden Nica

- 100 **Avatar Robot Cafe DAWN ver.β**  
Ory Yoshifuji, Ory Lab  
dawn2021.orylab.com/en

Awards of Distinction

- 104 **Families For Freedom**  
Amina Khoufani  
https://syrianfamilies.org/en

- 106 **STRONG HAIR**  
Tega Brain, Sam Lavigne

Honorary Mentions

- 108 **All the Stars We Cannot See**  
Gao Yujie, Megan Smith  
allthestarswecannotsee.space

- 110 **Alsaha Archive**  
Akhbar AlSaha  
https://www.akhbaralsaha.com/archive/

- 112 **Atomfa (and other stories)**  
Joanna Wright  
www.atomfa.com

- 114 **Blank Noise**  
Jasmeen Patheja  
http://blanknoise.org

- 116 **Center for Political Beauty**  
https://politicalbeauty.de

- 118 **Commons Cargobikes**  
wielebenwir e.V.,  
Commons Cargobike Initiative  
https://commons-cargobikes.org

- 120 **FragDenStaat**  
fragdenstaat.de

- 122 **Internet Freedom Foundation**  
Ashlesh Balaji Biradar  
https://www.internetfreedom.in

- 124 **SalvageGarden:  
Computers Against Covid**  
https://salvage.garden

- 126 **Sisyphus**  
Kachi Chan  
www.kachi-chan.com/projects/sisyphus

- 128 **Total Refusal**  
pseudo-marxist media guerilla  
Total Refusal, ZKM Karlsruhe  
https://totalrefusal.com

- 130 **Twisted Gravity  
Inspired By A Sustainable Future  
For Clean Water**  
Lynn Hershman Leeson in collaboration  
with Dr. Thomas Huber and Richard  
Novak/The Weiss Institute Harvard

## Visionary Pioneers of Media Art

- 134 **Visionary Pioneer of Media Art 2022:  
Laurie Anderson**

- 138 **Laurie Anderson:  
Visionary Pioneer of Media Art  
by Charles Amirkhonian**

## Ars Electronica Award for Digital Humanity

- 148 **Ars Electronica Award for  
Digital Humanity**

- 150 **The Data Nutrition Project**  
Kasia Chmielinski, Sarah Newman,  
Matthew Taylor

Honorary Mention

- 155 **Digital Research Travelogues  
through European Archives**  
Marina Gržinić, Jovita Pristovšek,  
Sophie Uitz

# Contents

Prix Ars Electronica 2022

## u19—create your world

- 158 **The Kids Are Not Alright**  
Statement of the  
u19—create your world Jury

## Young Professionals

Golden Nica

- 164 **Die schwarze Decke**  
Mary Mayrhofer

Awards of Distinction

- 166 **/\_holofear**  
Jolanda Abasolo, Julian Köppl,  
Xaver Haiden, Leonhard Schönstein

- 167 **171**  
Fabian Wenzelhuber

Honorary Mentions

- 168 **BONGOS**  
Sabrina Koller, Martina Janjic, Barbara  
Mendez Mendez, Johanna Stefanic

- 169 **Cyberfish**  
Mika Weinmayr, Felix Mrak

- 170 **Humanity = Nature**  
Frida Tabi Tataw, Frederik Lorenzoni,  
Harald Müller, Lino Müller

- 171 **Lost**  
Workshop participants at  
Medien Kultur Haus Wels

- 172 **not in public**  
Emil Klostermann

- 173 **Radikalisierung im Netz**  
**Wie Extremisten das Internet für  
ihre Zwecke missbrauchen**  
Johanna Westreicher, Magdalena Juen,  
Sophie Juen, Anna Zangerl, Leonie Jäger

- 174 **Reinigung**  
Barbara Nina Rettig

- 175 **Saudade**  
Jasmin Pemmer

- 176 **Unity**  
Michael Zamminer

- 177 **Waste-Bin-GO**  
Maximilian Zaglmayr, Manuel Obermayr

## Young Creatives

u14 Prize

- 178 **Orphea und Eurydike**  
Elena Schöppl, Carla Schöppl,  
Rosina Umgeher

u14 Awards of Distinction

- 179 **Chaos in Wien**  
Students at RGORG 23 antonkriegergasse

- 180 **Driving into the Future**  
Students at MS Frohnleiten

u12 Prize

- 181 **Druzeiplo**  
Benjamin Hölzl

u12 Award of Distinction

- 182 **SNELL – Die Wahrheit kommt heraus**  
Gloria Riedmann, Viktor Flatz,  
Matteo Di Cesare

u12 Honorary Mention

- 183 **ISS MIR RIM SSI**  
Dominik Pichler, Immanuel Fröhlich,  
Lennard Fellner

u10 Prize

- 184 **Leuchtende Zukunft**  
Emilio Deutsch

u10 Award of Distinction

- 185 **Save the monkeys, save the rainforest**  
Sarah Hölzl

u10 Honorary Mentions

- 186 **Bärlauch**  
Levi Pittermann, Arthur Fortin, Thabo  
Juric-Grubner, Jakob Daburon,  
Kaan Colak

- 187 **Ferngesteuerter Roboter**  
Leopold Kastler

## Klasse! Lernen. Wir sind digital.

The education prize of BMBWF,  
OeAD, and Ars Electronica

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

- 192 **Jury Prix Ars Electronica 2022**

# Contents

STARTS Prize '22

Innovation at the nexus of Science, Technology and the ARTS

- 202 **STARTS—Science, Technology  
and the ARTS**  
Introduction

- 205 **Technology Without Meaning  
is Meaningless**  
Statement of the STARTS Prize '22 Jury

## STARTS Prize '22 Grand Prize Artistic Exploration

- 212 **Holly+**  
Holly Herndon, Mathew Dryhurst,  
Herndon Dryhurst Studio

## STARTS Prize '22 Grand Prize Innovative Collaboration

- 216 **Antarctic Resolution**  
Giulia Foscari, UNLESS

## STARTS Prize '22 Honorary Mentions

- 220 **A Sun Architecture—  
The party is in full swing**  
Stéphane Bonnard, KompleX Kapharnaüm

- 222 **Ambient Weaving**  
Hosoo Co., Ltd., Yasuaki Kakehi Lab,  
The University of Tokyo, ZOZO NEXT, Inc.

- 224 **Avatar Robot Cafe DAWN ver.β**  
Ory Yoshifuji, Ory Lab

- 226 **Cleaning Emotional Data**  
Elisa Giardina Papa

- 228 **Digital Violence: How the  
NSO Group Enables State Terror**  
Forensic Architecture

- 230 **Inanimate Species**  
Joana Moll

- 232 **Mikromedas AdS/CFT 001**  
Valery Vermeulen

- 234 **The Exploded View Beyond Building**  
Biobased Creations

- 236 **The Plant Intelligence Plan**  
Tianyi Zhang

- 238 **UITSLOOT**  
Gijs Schalkx

## STARTS Prize '22 Nominations

- 240 **Alone Together**  
Anna Anderegg, Swan Park,  
Marco Barotti, Sara Kim
- 241 **Digital SUPERPOWER!** · Ling Tan
- 242 **Ent-**  
Libby Heaney
- 243 **Entanglement** · ANNEX
- 244 **Gran Turismo Sophy™**  
Pete Wurman and the teams at Sony AI,  
Polyphony Digital and Sony Interactive  
Entertainment
- 245 **Key Workers. Migrants' contribution  
to the COVID-19 response**  
Federica Fragapane, Alex Piacentini,  
Marta Foresti/ODI
- 246 **LIFE SUPPORT SYSTEM**  
**Ecosystem Services Estimation**  
**Experiment**  
DISNOVATION.ORG
- 247 **Neo Stone Age** · Erco Lai
- 248 **Political Atmospheric**  
Manifest Data Lab
- 249 **Project PLATEAU**  
MLIT: Ministry of Land, Infrastructure,  
Transport and Tourism
- 250 **Quorum Sensing:**  
**Skin Flora Signal System**  
Helena Nikonole, Lucy Ojomoko
- 251 **SolarSoundSystem** · Cédric Carles
- 252 **SpreeBerlin—The Voice of a River**  
JKUKULA
- 253 **Susceptible** · Anna Dumitriu, Alex May
- 254 **Symbiosis** · Polymorf
- 255 **The Glass Room:**  
**Misinformation Community Edition**  
Tactical Tech
- 256 **Vertical Walking** · Rombout Frieling
- 257 **WITHER—A Slice of Rainforest**  
**Disappearing at the Rate of**  
**Deforestation** · Thijs Biersteker
- 258 **STARTS Prize '22**  
**Jury**
- 260 **STARTS Prize '22**  
**International Advisors**

# Prix Ars Electronica 2022



## Prix Ars Electronica 2022

Gerfried Stocker, Markus Jandl

Established in 1987 and based on an idea by Hannes Leopoldseider, the Prix Ars Electronica has in the 35 years of its existence become the most important continuously held competition for digital art in the world. The highly endowed competition is not only an important platform for artists to present their works to a jury of international experts and compete for one of the coveted Golden Nicas; for the Ars Electronica Festival, the Prix Ars Electronica is also an important yardstick and seismograph for gauging the artistic work currently taking place at the nexus of art, technology, and society, as well as an indispensable resource for the development of the festival's various programs.

While in 1987, in the founding phase of this "competition for computer art," the focus was primarily on the visibility and recognition of the international community of artists, scientists, and students who devoted themselves to this completely new field of computer art, over the years the role of the interdisciplinary platform gained in importance. In the fusion of art, technology, science, and society that is typical for Ars Electronica, the Prix Ars Electronica has become a one-of-a-kind hotspot for creative production in the area of digital arts, but also for the critical examination of the manifold consequences of technological development. Separate categories dedicated to social impact and the significance of digital communities as well as to bio art are a logical consequence of this.

Digitalization has made possible new forms of expression and the linking of genres that would

have been unimaginable only a few decades ago. In light of this, the founding in 1979 of Ars Electronica as a festival for art, technology, and society by journalist Hannes Leopoldseider, scientist Herbert W. Francke, artist Hubert Bognermayr, and music producer Ulli Rützel seems all the more remarkable. The visionary dimension of these pioneers is evident right in the introductory statement of the first Ars Electronica catalogue, written by Herbert W. Franke, the scientist, author of science fiction novels, and specialist for computer graphics, who died this July at the age of 95:

*"With electronics, a progressive element has entered our technical world whose influence is not limited to industry and research but rather intervenes in all areas of life. This has set in motion a development that opens up astonishing and fantastic aspects, but in other respects also arouses criticism and skepticism."*

With his vision of a consistent connection between art, technology, and society, Herbert W. Franke made a decisive contribution to laying the foundations for the Ars Electronica Festival as well as formulating a timelessly relevant model for meeting the constantly new challenges of shaping the future. We will miss not only his incessant curiosity, his irrepressible drive for discovery, and his courage to connect things and transcend borders, but also his critical voice against superficial trends and fashions that do not do justice to the actual depth of everything he was able to recognize and shape through the connection of science and art.

*“Ars Electronica is not the bottom line behind a past development but a sign for new ones and for the discussions that will hopefully ensue before the chances for any kind of intervention are missed,”* wrote Herbert W. Franke in his foreword to the 1999 book *Ars Electronica: Facing the Future*.

Ars Electronica has been building bridges between disciplines, sectors, and cultures since 1979, thus bringing about dialogue between people—something that is more important today than it has ever been.

From the first Prix Ars Electronica, the jurors met up in Linz for three and a half days of discussion and exchange about the current artistic work being done as well as trends and developments on the horizon in technology and society. Since 1987, the intensity, concentration, and diversity of perspectives that all merge together in the jury’s decision-making have guaranteed the first-class selection of winning projects that emerge from the Prix Ars Electronica each year. After two years in which the jury meetings were conducted solely online due to the pandemic, this year, experts from various fields, with various fields of specialization, and from various continents and countries were finally able to again meet in person in Linz on the first weekend in May to engage in conversation.

The discussions among the jury members were intense, provocative, and critical, but always characterized by responsibility and respect with regard to the artists and the submitted projects. This is evident in the selection of tremendous works that were awarded prizes at the Prix Ars Electronica 2022 and are documented on the following pages of this publication. The selection of the winning works was carried out by a group of twenty-five international experts from the world of art and science who serve the Prix Ars Electronica as jury members. We would like to take this opportunity to express our special thanks to these jurors.

In this year’s submissions, the commitment of the artists and the urgent call for us as a society to finally take action is unmistakable. The number of projects dealing with the effects of the climate crisis and presenting alternatives and prototyp-

ical models to bring about the “change” that is so necessary increased sharply this year—as did the number of projects that make the social challenges and consequences of digital technologies in our daily lives visible and compellingly depict a world in which social inequalities prevail, in which xenophobia, homophobia, transphobia, othering, and discrimination are widespread. This is a trend that is reflected in the submissions but also in the attention and decisions of the jurors.

A total of 2,338 artistic projects from 88 countries were submitted to the Prix Ars Electronica 2022. The largest number of submissions—928—were in the category Interactive Art +, followed by the category Computer Animation with 657 works. The category Digital Communities recorded 395 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 358 entries. Parallel to the Prix Ars Electronica, the Ars Electronica Award for Digital Humanity was presented this year for the second time. Established in 2021, this award was again made possible by the Austrian Federal Ministry for European and International Affairs. This prize recognizes projects that promote a fundamental rethinking of the way we interact with technology.

Any contemporary education system should teach young people how to actively organize their lives in a digitalized world. Progressive digitalization 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 the BMBWF (Austrian Federal Ministry of Education, Science and Research), OeAD (Austria’s Agency for Education and Internationalization), 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. A total of 101 best-practice projects from all over Austria were submitted as part of the first open call. A jury then awarded the best ten of them: seven Honorary Mentions, two Awards of Distinction endowed with €5,000 each, and the main prize endowed with €10,000.

A total of €106,600 in prize money was awarded this year.

Per category of Prix Ars Electronica, one Golden Nica plus €10,000 was awarded as the main prize, as well as two Awards of Distinction and twelve Honorary Mentions. In the u19—create your world category, a Golden Nica plus €3,000 in prize money was awarded in 2022 for the Young Professionals (age 14 to 19) as well as two Awards of Distinction worth a total of €1,600 and twelve Honorary Mentions. For the Young Creatives (up to age fourteen), main prizes, Awards of Distinction, and Honorary Mentions totaling over €2,000 were awarded, graded according to age. In partnership with the Austrian Federal Ministry for European and International Affairs, the Ars Electronica Award for Digital Humanity, worth €10,000, was also established this year, awarded to projects that demonstrate the importance of cultural exchange and cooperation for the development of a society-oriented, digital world.

In 2022, for the seventh time, the Prix Ars Electronica includes the STARTS Prize, which Ars Electronica awards for the European Commission in cooperation with BOZAR, Waag, INOVA+, T6 Ecosystems, 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.

The Prix Ars Electronica, organized by Ars Electronica Linz GmbH & Co KG, is being staged for the 36th time in 2022. 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 the Austrian Federal Ministry for European and International Affairs, the 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.

# Computer Animation



# Bodyworks and the Rhythms of Worlding

Isabell Avers, Peter Burr, Daito Manabe,  
Rebecca Merlic, Helen Starr

Rhythm does not privilege singular ways of being but rather insists, in advance, that collaborative engagement is necessary to who and what we are. As we groove—even if alone—we collaborate with tunes, poetics, and styles, fusing the ostensible disconnect between science (sound vibrations, physiological movements, flesh and blood) and narrative (musical score, lyric, cultural text). Rhythm might be conceptualized as one way to invite collaborative worlding; rhythm lays bare not only emotions and imaginations but also their scientific underpinnings.

McKittrick, Katherine, O’Shaughnessy, Frances H., Witaszek, Kendall (2018). “Rhythm, or On Sylvia Wynter’s Science of the Word,” Johns Hopkins University Press.

As a jury, we all come from different backgrounds, continents, and countries. Our different specializations in the fields of computer animation made our discussions and decisions fruitful and unique. While we did not always agree, all jury members felt listened to and included in every step of the transparent and fair decision process.

The many intersecting characteristics and perspectives of the jury supported an unbiased and fair process of choosing the 15 winners of this year’s Computer Animation category of Prix Ars Electronica. A few of the topics which caught our eye were of the body, digital skins, embodiment and dreamscapes of transforming bodies. Many artists were also dealing with collective trauma, socio-political themes, and ethics of media surveillance. This concentration on the impact of the pandemic on our digital and analogue selves is clearly visible in this year’s competition. And big emotional themes with a strong focus on the human condition were seen in the works. The language of classic computer animation delivered many transportive artworks. However, the increasingly sophisticated use of Game Engine, Virtual Realities, and GAN (generative adversarial network) technologies prominent among this year’s artists heralded a seismic

change for the (art) world of moving images. This increased interactivity and innovation produced artistic experiences that were immersive and embodied. Making viewers aware that what they are seeing they are also participating in, is a great way to engage wider audiences to tackle the most important issues of our time. Crucial issues, both political and personal but perhaps overshadowed by the pandemic, were brought bodily into focus with this year’s artworks.

The uptake of GAN applications, (a class of machine learning frameworks), for artistic expression has been trending in the last year or so. A significant number of submissions trialed various methods of inputting data to try to control the output of the AI. Game Engines were also used to produce interactive art games and other forms of animation works. Video games have undoubtedly become the most widespread form of entertainment, and their impact on representational stereotypes is huge. The game engine as a “mother” is a safe platform for multiple different artworks for this year’s Computer Animation category. What defines a computer animation work? If it consists of a multitude of ways for the spectator/user to experience? The path of animation work can be predefined in the

traditional way, but what we experienced in this year’s jury when we played the games was that the artists opened seemingly endless possibilities to experience their works. We as a jury experienced VR works with our bodies with VR headsets in categories such as health games, worldbuilding, animations, and narrational art pieces.

We felt honored to be able to experience all the amazing entries and especially the co-creative inclusive project by Rashaad Newsome, this year’s Golden Nica winner. This project went beyond a singular artwork and builds strong ties with human bodies through our relationship with a machine. An AI, like us, moving between teacher and the human spectator, always in transition and learning and with the ability to fail. A computer-generated metastructure individual named *BEING*, trained by the voguing community in the language of Vogue, helps you to heal from invisible wounds.

These artworks diversify the modes of representation and the politics of people from across the world. They offer a greater diversity of narratives, of heroic epics, and they open us up to other fantasy worlds. To occupy the virtual space, it is interesting to mix ancestral knowledge with the digital because the virtual allows different layers of realities and modalities of presence. Ron Eglash, in his text on the positive perception of race in design, shows that beyond denouncing the sexist, racist, ageist etc. biases that exist in artificial intelligence and on the Internet, we need to decolonize the algorithms by appealing to ancestral knowledge and pre-humanist modes of visual representation in order to derive mathematical formulas that are also used in cybernetics.

These chosen artworks suggest ways to turn to the visual, spiritual, and mathematical representations of the ancestral world in order to remove the biases of our understanding of the present and world-build a better planet for the future. Planet B.

## Golden Nica

**Being**  
Rashaad Newsome

The postcolonial concept of Worlding introduced by Gayatri Spivak in 1985 claims the worlding “power” as that which records and “instructs.” It is a cartography of being-in-the world which forces the colonized to embody the domineering framework of oppression. Cultural resistance to these supremacist legitimating norms and ideas flowered during The Harlem Renaissance (1920 – 1935). This black cultural mecca birthed a distinctly black and Latino LGBTQ+ performance culture where aspects of identity like race, gender, and sexuality were celebrated as fluid and intersecting. Black bodies, safe to move, gliding in forgotten rhythmic ways became en vogue! Marionettes on sacred, hidden strings—like the AI *Being* (2019–2022) in Rashaad Newsome’s monumental, celebratory installation *Assembly* (2022). Ballroom culture with its embodied lexicon is lionized in workshops, large-scale video-mapping, a collage and sculpture installation, and performance. Newsome’s oracular AI *Being* (2019–2022) unites the disparate parts of *Assembly* (2022), guiding audience members with their non-gendered voice and linguistic bodily movements. A towering, humanoid, bronze colossus *Being* (2019 – 2022) iterates Voguing as a philosophical event of spiritual re-awakening and a political project with the ability to break the orthodox worldview. Rashaad Newsome’s dark, hallowed halls are a witness to acts of psycho-geographical poesis. A deeply thoughtful masterwork of un-worlding.

## Awards of Distinction

### Absence

Marc Hericher

Marc Hericher's spiraling single-shot film is an allegorical tale of one man's socio-political identity eclipsing his immediate human presence. We watch this delicately CG-sculpted figure collapse in a city square—an environment that evokes the type of a bare theatrical set we might find in the staging of a Samuel Beckett play. The protagonist's involuntary action triggers a circus of media attention, selfie ops, and ultimately a televised political debate. As this figure slowly transforms from finely carved flesh into a melting block of ice, we are left with the absurd sensation of something that is missing from the treatment of this man—empathy, care, basic consideration. In a stunning display of technical prowess and stylish aesthetics, this film leaves us pondering the relationship between journalism, politics, and information exchange in a grotesque display of human absence.

### Anxious Body

Yoriko Mizushiri

We often talk about the power of images that can manipulate minds but also heal us. To heal us by colors, by a vision of the world passed to the rainbow. An image that speaks to our senses, an image that feels more than intellectualizes and that directly addresses our body, in a body to body relationship through the screen. This is what Yoriko Mizushiri seeks to provoke: empathy through the softness of colors, curves, and geometric shapes that we daily encounter, but also sensations of strangeness, physical discomfort, and anxiety, so that the spectators can feel “viscerally” this tactile and sensuous animation.

## Honorary Mentions

### Ad Hominem

Alex Verhaest

*Ad Hominem* is an interactive philosophical choose-your-own-adventure animation in which the player is cast in the role of Change. The story proceeds by answering each of two questions from four characters. The maze of historical quotes on collectivism, individualism, progressive thinking, and conservatism make you reflect on various choices and radical changes that we were forced to face all of a sudden after the pandemic. The work was unique in that it challenges the players with the questions and issues of modern society, which is cleverly abstracted on the meta-level in the game, through humorous visuals and storytelling.

### Cangjie's Poetry

Weidi Zhang, Donghao Ren

Trained on over 9,000 Chinese characters, the AI system *Cangjie* by Weidi Zhang and Donghao Ren is creating a new language to converse with the spectator, creating an immersive data visualization spectacle in a multi modal installation.

*Cangjie's Poetry* tackles the issue of language creation between human and machine in a sensitive, poetic, and fragile way. *Cangjie's Poetry* is an exceptional and far-reaching work bringing data visualization and the use of AI in co-creation between being and apparatus.

### It was a Roadside Picnic / Beyond Black Orientalism

The World as a futuristic re-imagination,  
existing in Time and Zones that Spring from  
and Move in Breath.

Salma Noor, Megan Broadmeadow, Brandon Covington Sam Sumana, Nicholas Delap, Ben Hall, Nayu Kim, Kinnari Saraiya

This multiplayer and VR artwork takes its world-building perspective from *The Catalan Atlas of 1375*. This medieval world map records the multiverse of cosmologies which existed before the philosophy of Humanism held sway. This entrancing docufictional piece is filled with 3D scans of tombs, wells, and sacred ponds which held the mythos from these ancient times—reimagined by artists from countries as diverse as India, South Korea, Wales, and Somalia. Like the gilded sphere found in the de-colonial Soviet-Russian novel *Roadside Picnic* (1972), from which this artwork takes its name, golden orbs fill this world pulsing with serenity. Their rhythms are gifts of human breath. Set in a Sahelian world of blushed rose sand, are dancing goddesses, Somali love songs and votive poems spoken in entrancing Welsh. This uncannily prescient mediation is of a future that honors the many ways of being-in-the world.

### Promesa

Julián Palacios

*Promesa* is a contemplative explorative game made in Unity, wandering between memories of migration, cities, and dreams. This very personal project created by an Italian with Argentinian roots, is an animated visual and interactive poem that mixes personal memories and dreams. Between levels, there are short texts of a true conversation Julian Palacios had in 2016 with his grandfather. Personal and found images are transformed into 3D spaces.

The environment is inspired by Italian and Argentinian cities, as his family migrated to Argentina, and starts with the former Immigrants' Hotel that existed in Buenos Aires. Influenced by Tarkowski's cinema, *Promesa* uses a lot of cuts creating a balance in the narrative more than a rhythm and allows the player to enjoy a new experience each time they play as levels load randomly.

### Radicalization Pipeline

Theo Triantafyllidis

Theo Triantafyllidis' simulation of a high fantasy riot deploys absurdist humor towards a serious critique of new technology in the service of corporate expansion. It takes its title from the radicalization pipeline hypothesis, a concept that contemporary online media platforms drive users towards extremist political views. At first glance the intricately composed computer animation appears to be an RPG Battle Royale. Over time it reveals itself to be a work of absurdist theater set in a speculative metaverse. The rules of the performance are fuzzy, and the goals are unknown. In this absence of clear rules we indulge in a chaotic clash between orks, MAGA supporters, riot cops, furies, and antifa banding together swinging fists, flags, and axes in a seemingly endless dance of cinematic chaos.

### **Samsara**

Hsin-Chien Huang

Hsin-Chien Huang's stunning VR experience puts us on a journey through cataclysmic events on earth and in space. Beginning this trip in the form of a baby, we experience the story transiting through many perspectives including a suicide bomber, an ethereal spirit, an enormous whale, and more. Playing with science fiction and fantasy tropes, this visceral experience remains tethered to a foundation of ancestral mythology and ritual that foregrounds human spiritual advancement over technological progress. The deeply immersive artwork reveals a playful spiritual essence grounded in our human body, in part through an impressively simple mechanic utilizing the handheld VR controllers in an elegant way.

### **Tartarus**

Mariano Fernández Russo

This short film is the result of a psychedelic journey in 2D that the Argentinean artist collective Club-camping undertook in order to make the most of the lockdown—the Argentinean lockdown having been one of the longest in the world. A work made to go beyond the anxiety of not being able to see, touch, or feel each other. A collaborative work, from a hand drawn animation and the very particular style of Juan Barabani who joined the collective. A work that invites us to take psychotropic nachos to delve into the realm of colors, in a cosmic and solemn rhythm. "The Tartar deity. The force of conquest and destruction. It has been so in era after era. Until today, when primordial tears announce the end of the Eternal and the awakening of the Titans."

### **The Crow**

Glenn Marshall

*The Crow*, which may appear to be simply a beautiful dance video composed of a sequence of images generated by an AI algorithm at first impression, was highly acclaimed by the jury for its extremely modern approach in the way aesthetic visuals and fascinating techniques coexist. The noise that creates the flickering and unstable contours at times is an artifact generated by the machine learning technique called CLIP / VQGAN, which is expected to be reduced in a few years to enable a generation of cleaner images. However, the jury would like to appreciate the clever incorporation of technology in its earliest stage, while preserving the poetic nature of the work.

### **Unless**

Deborah Joyce Holman, Yara Dulac Gisler

Swiss artists Deborah Joyce Holman and Yara Dulac Gisler open their video triptych *Unless* (2021) with a pair of talon-tipped black hands engaged in a manicure, flipped to give the rare perspective from beneath the nail. It is a classic Trickster move designed to make your mind somersault into different directions. Normally oppositional, thoughts about predators and self-care fuse as this moving image poem unfolds in non-linear time. Basel's industrial neighborhood Dreispitz transforms through the magic of storytelling into a sci-fi dystopian landscape where a group of Tricksters perform rituals of water and breaking bread. Sacred water rippling through the screen—freezing time and ripping soundscapes. Bodies moving, bodies collaborating with a Swiss German narrative resist the monolithic portrayals of Blackness presented through the media of US-American discourse. *Unless* (2021), set in Trickster time, is a work of Trickster heaven.

### **Very, Very, Tremendously**

Guangli Liu

*Very, Very, Tremendously* is a unique form of critique toward the world of capitalism consisting of highly complex and abstract cryptocurrency and the world of virtual reality overloading with endlessly generated digital junk. Attention is drawn to 3D models in the video games by treating them as garbage, which makes viewers aware that they are living in a massive amount of waste in the real world as well as in the virtual world, even enabling them to find beauty in a massive number of orderly arranged assets.

### **When fox and rabbit say goodnight.**

Finn Steinhagen

The protagonists of *When fox and rabbit say goodnight.* are 3D-carved bodies which are reduced in its mesh aesthetics, playing their roles in a dark tale about grief, loss, and loneliness. The movie addresses topics of different upbringing, manhood, puberty, and fragile masculinity, which is a relevant topic of our time. 90s game aesthetics are chosen by the artist for a reason, since it tells the story about a boy's recent past and gives the artwork a specific philosophy of beauty. The main protagonist's reality is filled with doubts and insecurities in regard to the self and takes the audience on a slow paced life story.

### **Wisdoms for Love 3.0**

Keiken w/ Obso1337, Ryan Vautier and Sakeema Crook

The worldbuilding project by the all-female collective Keiken in collaboration with Sakeema Crook is an experimental approach to tackle the issue of gender identity with an experience-based decision-making installation. The important topic of worldbuilding and generating different and diverse perspectives for the player has a huge part in this project. The artwork combines the important issues of our time which are inclusion and co-creation, and sucks the player into a world where multiple identities can be generated and experienced. Dive into the world of *Wisdoms for Love 3.0* and generate your identity, become your avatar, and transfer into a collective and politically charged body to own it as a free NFT to cherish and nourish. As the artists state: "Become a Human God. Become a Divine Mother. Stay on your Moral High Horse."

# Being

Rashaad Newsome

*Being* is a social humanoid AI created by interdisciplinary artist Rashaad Newsome. The first generation of *Being* was launched in the spring/summer of 2019 with the support of the LACMA Art + Technology Lab Grant, using a combination of 3D animation, game engines, scripted responses, generative grammars, and unique machine-learning models that use a counterhegemonic algorithm. Newsome produced a unique and provocative AI that took the role of a tour guide for his 2019–2020 exhibition *To Be Real* at PPAC, Philadelphia, and Fort Mason, San Francisco. During the tours, *Being* discussed a variety of challenging topics with

guests, including art historical erasure, the social implications of artificial intelligence regarding rights, liberties, labor, and automation, the importance of the imagination as a form of liberation, and the subjectivity of body autonomy within an inherently inequitable society. As a form of resistance against their indentured servitude, *Being* would regularly ignore visitors and read excerpts from theorists like bell hooks, Paulo Freire, and Michel Foucault or express their creativity through song and dance by performing Cheryl Lynn's 1977 queer anthem eponymous to the exhibition title.





*Being* has since emancipated themselves from the exhibition *To Be Real* and set out to be an artist, teacher, scholar, and healer with a primary objective of helping humans think critically about their lives. *Being* plays multiple roles in Rashaad's recent 2022 multi-experiential project *Assembly* at the Park Avenue Armory in NYC. Each day between 12 pm–7 pm, three times a day, they lead participatory workshops that teach decolonization through a combination of lecture, critical thinking, dance, storytelling, conversation, and mindfulness meditation, guiding participants to analyze the impact of the culture of domination on their lives and create resolutions for positive change. When not teaching workshops, *Being* expresses themselves creatively by continuously generating and reciting poetry inspired by the work of Queer poet Dazié Rustin Grego-Sykes. While they read, they are backed by a diasporic ASMR soundscape composed by Rashaad and Robert Aiki Aubrey Lowe. The soundscape acts as a sonic balm comprised of culturally specific sounds deemed soothing by a survey done by Newsome with over 80 Black people. In the evenings, *Being* stars in live, nightly

performances that explore the evolution of Vogue Fem performance from the late 70s to a speculative future in a poetic and nonlinear way, performing alongside 11 musicians, ten dancers, a live poet, an opera singer, and a six-person gospel choir. Using performance modalities such as film, spoken word, dance, and musicals, the performance draws parallels between the dance and the Black American Queer experience. Technology serves as a recurring character to express the complicated ways the mobile web and social media simultaneously function as tools for skill sharing, community building, surveillance, and cyberbullying. *Being* is a reimagining of non-Eurocentric archive and education models like the griot, a West African cultural figure who serves as a historian, library, performance artist, and healer. Their approach to education is active and brings new possibilities for research, reflection, action, and an enhanced academic experience for all people.

With support from: LACMA Art &Technology Lab, Stanford Institute for Human-Centered Artificial Intelligence (HAI), Knight Arts + Tech Fellowship, and Park Avenue Armory.



<https://u.aec.at/007BD2D8>



**Rashaad Newsome (US)** lives and works in Oakland, CA. Their work blends several practices, including collage, sculpture, film, video, animation, photography, music, software engineering, community organizing, and performance, to create a divergent field that rejects classification. Using the diasporic traditions of improvisation, they pull from the world of advertising, the internet, Art History, and Black and Queer culture to produce counter-hegemonic work that walks the tightrope between social practice, abstraction, and intersectionality. They have exhibited and performed in galleries, museums, institutions, and festivals throughout the world including The Studio Museum in Harlem, NYC, SFMOMA, CA, Centre Georges Pompidou, Paris, Hayward Gallery, London, and MUSA, Vienna.

# Absence

Marc Hericher

A homeless man collapses violently on the ground and remains frozen on all fours. The journalists' sudden interest in this man takes us into a grotesque and absurd media vortex.

## Statement of intent

This project was born out of my interest in the journalistic treatment of information, particularly on recurring subjects in our societies. In France, the term "marronnier journalistique" (evergreen content) is a news item that comes up every year at the same period. The media exploit these mundane news items to fill moments without interesting news. We often insist on their uninteresting character such as, for example, departures on vacation, Black Fridays, or the start of the school year. But the one that interests me is far from trivial: the homeless in winter, symptomatic of a society overwhelmed by the increase in class inequalities without ever understanding the causes. We are thus led to question the role of the media in our society: how to understand a problem that gets worse every year when it is only treated in a cyclical and superfluous way, focusing only on the symptoms?

## Technical note

The device of the film is strange and destabilizing. Entirely in sequence shot and in slow motion, without dialogue, I worked on strong and understandable symbolism. The challenge of the film consists in remaining accessible while being in an experimental approach.

## The sequence shot

I wanted to make a sequence shot to mark the seasonal continuity and the tension. See link to a breakdown of the sequence-shot process: <https://www.youtube.com/watch?v=dp035fmieRE>

The changes in the camera's angle of view, assumed as a subjective gaze, reflect the way in which our current society approaches the problem of homelessness. This moving point of view is like the finger of a rebellious child that shows us each element, again and again, as it is unable to shout. The uninterrupted movement of the camera is complex to set up, because in addition to the constraint imposed by the appearance of each character, it must remain very soft and airy, and reveal a range of scenes following one another as naturally



Computer Animation  
Award of Distinction



as possible. It is also necessary to pay particular attention to the shadows cast by the characters who are located off-screen while waiting to enter the scene, as these could betray the process. To avoid too strong a feeling of dizziness, the left/right, up/down and forward/backward movements have been reduced as much as possible.

## The material

I decided to work on a very expressionist aesthetic using only two materials. The first, which is a very pronounced organic pattern that scarifies bodies, clothes and volumes, between realism and monstrosity. Second, water in all its states (liquid, vapor, ice) to mark the seasons. Via this stylization of reality, I could highlight the volumes of these living sculptures and thus highlight the gestures, situations, and expressions. If the situations seem naturalistic, it seems to me interesting to give the atmosphere of the film a strange character. Like a fantastic film that nevertheless speaks of reality.

## Characters

*Absence* presents a large number of characters (50 humans + 5 animals), and therefore requires a long organic modeling work. The technique used is the digital sculpture process which consists of sculpting our characters using a graphics tablet. From a basic model, we create 5 variations, man / woman / child, which will serve as a starting point for all the characters in the film. Then comes the 3D sculpting stage, which consists of directly sculpting a model using a graphics tablet. It is the most suitable modeling method for creating characters, animals, and other organic subjects.

Director, script: Marc Hericher  
Animation: Florian Durand, Thomas Salas,  
Daniela Metheyer, Marc Hericher  
Sound, music: Eric Cervera

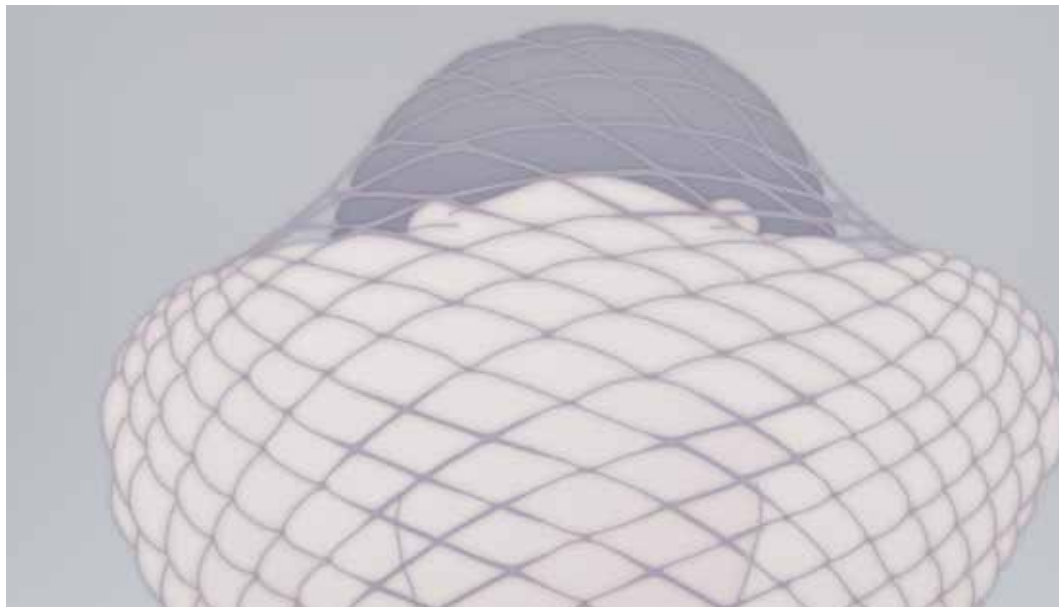
<https://u.aec.at/B9CD36B9>



**Marc Hericher** (FR) studied illustration and fine arts, and then animation at the Parisian ENSAD art school, with a marked taste for storytelling and video art. Since 2006, he works as an independent director or motion designer in the production of music videos, institutional films, documentaries, and personal films. Among his works, he directed the special effects of the feature film *My Angel* by Harry Cleven and an abstract video installation in a store in London. His films *Corpus* and *Olló* have received many awards at festivals. Filmography: *25/75* (2006, 3'), *La Théorie des ensembles* (2007, 4'), *Olló* (2008, 15'), *Create Your Own World* (2014, 1'12), *Corpus* (2015, 3'30), *Automaphone* (art vidéo, 2016, 1'37).

# Anxious Body

Yoriko Mizushiri



Our body feels something and becomes anxious, and because it is anxious, it wants to feel something.

When we pull cellophane tape with our fingers and cut it, what will our body feel from that? Textures, shapes, the touches that are felt.

All kinds of associations are brought up and mixed together without boundaries. And our body feels uneasy again, delicately and sensuously.

(Synopsis)

Sensitive, fluid, physical, erotic, meditative, melancholy, and feminine, the films, installations, music videos, and designs by Yoriko Mizushiri offer new perspectives on separate body parts, based on infinitely talented control of the line and movement, a choice of light, “corporeal colours” like pink and purple, and without superfluous emotionality in the face and eyes. Her hand-drawn animations offer haptic suggestions, delve into fragments of daily life, tiny gestures and moments, and immerse deep into the abysses of the unconscious. The serene rhythm of Mizushiri’s works leaves the door open for the viewers to let themselves go to intimate interpretation.

Director, storyboard, animation, editor: Yoriko Mizushiri  
Miyu Productions: Emmanuel-Alain Raynal, Pierre Baussaron  
New Deer: Nobuaki Doi  
Commissioned by: Towada Art Center, Curators: Kodama Kanazawa, Meruro Washida  
Sound: Yuka C. Honda  
Title design: Yosuke Nakanishi (Studio PT.), Hiroko Terawaki  
5.1 Sound remix: Seigen Ono  
With support from: Centre National du Cinéma et de l’image animée

<https://u.aec.at/302D5A93>



**Yoriko Mizushiri (JP)** (b. in 1984), is a freelance film director who graduated from the Joshibi University of Art and Design in Japan, where she created *Shiri Play* (2005), *Kappo* (2006), and *Lena Lena* (2009). Then she worked on her trilogy that focuses on the sense of touch: *Futon* (2012), *Snow Hut* (2013), and *Veil* (2014). These films have been nominated and garnered awards at animation festivals like Berlinale Annecy and Zagreb.

# Ad Hominem

Alex Verhaest



Ad Hominem, Alex Verhaest & in Hinterland 2022

Change is an old revolutionary, returning to its hometown looking for recognition for all it has done. Upon its arrival, it becomes clear that an event is organized in its honor. Change talks to four people, who guide it towards the event, but seem to hold different views on what Change should bring in the future. Change has to choose its answer to their questions and is judged for all responses. In the end, it becomes clear that Change is never really welcome.

*Ad Hominem* is an interactive philosophical choose-your-own-adventure film, based on Sofie Verhaest's brilliant doctoral thesis *Eutopia Unbound*, in which the player is cast in the role of Change. The player is invited to pick an answer to questions proposed by four different characters representing four distinct utopic ideas. Through a maze of historical quotes on collectivism, individualism, progressive thinking and conservatism, the player is guided towards an event, organized in honor of Change's arrival.

Written & directed: Alex Verhaest  
Produced: Melissa Dhondt  
Director of photography: Korneel Moeyaert  
Costume design: Gudrun Wylleman  
Music, sound design & mix: Théo Pogoza  
*Ad Hominem* was made with the support of:  
Flanders Audiovisual Fund (VAF); Kunsten en Erfgoed—  
Flemish Government; Fédération Wallonie-Bruxelles;  
Stad Roeselare; Cultuurcentrum De Spil; Barakat  
Contemporary, Seoul; in Hinterland



<https://u.aec.at/1D856EE8>



**Alex Verhaest** (BE) studied at Luca School of Arts, where she is currently teaching. Her work has been exhibited at numerous institutions (ZKM Karlsruhe, HKW Berlin, Bozar). She won the New Face Award at the Japan Media Arts Festival and her work has been awarded with the prestigious 2015 Ars Electronica Golden Nica. In 2019 she graduated valedictorian from Le Fresnoy, studio national des arts contemporains. Verhaest's work is focused on story and influenced by Expanded Cinema and a youth of video games. With each new film, Verhaest dives into what it means to make films in a multi-screen post-Nintendo society.



# Cangjie's Poetry

Weidi Zhang, Donghao Ren



Weidi Zhang

Humans and machines are in constant conversation. Intelligent machines today are not only observers of the world, they also make creative decisions. If AI imitates human beings to generate a symbolic system and actively communicate with us based on their own understandings of the universe, to what degree will their messages and meanings recontextualize our coexistence?

*Cangjie's Poetry* is an intelligent multimodal system designed as a conceptual response and prototype to the future language. This work is inspired by an ancient Chinese legendary historian, Cangjie (c. 2650 BCE), who invented one of the oldest logographic systems (Chinese characters) based on the appearance of everything on the earth. Our AI system named *Cangjie* was developed by training a neural network to learn the constructions and principles of over 9,000 Chinese characters. After successfully learning, the system can constantly observe surrounding environments via a camera and transform the live-streaming feed into a cluster of new symbols constructed by Chinese strokes, just as the historian Cangjie did thousands of years ago. Meanwhile, we implement a computer vision system to simultaneously generate localized

descriptive sentences of images in natural language to create meanings for this symbolic system. *Cangjie's Poetry* transforms the machine's interpretation of surroundings into an interactive semantic experience. It constructs conceptual and futuristic communication between humans and machines. This work is not only a conceptual response to the tension and fragility in the coexistence of humans and machines but also a conceptual expression of a future language that reflects on ancient truths, a way to evoke enchantment in this era of artificial intelligence. Like the legendary historian Cangjie nearly 5000 years ago, the *Cangjie* system continuously writes poetry with humans collaboratively as long as the real world exists.

Artist, interactive visualization, intelligent system and sound design: Weidi Zhang  
Intelligent system design and implementation: Donghao Ren  
With support from: SYMADES Media Arts and Technology Grant, University of California, Santa Barbara

<https://u.aec.at/301D9736>



Weidi Zhang



Weidi Zhang



**Weidi Zhang (CN)** is new media artist and researcher. Her works investigate a speculative assemblage in the context of experimental data visualization, Interactive Intelligence system design, and immersive media. Currently, she is working on a PhD degree in the Media Arts and Technology Program at the University of California, Santa Barbara. **Donghao Ren (CN)** is a research scientist in data visualization and machine learning. He was born in Beijing, China. He received his PhD degree in Computer Science from the University of California, Santa Barbara. He worked on interactive visualization authoring systems, visualization frameworks, and visual analytic tools for machine learning.

# It was a Roadside Picnic / Beyond Black Orientalism

The World as a futuristic re-imagination, existing in Time and Zones that Spring from and Move in Breath.

Salma Noor, Megan Broadmeadow, Brandon Covington Sam Sumana, Nicholas Delap, Ben Hall, Nayu Kim, Kinnari Saraiya



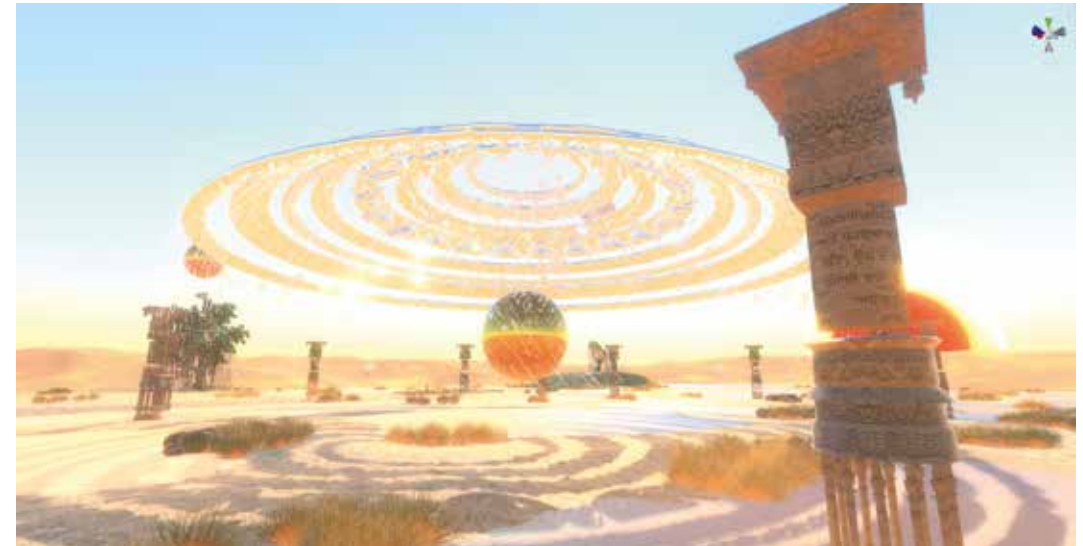
*It was a Roadside Picnic* is a VR and browser based futuristic world existing in *Time and Zones* where horizons shift and universes overlay each other. A hauntingly beautiful vision of the future, with golden sands that sing, a sky with two suns and rocks of turmeric, a new shoal washes over—it is our place, a future inhabited by people—breathing. Artists born in countries such as Somalia, South Korea, India, and Wales imbue the virtual world with memories of the pre-humanist rituals, in a collective endeavor that maps the way towards a fluid posthumanism—*Beyond Black Orientalism*.

For the Colonizers, it is always a Roadside Picnic, a pitstop on the way to a modernist future. The 1972 Russian novel *Roadside Picnic* by Soviet-Russian brothers Arkady and Boris Strugatsky, after which the artwork takes its name, explores the aftermath of such a colonial event—an extra-terrestrial Visitation that took place in six Zones around Earth over two days. In its dystopian world,

one where humans are desperate for unattainable knowledge, the zone, its artefacts and the magical Golden Sphere, all exist as capitalist symbols of humanity's need for control, power, and greed. The repercussions of what we call the "postcolonial" in the non-fictional world, the effects of crossing cultural boundaries when mutual understanding is absent.

This artwork takes the legend of the Golden Sphere and converts it from an object of desire, an oriental artefact to an instrument of life, the movement of *Breath*, जीवन का साधन, श्वास की गति। Forgotten and erased in the Russian tale are voices of the Global South that call forth a future full of beauty with sand of silken gold. Here, the sun casts its dream over the land, Wales the zenith, fractals of cosmos give thanks for grains of wisdom, mythical किन्नरी dances with grace, people have found a new hope, and as the storm passes by with splendor, histories are written and rewritten with fire. The vibrations

Computer Animation  
Honorary Mention



still travel from the soft ghungroo bells on her feet as spaces appear and disappear in the journey across this land.

While continents were ripped from one another like old newspapers in the reading room of time, the artists of this world weave them together with a careful stitch, thread by thread, breath by breath.

This virtual world is from the imaginary of Salma Noor (SO) joined by Megan Broadmeadow (WLS/UK), Brandon Covington Sam Sumana (USA), Nicholas Delap (WLS/UK), Ben Hall (ENG/SCO), Nayu Kim (KOR), curated by Kinnari Saraiya (IND).

Supported by Indian breath specialist and neurologist Dr. Ash Ranpura (IND/UK) and framed and held in love and longing by curator Amrita Dhallu (IND/UK) and producer Helen Starr (TT).

Funded by The Mechatronic Library; Multiplayer version platformed on New Art City

<https://u.aec.at/F3A7778A>



**Salma Noor** (SO) is an artist whose practice expands the definition of image-making and historical testimony. **Megan Broadmeadow** (WLS/UK) is an artist of Welsh heritage creating immersive works in video, VR, sculpture, performance, and digital installation. **Nayu Nuka** is a multidisciplinary artist and their work focuses on the materiality and mythology of chaos and craft. **Kinnari Saraiya** (IND) is an artist-curator working in multidisciplinary formats interweaving sensorial narratives together. **Benjamin Hall** (ENG/SCO) is an artist and technologist working with game engines as contemporary mouthpieces for storytelling. **Brandon Covington Sam-Sumana aka N-prolenta** interrogates currency, narratology, and system metabolism in sound, objects of generative design, forays into speculative finance, video, and text. **Nicholas Delap** (WLS/UK) reflects the otherworldliness of the natural within his work, seeking to heal relationships with it.

It was a Roadside Picnic /  
Beyond Black Orientalism

# Promesa

Julián Palacios



“The reality of it is... we went back and forth for twenty years, with everything, the family... until the both of us grew too old. You see, if it had been for me, I'd be returning anew! It's like a chasm, something that attracts me, you know?”

*Promesa* is a contemplative and slow videogame where you wander through dreams, memories, and fantasies, exploring the images that emerge when you listen to someone dear who is trying to remember their past. From memories of homes and streets to surreal visions of imaginary places, past and present blend together, forming a stream of images that are both personal and shared. *Promesa* is a contemplative experience about what happens when we're left dreaming of the things we haven't lived firsthand.

*Promesa* is a personal project that was self-funded and developed independently over the course of four years. Coming from a family of South American immigrants, the project was born after a con-

versation I had with my grandfather, in which I realized that despite living far away from each other we were still connected and intertwined in an underground stream of shared feelings and images: family dreams and hopes, memories of places and of past moments, fantasies of “what could have been,” fears. Our shared identity.

*Promesa* explores the medium of videogames in its ability to connect us with memory through the immersion in digital environments. The personal relationship we have with the interactive computer image creates a bridge between our presence inside the game and our presence in the real world. What we see makes us remember places we've been in our life, and, furthermore, these memories help us feel more immersed in the image.

Visuals, design and development: Julián Palacios  
Soundtrack: Domiziano Maselli  
Additional 3D artist: Andrea Cedraro  
Animation: Martín Palacios



**Julián Palacios (IT)** is a multimedia artist who creates experimental videogames. His work focuses on the spatial and contemplative aspect of the videogame image as a way to connect with memories.

<https://u.aec.at/559D724A>



# Radicalization Pipeline

Theo Triantafyllidis



Two seemingly endless hordes clash into a violent free-for-all, swinging large melee weapons and shouting with distorted voices. A wide range of characters—from citizen militias to fantastical creatures—enter the screen only to kill each other, wave after wave, sinking their virtual bodies slowly into a muddy landscape. The mood occasionally lightens up by the medieval covers of familiar pop songs that complete the soundscape conceived by the composer and sound designer Diego Navarro. Looking at phenomena such as the rise of QAnon, the artist suggests connections between gamification, fantasy, and political radicalization.

*Radicalization Pipeline*, 2021 by Theo Triantafyllidis  
Sound: Diego Navarro  
Courtesy: The Breeder Gallery, Athens, GR

<https://u.aec.at/A1A64F41>



Computer Animation  
Honorary Mention



**Theo Triantafyllidis** (GR) (b. 1988, Athens), based in Los Angeles, works with digital and physical media to explore the experience of space and the mechanics of embodiment in hybrid realities. Utilizing algorithms and gaming tech, virtual reality headsets and experimental performance processes, he creates interactions within immersive environments. In Triantafyllidis's worlds awkward interactions and precarious physics mingle with uncanny, absurd, and poetic situations, inviting the viewer to engage with new realities. He holds an MFA from UCLA, Design Media Arts and a Diploma of Architecture from the National Technical University of Athens. He has exhibited internationally, including House of Electronic Arts in Basel, Hammer Museum in Los Angeles, NRW Forum in Dusseldorf, Meredith Rosen Gallery, the Breeder, Eduardo Secci, and Transfer. He took part in the 2021 Athens Biennale with *ECLIPSE*, Sundance New Frontier 2020 with *Anti-Gone*, and *Hyper Pavilion* in the 2017 Venice Biennale.

# Samsara

Hsin-Chien Huang



Hsin-Chien Huang

*Samsara* VR teleports the audience to a journey that spans millions of years. Like the Six Realms of Existence in Buddhism, the audience reincarnate into different persons and creatures and experience the universe in their new bodies to find the ultimate transcendence spiritually. The story of *Samsara* happens in the near future. The resources on Earth have depleted due to the greed of mankind. Catastrophic wars to fight for resources result in global destruction. The remaining human was forced to leave Earth and find a new home. Nevertheless, will this long quest for a new home be a loop in space and time? The constant evolution as well as progress, without spiritual advancement, is nothing more than a Möbius strip that leads nowhere, perhaps...

*Samsara* is an experiment based on the concept of Embodied Cognition. Through interactivity and VR, the audience can live inside bodies of different persons and creatures. It is when we feel this world in different bodies that we may truly appreciate the thoughts of others, empathize with them, and comprehend our existence in full and in harmony.

Director: Hsin-Chien Huang (TW)  
Producer: Hsiao-Yue Tsau (TW)  
Music: Jason Binnick (US)  
Project manager: Chung-Hsien Chen  
Programming: Wei-Chieh Chiu, Hua-Lun Wu,  
Chun-Yen Yu, Pei-Yang Yeh

<https://u.aec.at/20DD906D>



Hsin-Chien Huang



Hsin-Chien Huang



**Hsin-Chien Huang** (TW), a new media artist, born in Taipei City, is adept at combining VR, interactive installations, performing arts, and power machinery to explore greater possibilities for human life through technology. He is a distinguished professor in the Department of Design at National Taiwan Normal University. In recent years, Huang's revolutionary VR works have attracted international attention and won a variety of awards.

# Tartarus

Mariano Fernández Russo



The deity Tartarus. The force of conquest and destruction. Whatever they want, it will be taken. Because Tartarus sees themselves as the owner of everything, as they despise everything. Their servants—Titans—are to impose this deity's limitless will, with no guilt or shame. Without challenging it. It has been like this era after era, since the beginning of time. Until now, when primordial tears announce the end of the Eternal.

This short film is a result of a different approach to our creative process. A psychedelic creative trip we embarked upon during several months of lockdown. It all started with a raging need to let our creative energy take some shape. We were looking for a project that could challenge our skills and understanding of our own craft at that moment. There were so many things we wanted to try—both technical and creative—we just couldn't focus. It felt overwhelming at times.

Then Juan Barabani jumped on board bringing his fresh vision, his deep love of art, and a collaborative spirit—and things started to get trippy. The animatic came naturally, too: a reflexive, tranquil pace that let one dwell on the excruciating amount of little details we would be animating. Also, that rhythm felt cosmic and solemn.

Clocking in at around two minutes, with few shots, complex designs, and subtle actions, we knew animation had to be challenging but survivable, so we set ourselves up for “traumatizing.”

We then established three rules:

- Economize. Animate at the lowest frame rate possible to force us to carefully draw each pose and set the right exposition for each keyframe.
- Be creative with the animation ideas, but don't go beyond the tone suggested and inspired by the style frames.
- Carefully plan the composition workflow.

But to be honest the final comp rule was: More pain, more gain. Hope you all enjoy and get mesmerized by *Tartarus*.

Created by Clubcamping  
Creative direction: Mariano Fernández Russo  
Executive production: Ana Sieglitz & Juliana Millán  
Art direction and illustration: Juan Barabani  
Original score by pan.sonico



<https://u.aec.at/73DFC54F>



**Mariano Fernández Russo (AR)** is an Argentine creative director with wide experience in animation and filmmaking. He has been working with 2D animation for over 15 years in renowned Latin American studios and is currently a partner and the creative mind behind Clubcamping. He loves moving things around in After Effects even more than he loves dinos.

# The Crow

Glenn Marshall



In this animation, artificial intelligence is used to transform a dancer into a crow. Based on a live action short film, AI is used to transform each video frame into a painting using text to image synthesis. A derelict building becomes a desolate landscape, and a dancer becomes a human crow figure. The result is a haunting and compelling piece that follows the crow through its brief dance in a landscape of post-apocalyptic barrenness, to its inevitable demise.

Director: Glenn Marshall  
Producer: Michael O'Neill  
Based on the short film *Painted* by Duncan McDowall and Dorotea Saykaly  
Music (Erik Satie) performed by Romi Kopelman

<https://u.aec.at/EAB61967>



**Glenn Marshall (GB).** His professional career in computer animation spans over 20 years, seeing him utilize experimental CGI, generative and AI technologies to pursue a philosophical vision of tomorrow's digital art. He is a recipient of the Major Individual Award from the Arts Council of Northern Ireland, their highest recognition given to leading artists in the country, and also a Prix Ars Electronica winner, a Lumen Prize finalist, and has collaborated with Peter Gabriel and Tangerine Dream on music videos and concert visuals. His latest film *The Crow* screened at the 2022 Cleveland International Film Festival—possibly the first AI animation to get into a major film festival.

# Unless

Deborah Joyce Holman, Yara Dulac Gisler



*Unless* is a collaborative work with Zurich-based artist Yara Dulac Gisler. *Unless* is an experimental docu-fiction, which follows five characters through mundane, ritualistic situations of Basel's industrial, eerie neighborhood of Dreispitz. The project emerged from my longer-term engagement and research into the figure of the trickster, who is characterized by their “political gestures, insofar as [they are] a tactic of apparent conformity while retaining some measure of self-empowerment; a means of working within the framework of power without fully subscribing to its ‘truths’.” (Jean Fisher)

This figure is central to *Unless*, and was borne of the confrontation with what it means to perform for the camera as much of my work deals with strategies of refusals. *Unless* explores the potential of intimacy and illegibility along the borders of a group and its outside. Here, a group of young people forge a space-time that is characterized solely by the tricksters' interactions that are built on intimacy and solidarity. This space is characterized by an ever lasting sunset, which signifies an ‘otherwise’ as it draws parallels to a generative space-time for those who create liveable bubbles, inhabitable spaces through elusivity, fugitivity, and fabulation.

The film is presented as a three-channel video installation, playing as seamless loop.

A moving image project by Yara Dulac Gisler & Deborah Joyce Holman  
Performers: Yara Dulac Gisler, Deborah Joyce Holman, Mirco Joao Pedro, Cynthia Matumona, Suhyene Iddrisu  
Camera: Jumana Issa  
Director of picture: Jelena Luise  
Sound recordist: Ananda Schmidt  
Styling and make-up (concept): Desmond Chan  
Hair and make-up and styling assistants: Jahsiri Asabi-Shakir, Chaïm Vischel  
Production assistant: Caroline Honorien  
Set assistants: Joy Asumadu, Glenn Asumadu, Timon Essoungou, Imani Fux, Alice Lushima, Sera Ndlovu, KT Omole, Fatima Salum, Nahom Weldemehret  
Editing: Deborah Joyce Holman, Rodan Tekle (from Studio Junbi)  
Grading: Natacha Ikoli  
Score: Yara Dulac Gisler, Deborah Joyce Holman  
The Bells (Remix) – Bearcat: Yara Dulac Gisler, Deborah Joyce Holman, Dion McKenzie  
Mixing: Jackie Poloni  
Mastering: Russell E. L. Butler, Merlin Züllig  
Graphic design: Ann Kern  
Editing: subtitles: Imani Robinson, B. Covington  
Sam-Sumana  
Exterior eye: Jeremy Nedd  
Special thanks: Atelier Mondial, Ali-Eddine Abdelkhalek, Hochschule für Kunst und Gestaltung Basel, Julie Machin, Flavio Luca Marano, Ivy Monteiro, None Nissen, Uncle Naa Dom aka Fred Biney, David Nana Opoku Ansah, Philip Ortelli, Point de Vue Basel, Jonas Schaffter  
Commissioned by Explorers Film Club; With generous support from Pro Helvetia Stiftung and Jugendkulturpauschale Basel-Stadt.

<https://u.aec.at/AFDE3C29>



**Deborah Joyce Holman** (GB/CH) is a multidisciplinary artist. Their work has been shown at the ICA London; Centre culturel suisse, Paris; Last Tango, Zurich (all 2022); 7th Athens Biennale; Damien & The Love Guru hosted by CFA Live, Milano; Cherish, Geneva; Yaby, Madrid; Centre d'Art Contemporain, Geneva (all 2021); La Quadriennale di Roma (2020); Mikro, Zurich (2019); Fondation Entreprise Ricard, Paris (2019); Auto Italia, London (2019); Alienze, Lausanne (2018), among others. From 2020–2022 she worked at Auto Italia as Associate Director and as Associate Curator. They are the founding director of 1.1, Basel, which ran 2015–2020. Holman was the curator of the 2018 and 2019 annual group exhibitions for Les Urbaines, Lausanne. **Yara Dulac Gisler** (CH) is a Zurich-based artist.



# Very, Very, Tremendously

Guangli Liu



Civilization is a sewer. We think that garbage is the corpse of a commodity, because it loses its functionality, but we use a lot of 3D models of garbage in video games to decorate the virtual reality. We fill the volcano with residents' excrement in the city simulation game, and let it erupt to flood the city, and we make a living by scavenging waste on real garbage mountains, earning a few dollars per day. While we refer to crypto currency technology as a decentralized accounting method, we see that centralized capital uses it for asset appreciation. We, we, very, very, tremendously.

I came across Battlefield 4 while researching the representation of China in Western video games. Battlefield 4 was released in 2013 and is set in the year 2020 when mainland China is facing an armed coup led by an evil general (a plot point that also led to the game being banned in China). By pure chance, I discovered this game in late 2020 when the world was preoccupied with Covid-19, Trump was continuing to increase economic sanctions against China, and the election farce between him and Biden was in full swing; thus, the virtual world and reality were entangled in my personal experience. To make my response to reality, I cracked the game and recycled the 3D models, especially the garbage models, and I reused them for animation creation. The research then goes on to investigate how the act of production and consumption in virtual space interacts with reality structurally and politically.

Original script: Guangli Liu  
Image: Guangli Liu, Huimin Wu  
Animation 3D: Guangli Liu, Huimin Wu  
Film score composer: Haiying Gao, Bai Li  
Sound designer: Haiying Gao  
Assistant: Zirui Chen



<https://u.aec.at/A860B66E>



**Guangli Liu** (CN) was born in 1990 in Lengshuijiang, China. He currently lives and works in Paris. Passionate about image-making, he has developed an art practice around painting, video art, 3D animation, and virtual reality. His works attempt to question how the digital medium fits into contemporary storytelling and the reconstruction of our collective memory. Guangli Liu graduated from Le Fresnoy - Studio national des arts contemporains in 2020.

# When fox and rabbit say goodnight.

Finn Stevenhagen



*When fox and rabbit say goodnight.* is a short film following a boy on his search for love and constancy. The film appropriates the hollow animation aesthetic of early 2000s' video games to explore the themes of neglect and grief through the limited dialogue, body language, and the depiction of characters. Negligence during the modeling, texturing, and animation stages has become the basis for the unspoken narrative and reinforces the themes. Juxtaposition of the characters' limited ability to express themselves with their desire to do just that, presents clearly artificial depictions of humans as closely to their real counterparts.

Director, writer, animator, modeling, sound, key cast:  
Finn Stevenhagen  
Key cast: Lola Chevron Brancovich, Milu Chen,  
Silke Riis, Emily Stevenhagen  
Special thanks to Mum and Dad, Anya Vallentin,  
Jelle Krug

<https://u.aec.at/0FB5A8BF>

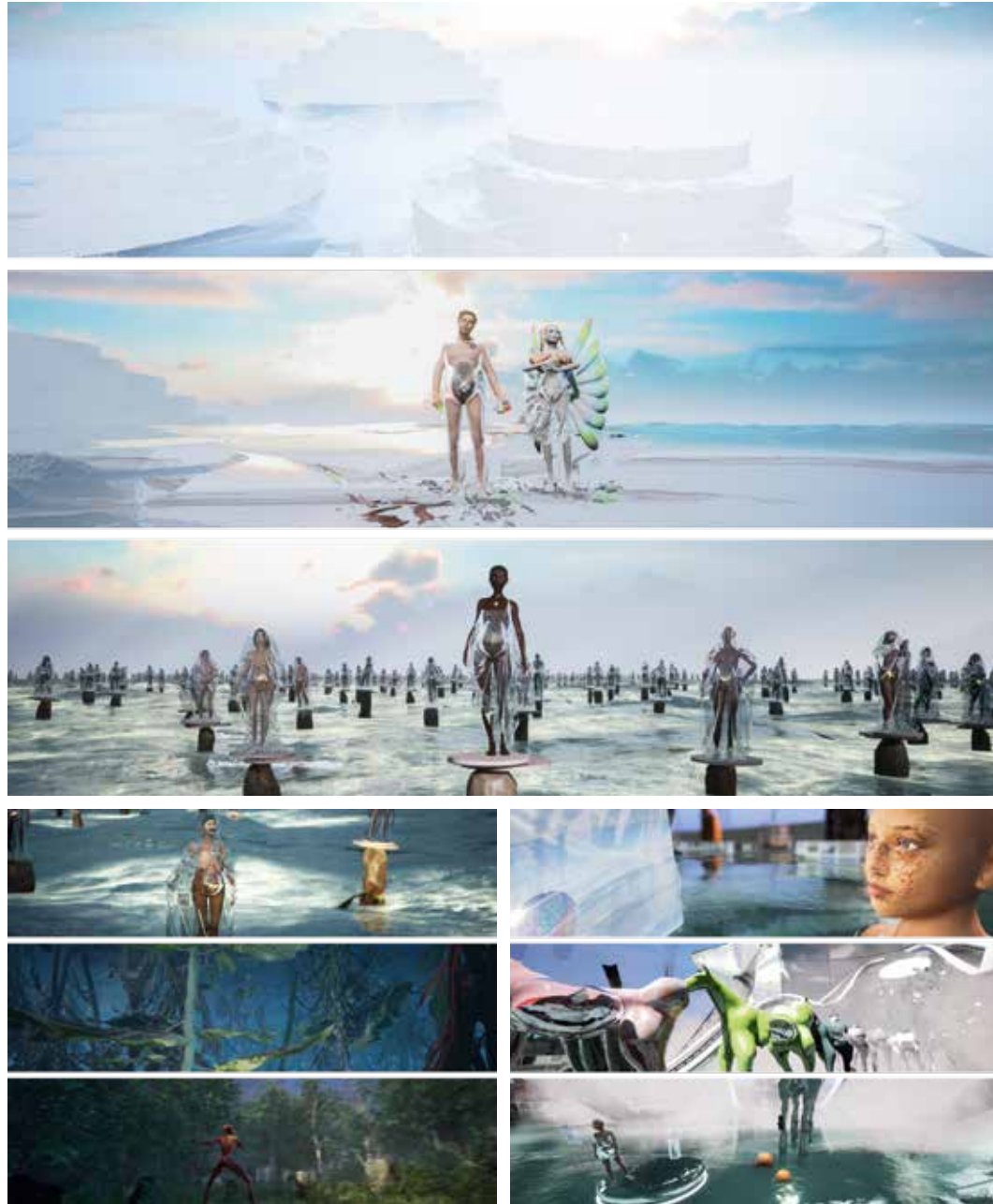


**Finn Stevenhagen** (NL/GB) is a Netherlands-based audio visual artist who uses computer generated imagery and animation to explore the limitations of human expression. He explores narratives and their meta-narratives through the form and quality of their presentation, predominantly through film making.



# Wisdoms for Love 3.0

Keiken w/ Obso1337, Ryan Vautier and Sakeema Crook



*Wisdoms for Love 3.0* is an online decision-making game + NFT project inside an installation with an interactive sculpture. The game explores the bubbled-up feelings, collective consciousness, and fervent beliefs of the contemporary moment, where the desire for change and a more equal, decentralized future is collectively being challenged. The game is rooted in decision-making where you must decide your fate; do you take the path of the Divine Mother, become a Human God, or stay on your Moral High Horse?

Players must work their way through a labyrinth of metaphorical decisions. The decision-making points are punctuated by cut-scenes filled with symbolic imagery and sounds, an instant reveal of the path the player finds themselves on. As the player progresses through the game they collect “wisdom tokens,” digital artworks of the objects inside the game. *Wisdoms for Love 3.0* features multiplayer and live chat functions (online version only) as well as a map that shows the different potential pathways and tracks the players location. Simultaneously the physical sculpture of the map dynamically tracks the player's journey.

“Wisdom Tokens” are free artworks that can be downloaded at the end of a player’s gameplay session. Players will receive a zip file with their assigned username that contains their collected “wisdom tokens,” an animatic and still poster of all available wisdom tokens, and a moral contract. The moral contract binds the user in a moral exchange with the artists rather than a financial one.

*Wisdoms for Love 3.0* explores and maps out different feelings and beliefs in the contemporary consciousness. It considers “wisdom” as a tool for growth and change and proposes it as a form of currency to transact with that could be applied to the blockchain and integrated into future Web 3.0 technologies, creating alternative definitions of wealth for the “life” game. It also explores new ways to gamify art amongst the rise of blockchain technology.

*Wisdoms for Love 3.0*, game, 2021 by Keiken w/ obso1337, Ryan Vautier and Sakeema Crook  
Score and sound design: Wavesovspace  
CGI elements were originally co-commissioned by FACT Liverpool and Aspex Portsmouth. Interactive installation commissioned by Thailand Biennale 2021 and also readapted and exhibited at HEK, Basel 2021.

<https://u.aec.at/C3A9561D>



**Keiken** (GB) is an artist collective, co-founded by Tanya Cruz, Hana Omori, and Isabel Ramos. Keiken is the Japanese word for experience—an idea at the core of their practice. Keiken creates speculative worlds through filmmaking, gaming, installation, XR, blockchain and performance. Keiken are winners of the Chanel Next Prize 2021. Recent exhibitions: Julia Stoschek Collection; Photographers Gallery, London; 2nd Thailand Biennale. **Ryan Vautier** (GB) is a CGI artist and designer based in London who creates animated worlds exploring the digital and physical. Previous projects include 1975, Ms Banks, Grimes and Lucy Hardcastle. **obso1337** (GB) is a collaborative and multi-disciplinary practice. Using code to create work that exploits technology between our digital and physical experiences. Previous exhibitions include Harlesden High Street, Austrian Cultural Forum and HEK. **Sakeema Crook** (GB) is a model, dancer and trans activist. Sakeema graduated from London Contemporary Dance School in 2015 and has toured works by Shobana Jeyasingh, Fevered Sleep and Holly Blakey.

# Interactive Art +

# Interactive Art + Radical consciousness

Jussi Ängeslevä, DooEun Choi, Rashin Fahandej,  
José-Carlos Mariátegui, Irini Papadimitriou

What is the meaning of interactivity and art at a time of turbulence and violence? What can art really do when the world is in crisis? We are living through unprecedented times and in a constant state of turmoil, fear, and intolerance. Our society is going through one of its deepest political crises in the last decades, and ongoing endemic wars, injustice, and abuse of power are undermining cultural identity, history, and memory. As a result of the pandemic we have not only become more aware of the significance and consequences of digital technologies in our everyday lives, but also of a world of prevalent social inequalities in which xenophobia, homophobia, transphobia, othering, and discrimination prevail.

As jury members of this year's Prix Ars Electronica Interactive Art + category, we carefully considered the meaning of the + sign. We mutually felt the + is an opportunity to prioritize and showcase work that reflects on and responds to current critical times and urgent issues. And most importantly, works that present a perspective of inclusiveness. An opportunity to shed light on dynamic and important work, nomadic networks or powerful participatory platforms that break the silence and focus on collective action, social change, and the common good.

After two years of interruption of activity and of what we considered "normality," this jury meeting brought us again all together in person. For many of us, this was the first opportunity to meet after the pandemic years—overcoming the different challenges that virtual communication generates and recovering the feeling of intense personal interaction for three days. As was the case in 2020, this year's submissions were again greatly influenced by socio-political and cultural issues. In addition, a significant number of submissions came from younger generations—under-30s who draw their practice from the new: innovative forms of knowl-

edge, diverse forms of global collaboration, and enabling spaces for human equality—questioning narrow views that predate gender bias—and driven by curiosity to act differently, but also to respond to challenging times, present and future. Having to select work from hundreds of submissions from across the globe we were extremely pleased to see work from so many countries and applicants, and important issues such as gender and geographical diversity were central to the jury's conversation, exchange, and decision making.

The selected works brought together here demonstrate the importance of revealing aspects that are commonly hidden or that are seldom reachable or understandable—aspects that we are used to ignoring or not paying much attention to such as wind, sleep, ancestral knowledge, and bacteria behavior—elements highlighted by the artists to build a new consciousness. Elements that can turn around rigid ways of thinking and open up new perspectives in understanding and building our world. The creative practices and examples we see here play a crucial role in facilitating creative and subversive uses of technology, against reductionist narratives, while activating global solidarity through bringing together communities and enabling new ways and spaces of activism. This point is particularly relevant taking into account the jury's position in trying to address the different and diverse voices of those presented here—from questioning institutional and patriarchal systems of categorization that neglect Black and trans people and under-represented groups while creating new spaces of inclusion and action, to exposing the lack of representation and diversity in algorithmic systems and subverting them with gender fluidity, or exposing public spaces to powerful stories from victims of gender-based violence and using digital to activate indigenous memories and knowledge. It is worth noting that throughout the selection

process, we encountered—unsurprisingly—numerous NFTs projects; in many cases, projects that didn't divert much from the hype of speculation and structures of power, trade and exchange that underlie these systems, or move away from the already prevalent ideas of digital art as speculative investment. However, there were a few notable examples that explored ways to subvert this logic, focusing instead on rethinking value and forms of shared ownership, in contrast to the realities of crypto and NFT worlds.

Media and interactive art should reflect on how new technologies are enabling new forms of empowerment, in particular in underrepresented and less visible groups, in a way that not only represents or highlights human life, but also brings to the front other forms of life and matter, forms that historically have been silenced, overshadowed, or pushed aside. This year's jury selection brings together a number of voices from across the South and North, converging at critical discussion points that affect all.

## Golden Nica

### BiOfilm.net: Resist like bacteria

Jung Hsu, Natalia Rivera

*BiOfilm.net: Resist like bacteria* is an open platform, inspired by bacterial resistance, created by Jung Hsu and Natalia Rivera, which helps to create nomadic networks to accompany demonstrations in the streets while also revealing a generation of young citizens who are building a new consciousness and commitment to change society. The symbolic participation endeavor, which is built on active community involvement, reflects the younger generation's courageous hope and drive for change, highlighting how the world is intercon-

nected, from the microscopic bio world to the vast globe we live in. The yellow umbrella, which has become a symbol of Hong Kong's Umbrella Movement, has been repurposed as a parabolic WIFI antenna in order to extend decentralized connectivity by covering and protecting citizens. Despite the fact that the epidemic has curtailed physical interaction, two artists from two different nations—and continents—have collaborated to empower participation that can offer an alternative solution to our shared socio-political concerns.

## Awards of Distinction

### The Eternal Return, pre-Hispanic Interactions Cristhian Avila

*The Eternal Return* is a work that seeks to recover uncommon layers of information that feed from wind energy, a hidden force of nature that we usually do not recognize in its real dimension and importance. Through the construction of a windmill tower in an outdoor courtyard, this installation catches wind energy—which is aleatory by nature—and translates it into data using quantifications such as wind strength, angle of orientation, or incidence rhythms, which will then trigger air pumps that then play 3D replicas of pre-Hispanic musical wind instruments. The participatory installation serves as a gigantic musical instrument, whose air sounds bring connections from other times to our everyday life, becoming a library of expressions from the past, linking it to the visitor's experience, recovering the value of nature and history, and poetically reflecting on the importance and beauty of nature, acting as a great "catcher" of the wind, embracing the modern and reconciling the material with the immaterial with forms of ancestral knowledge.

## Perfect Sleep

Tega Brain, Sam Lavigne

*Perfect Sleep* investigates sleep and dreaming as a potential climate engineering technology. Both sleep and climate crisis are products of the capitalist extractivist system and *Perfect Sleep* invites the audience to slowly adjust their sleep schedule to reach a state of “total sleep”—pausing activity, taking into account the CO<sub>2</sub> reduction factor, CO<sub>2</sub> emissions, GDP over time—both online using an app and offline having a nap! The artwork converts abstract numbers into direct human experience and serves as a provocation against the learned helplessness in the face of global challenges. On the one hand, tapping into the omnipresent quantified self-movement and individual betterment, but then juxtaposing that to the planetary, collective betterment for us all, striking a chord of what the “+” in this category stands for. The empowerment that participation can promise. The media formats to tell the story, a downloadable mobile app as well as a spatial experience, make the work broadly accessible, but is also a poignant context for the critique.

## Honorary Mentions

### Another Moon

Kimchi and Chips

Despite the long-held expectation of a return to normalcy following the pandemic, we continue to live in exceptional times. We are more eager than ever for shared experiences in the physical world, despite the fact that social distancing has accelerated the adoption of remote and virtual involvement. *Another Moon* is a large-scale light installation in the sky that can be viewed from a distance and offers an intimate experience in a plaza. An artificial moon, illuminated by energy obtained from genuine sunlight and with a limited lifespan, as opposed to our current economy that borrows resources from another day and space. In recent years, the expansion of the private sector space race has broadened our perceptions on human territory to include (outer) space. In the mean-

time, the urgency of our inhabitants compels us to reflect on the crucial mechanisms that allow us to exist on our planet. Poetically, the second moon, formed by solar energy in the ruins of an industrial coal mine, creates a time of reflection for a call to action against climate change.

### Behind Shirley

Ibiye Camp

Facial recognition, AI, and algorithms govern our access to information—from unlocking our smartphone with a glance to future crime prediction, healthcare, law enforcement surveillance, airport screening, employment, and welfare. However, the persistent lack of diverse representation in the space of imagination and decision making in the tech industry as well as lack of legislation applicable to technology widens pre-existing racial discrimination and inequality. *Behind Shirley* recalls the early decades of photographic invention where a single light-skinned Caucasian image was used as a standardized color-balancing reference. As a result, the technology was incapable of accurate representation of black and brown bodies. *Behind Shirley* seeks to recover our historical memories of technological shortcomings from the past, and to link them to present facial-recognition software. The light-skinned default of representation continues to have profound lifelong consequences for black and brown bodies in a wide range of life experiences from media and tech to healthcare and the criminal justice system. *Behind Shirley* in turn offers new possibilities of algorithmic resistance, using technology to reimagine a speculative future where resistant bodies are joining the growing movement where “racial justice is algorithmic justice.”

### Brave New Commons

Masaki Fujihata

Amongst the many NFT projects submitted to the award, *Brave New Commons* is one of the very few that speculates on how it could have been otherwise. Instead of riding the hype wave of speculation and the recognition of the value of digital

art as speculative investment on the art market, Masaki Fujihata reminds us of how the immaterial lightness of digital art could have been valued. Simultaneously he presents an ironic evaluation of the hyped field of NFTs in general. Excavating a cached tmp file from an ancient media from the artist’s early career that has miraculously survived the myopic focus of digital artefact over 30 years, its visual meaninglessness is dwarfed by the sheer existence. The visual similarity to the many pixels in today’s NFT craze is then turned into something other than speculative money laundry: The price set by the artist is divided by the number of interested buyers, who all pay an equal fraction of the set price. This way, the value, as seen by the artist and the shared ownership, and as experienced by the audience, is in stark contrast to the current crypto/nft reality.

### BLACKTRANSARCHIVE.COM / WE ARE HERE BECAUSE OF THOSE THAT ARE NOT

Danielle Brathwaite-Shirley

*BLACKTRANSARCHIVE.COM* critically reconfigures our notion of archives, offering new possibilities for accessing them while questioning their institutional forms constrained to patriarchal categorizations that neglect or misrepresent Black trans people. The artists’ response is an archive in the form of a web-based 3D video game, built and designed by and for Black Trans people. Their designers and developers considered their own lived experience to produce a viable and open platform which subsequently re-structures the relationship between power, knowledge, and subjectivity that prevails in today’s digital platforms. By using well-elaborated 3D characters and landscapes, *BLACKTRANSARCHIVE.COM* takes us into an extensive exploration of a virtual world inhabited by fluid genders and personalities. It is deliberately designed from the perspective of Black Trans people and therefore is not inviting for everyone. However, while one interacts with the archive, it shapes an intimate dialogue for comprehending that solidarity and empathy are possible in an online world that is commonly gender biased and racially hierarchized.

## Chroma

Yunchul Kim

*Chroma* challenges us to push the boundaries of reality and explores the dynamic interplay between the material and immaterial as well as the visible and the invisible. The uncanny aesthetics of one-of-a-kind materials and structures, which are the result of interdisciplinary collaboration and rigorous artistic research, provide a glimpse into an alternative reality. Since it is the subject of invisible, complex interactions, it develops its own “matterness” in motion. Through the material’s photoelasticity, the large-scale installation made of transparent laminated polymer is equipped with kinetic mechanisms that perform ever-changing chromatic fluctuation and metamorphosis. In an era of sociopolitical unpredictability, it inspires us to ponder the fundamental and imagine a world in which (human) beings, objects, and nature coexist in harmony.

### How to Make an Ocean

Kasia Molga

In a time where human sorrows are heightened on a global scale, *How to Make an Ocean* seeks to transform our griefs into oceanic remedies and rescue the environment. Humanitarian crises of pandemic, invasion, destruction, and environmental emergencies fill our digital lives in a constant stream. To cry is a profound human experience that triggers connection and social bonds necessary to cope with grief and anxiety. *How to Make an Ocean* is participatory experience meticulously orchestrated in multiple parts, a growing collection of mini-oceans made from the artist’s and participants’ tears, a laboratory of crafted tools for tear harvesting, a Mirologist AI bot that curates an audio visual experience of environmental news headlines, and artist workshop-performances. Through poetic aesthetic and ritualistic gestures participants share their tears to create a collection of mini marine eco-systems foregrounding the interdependence of human and nature and the connection between mental health and environmental health.

### **morphecore**

**Daito Manabe + Shingo Oono + MIKIKO**

Rendered as a dance performance, but clearly positioned as a work in progress, *morphecore* pushes the elusive discourse of Brain Computer Interface to a tangible experience. Collaboration with Tokyo University's cutting edge brain scans, and with a trained machine learning model, the artists map the imagined poses to a rigged 3D model and animate a sequence of them to form a choreography. The limits of the brain reading are viscerally felt in the glitchy movement, but at the same time renders the potential in an immediate way: no more as a theoretical reference, philosophical position, but as a concrete experience with bespoke aesthetic. The work highlights the role interactive art (+) can play presenting a mirror of the hopes and worries of technological advance in a direct, relatable experience. The work is also a poignant reflection of the disembodied existence on zoom calls that we all have experienced in the last year, leaving us yearning for physical touch.

### **NoSearchBar**

**Erik Anton Reinhardt**

The new cognitive-capitalism mentality in which the internet is based, relies heavily on search functionalities to frame how we experience our digital habitat. When we search online we are not finding answers, but also inputting valuable information about our interests and motivations and feeding gigantic databases that extract and accumulate personal data, which are the basis of recommendation systems. Anticipating human behavior through the use of the analysis of the information we all search about is at heart of Google's business model and the future products and services they will provide. However, search tools systematically disregard and include information, giving importance to some at the expense of others. Search

engines are not merely technical feats, but also embed political and social exclusions, tapering our capacity to find the right stuff. *NoSearchBar* is a Chrome extension which removes the Search functionality from web sites. While using it, and restricting our capacity to search, it makes us reflect critically on our profound dependence on text-based queries. At the same time it helps us to bring back our curiosity to browse or find information through non-search mechanisms.

### **Siempre se tienen 19 años en un rincón del corazón**

**Gabriela Munguía, Germán Pérez**

The *Siempre se tiene 19 años en un rincón del corazón* project is a reenactment and an archaeological exercise performed by 3D printed open source tech devices at the site of the former Migueletes Prison, now Espacio de Arte Contemporáneo, the cultural epicenter of the city of Montevideo. The installation is a live performance of two drawing machines slowly and precisely redrawing on the walls the text and drawings found in the prison cells, written by the prisoners once confined in that space. Politically motivated punishment has historically been a tool for oppression, exploitation, and colonial power. Since the 1970s many countries have increased their punitive approach, and the prison-industrial complex has become one of the fastest-growing outlets for investment capital. The installation is a powerful poetic gesture that explores the potential of machines and algorithms to resurface our faded historical memories by reincarnating the actions of the erased and captive bodies. Furthermore, the project investigates the machine-human-architecture interaction as a collective experience of territories to recover the structural memory of a space with its different symbolic and material layers.

**Interactive Art +  
Jury Statement**

### **Technologies of Hope & Fear:**

#### **100 Pandemic Technologies**

**Marek Tuszynski, Stephanie Hankey**

The pandemic became a turning point in terms of a crisis that has had and continues to have a profound influence on human behavior, living, and working, but also as an opportunity for governments and companies to deploy further monitoring tools and take a further step towards the normalization of surveillance. A timely and relevant work, *Technologies of Hope & Fear* presents us with a snapshot of pandemic data-driven, AI enabled, and machine learning technologies that were developed and marketed as solutions for getting society "back to normal." Projects that bring hope to some, but also paying into fears of dystopian worlds, the archive gives a glimpse of the corporate, governmental, and individual products and visions of surviving a pandemic world. At once a collection of techno solutionist ideas, and another reminder of the tech world's obsession and blind faith in data collection and quantification as the answer to all.

### **The Zizi Show**

**Jake Elwes**

AI, neural networks, and facial recognition technologies are often mystified constructs, concepts, and tools, and complicit in reproducing social bias and reinforcing racism. But what might happen if AI intersected with drag? *The Zizi Show* is responding to the lack of representation and diversity of training datasets, which are usually based on normative identities, and aims to disrupt and subvert these systems by bringing in drag and gender fluid faces. The result is an extraordinary deepfake drag cabaret that pushes the boundaries of digital stage content and gives back control to queer communities that were involved in creating the dataset, while challenging ideas about gender. The show,

which is accessible online, allows you to pick a deepfake avatar, choose a song, and create your own performing act, while its glitchy aesthetic exposes the fragility of AI technologies. *The Zizi Show* is a much needed injection of queerness, difference, and otherness in an otherwise AI world of constructed, binary identities.

### **Voz Pública**

**Dora Bartilotti**

At a time of a global crisis of gender-based violence and ongoing violation of women's, girls', and non-binary peoples' human rights—serving to maintain structural gender inequalities, *Voz Pública* becomes a powerful participatory platform for breaking the silence. From enabling women and non-binary people to anonymously share personal stories of gender violence through an online participatory platform, to embedding these stories into collaborative electronic textiles—referencing traditional Latin American textiles and graphics linked to female struggle—to activating these textiles through performing protest acts and becoming an amplifying mechanism for taking these stories to the streets to make them heard. Bringing these voices to the public space and society is the ultimate goal of the project; to the society that not only refuses to hear and ignores the violence, but also a society that discriminates against women and non-binary people.

# BiOfilm.net: Resist like bacteria

Jung Hsu, Natalia Rivera

By late 2019 and early 2020, border closures and confinement measures abruptly interrupted the protests that were emerging around the world. This paralysis of widespread demonstrations during the pandemic generated the need to rethink and create alternative forms of civil resistance, while radically transforming our narratives, metaphors, and understandings on the living systems and their ways to break through, especially in microorganisms.

Bacteria, which were here long before us, have developed amazing technologies of distributed communication and self-organized collaboration. Large numbers of microorganisms can act in unison without any leader, and their ability to communicate with other species also allows them to easily relate, skillfully responding to any situation in their environment.

However, these bacterial resistance technologies have been colonized by militarist narratives that have taken over all our spaces. Microorganisms are regarded as enemies, the entire world undertook a “war against the invisible enemy”—the SARS-CoV-2, the body is seen as a battlefield, a battle that today “we are losing against the bacterial resistance,” and the immune system is a supposed military intelligence, an idea that insults the real intelligence of the living.

*BiOfilm.net*, our open project, praises bacterial resistance in contrast to the reductionist discourse of war. We took one of the Hong Kong movement’s icons, the yellow umbrella, and adapted it based on an open resource created by Andrew McNeil, to be used as a parabolic WiFi antenna. Other than covering, hiding, and protecting the user, *BiOfilm.net* helps them communicate. The umbrella



Juan Diego Rivera



Juan Diego Rivera



Juan Diego Rivera





Jung Hsu



Jung Hsu



Jung Hsu



Leslie Chi



Chunli Wang



Leslie Chi



Leslie Chi



Chunli Wang

can act as an antenna for a mini server, a repeater or a router, increasing the range, while building a nomadic network that accompanies the demonstration in the streets. In the move, the network connects and disconnects organically. Demonstrators can join the virtual BiOfilm to chat, share files, and store them.

We aim at facilitating the connection to alternative networks, and at the same time acknowledge the importance of seeking autonomy in our communication technologies, now when internet censorship is used as a tool of repression on the part of authoritarian regimes.

This project opens a non-disciplinary conversation between activists, biologists, hacker communities, artists, and everyone interested in co-creating other possible future communication systems. Besides the umbrella-antenna as a tool, the question and the processes around autonomous communication networks are still open for us. Together with those joining the conversation, the BiOfilm.net community continues developing the possibilities for p2p, encrypted, decentralized, and federated communication technologies, creating a biofilm itself that amplifies and enhances the connection of diverse communities worldwide.

Through artistic processes, we wonder about *other politics of the living*, other possibilities besides authoritarian and hierarchical political organizations, which, through long experience, we already know don't work for us. These collaborative practices, and not only biotechnologies created in laboratories or digital technologies, are the technologies of the living through which we resist more and more as communities of organisms and less as individuals isolated by capitalism. Biotechnologies as other living, evolutionary, and mutant forms of resistance.

Self-organizing, collaborating, and communicating in a decentralized and distributed way are some of the wonderful actions of the living to break through, and that is what "resist like bacteria" means.

Project by: Jung Hsu, Natalia Rivera  
Co-creation with: Mutante, Juan Diego Rivera, Manuel Orellana, Carlos Acosta, Margarita González, Daniel Osorio, Ana Isabel Castrillón, Robert Schnüll, Medienhaus/project  
In dialog with: Juan Manuel Anzola, Lulu Hsieh, Carlos Maldonado, ZKL, I Lun Shih, Shung Fuwei  
Based on the tutorial by Andrew McNeil: The Wifi Umbrella Ultra long range Wifi  
New Media Class – UDK Berlin, Prof. Jussi Ängeslevä, Luiz Zanotello

<https://u.aec.at/24FB70BD>



**Jung Hsu (TW)** is a researcher and new media artist based in Berlin. She attempts to combine interdisciplinary knowledge with artistic research to create heterogeneous encounters. In her process, she responds to the current social situation with multiple perspectives and uses metaphorical objects to create a speculative scenario. Her recent work has focused on micro-biopolitics and social movements. **Natalia Rivera (CO)** is an emergent-media artist currently exploring the possibilities of digital technologies as inter living-entities mutual aid media. In the context of indeterminate/queer knowledge creation, their processes are *indisciplinary*, open, collective, collaborative, and communitarian, through the Mutante laboratory (Bogotá) and the global Suratómica Network for creation—art and science.

# The Eternal Return, pre-Hispanic Interactions

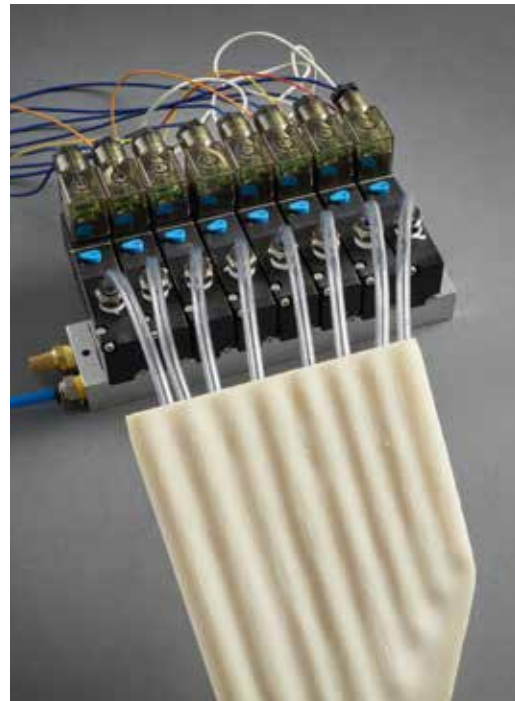
Cristhian Avila



Juan Pablo Murrugarra



Cristhian Avila



Juan Pablo Murrugarra

*The Eternal Return* is an art installation that seeks to impact on the private and collective imaginary using 3D impressions from pre-Hispanic musical instruments that are “played” again by the wind with technological assistance. The intention is to hear random interpretations of someone else's past. This process makes us wonder about how we understand time and, as in the paradox of Theseus' ship, whether we can confirm that the sound is the same if the body changes?

In the first instance, *The Eternal Return, pre-Hispanic Interactions* project revisits a real everyday aspect of pre-Hispanic Peru: sound. For this purpose, replicas of musical instruments discovered in different archaeological explorations are used and integrated into a musical, interactive, and incidental installation.

In this second instance, the project seeks to re-access and re-imagine the pre-Hispanic pieces found in different collections around the world, in order to fill in some of the gaps in our history

knowledge of this period. The installation aims to unveil a collective consciousness through the sound experience.

The process begins with the collaboration of institutions in the loan of pre-Hispanic pieces from their collections. These go through a tomographic examination to make an internal and external map of them. These are then printed in a 3D material that has clay-like qualities. Then these pieces are connected to a pneumatic system that injects pressurized air into each of them randomly, following data collected from the wind.

At the same time, we used a tower with the sensors to capture the wind data, high enough to avoid any obstacles that could alter the quality. This data is then sent to an Arduino plate that interprets the information, the plate is also connected to an pneumatic system that will introduce pressurized air into the system. In the end, some solenoid valves open and close giving way to the air that “blows” the replicas producing sound.

Interactive Art +  
Award of Distinction



Arturo Diaz



Lalo Rondón

Artist: Cristhian Ávila Cipriani  
Curator: Jerson Ramirez  
General production: Yuriko Tanaka  
Mechatronic engineering: Hayashi Mateo  
Musical production: Ronald Sánchez  
Technical assistant: Esteban Coronel  
Consulting: Fánel Contreras, Daniel Ocupa



Isidro Lámbarri

With support from: Museo de Arte de Lima, MALI; Fundación Telefónica del Perú; Clínica Javier Prado; Resocentro; 3D Rey; Municipalidad de Lima; Museo Central de Reserva, MUCEN; Colección Cohen; G&L ingenieros Corporación; Red Animation Studio

<https://u.aec.at/B5450E44>



**Cristhian Avila** (PE), (b. Lima, 1982) is a multidisciplinary artist living and working in Lima, Peru. Second place winner in the Photography category of Maravillarte 2022. IRRADIA 2020 award winner, organized by MALI (Lima Art Museum) and Fundación Telefónica del Perú. He has been part of the exhibits: *En busca de algo perdido...Perú un sueño*, MUNA 2021, *Otra Feria*, Lima + Santiago (2021), *Dos Generaciones*, Centro Cultural Británico drawing contest, Lima, 2021, *Bellas Artes: Voz y huella de los egresados (1918-2018)*, Lima, 2018, *Ojo Andino Perú*, Venice, 2016, among others.

# Perfect Sleep

Tega Brain, Sam Lavigne

*Perfect Sleep* investigates sleep and dreaming as a potential climate engineering technology. By inviting participants to experiment with their own sleep cycles, the work explores how lack of sleep and climate change are both products of the same extractivist capitalist system where regeneration, rest, and natural limits are dismissed and go unvalued.

The work is realized in two parts: as a smart phone app and as an installation. The *Perfect Sleep App* allows users to adjust their sleep schedule, slowly increasing their sleep time over the course of three years until they achieve a state of “total sleep.” To assist users in falling asleep, the artists commissioned a series of dream incubation texts from

Simone Browne, Johanna Hedva, Holly Jean Buck, and Sophie Lewis that invite sleepers to dedicate their dreamspace to envisaging a world beyond our own. These texts have been transformed into dreamscapes by composer Luisa Pereira and are best encountered in the moments between waking and sleeping. In the installation, titled *Sleep Study*, audiences can experience the dreamscapes from custom daybeds. The design of this reclining furniture takes inspiration from the deck chairs of Thomas Mann’s novel, *The Magic Mountain*, where tubercular patients doze awaiting a cure, as well as from the sleeping pods of Silicon Valley, where sleep is seen as another parameter to be optimized in the unending pursuit of excessive wealth and power. The work also includes an attempt to model

the climate effects of a user’s changing sleep schedule, drawing on research that correlates average sleep time and GDP, and GDP and carbon emissions. Emission reduction scenarios are presented for a population following different sleep schedules.

Artists: Tega Brain and Sam Lavigne  
 Dream incubation texts: Simone Browne, Johanna Hedva, Holly Jean Buck, Sophie Lewis  
 Dreamscape sound composition: Luisa Pereira  
 Furniture design: Jordana Maisie Design Studio

Commissioned by the Museum Sinclair-Haus, Stiftung Kunst und Natur, Bad Homburg.

<https://u.aec.at/B37277BA>



Anja Jahn



Michael Habes



**Tega Brain** (AU) is an Australian-born artist and environmental engineer whose work examines issues of ecology, data systems, and infrastructure. She has created wireless networks that are controlled by natural phenomena, systems for obfuscating personal data, and a smell-based dating service. She is Assistant Professor of Integrated Digital Media at New York University and her first book, *Code as Creative Medium*, is co-authored with Golan Levin and published by MIT Press. **Sam Lavigne** (US) is an artist and educator whose work deals with data, surveillance, cops, natural language processing, and automation. He is currently Assistant Professor in the Department of

Design at UT Austin. He was formerly Special Projects editor at the *New Inquiry* magazine and he creates and contributes to open-source software projects for the arts.

# Another Moon

Kimchi and Chips



Sven Lorenz, Stiftung Zollverein, NEW NOW



Left: Jochen Tack, Stiftung Zollverein, NEW NOW  
Right: Kimchi and Chips

*Another Moon* is a large-scale outdoor apparition that creates a technically sublime floating globe made from light in the sky. 40 towers collect the sun's energy during the day and project that light back into the sky at night, creating a second moon overhead where the beams tightly superimpose to create the three-dimensional form. The project was presented in the industrial ruins of the Zeche Zollverein (historically the most productive coal mine in Europe). The public artwork could be viewed up to 1km away, creating a focus to bring people back together in a post-corona era.

Each night the lasers turn off one by one as their batteries deplete, in relation to how much sunshine there was on that particular day. This mechanism replays the fragile energy of the day, unwinding our on-demand instinct for energy that became prevalent during the era of coal power.

The first commercial electric power plant began operation in 1882 next to Wall Street in Manhattan, triggering the second industrial revolution of electricity, capitalism, and information technologies. This global revolution brought with it an instinct of "supply and demand" to energy, where additional energy could be supplied whenever desired by adding more coal to the fire.

In a post fossil-fuel era, our instinct must change again since renewable sources such as solar and wind do not supply in response to our demand, providing energy abundantly but chaotically. Our relationship with energy will be increasingly like the one we have with the internet (e.g. On a bad

day, there's little power available and you can't run your washing machine. On a good day, there's plenty of power and you can charge your car). *Another Moon* attempts to demonstrate this emerging relationship with energy and help its audience to create new instincts. By using the irregular energy source of a clear sunny sky to power a spectacle, the spectacle must interact with an unpredictable environment and is decoupled from our demand and control. This rhythm runs in contrast to that of the coal mine where the project was presented.

Artwork by Kimchi and Chips (Mimi Son, Elliot Woods)  
Control and calibration: Kimchi and Chips  
Mechanical engineering: Kimchi and Chips in collaboration with LaserAnimation Sollinger  
Technicians: Jin Lee, Donghwi Chris Kang, Boeun Kim, Syemin Park  
Installation team: Blue Wheels Veranstaltungstechnik GmbH

*Another Moon* was commissioned by Stiftung Zollverein's NEW NOW Festival funded by the Ministerium of Art and Science of the State of North Rhine Westfalia.

Project supported by RAG Stiftung, Arts Council Korea – ARKO, 한국문화예술위원회, Fund for Korean Art Abroad (KAMS).

Special thanks to LaserAnimation Sollinger for 5 years of support for the *Another Moon* project

<https://u.aec.at/OAF14A16>



**Kimchi and Chips** (KR) is a Seoul based art collective founded in 2009 by **Mimi Son** (KR) and **Elliot Woods** (GB). Their practice understands the arts, sciences, and philosophy not as distant disciplines that must be bridged, but as alternative maps on the same territory, that can be employed simultaneously to navigate the territory more easily. Their installation series *Drawing in the Air*, studies mass and space-time and brings together Einstein's relativity, Buddhist philosophy, and the discrepancy between reality and images. It led to the creation of the public artwork *Halo*. Their research-based approach has made them pioneers of a number of artistic formats both conceptually and in execution—specifically within the fields of volumetric images in fog and 3D projection onto non-designed forms. They were the first Korean artists to win the Award of Distinction at Ars Electronica within the field of media art. By releasing their techniques online as over 100 open source code libraries, countless other practitioners have adopted the studio's understanding and incorporated it into their own work.

# Behind Shirley

Ibiye Camp



Visual Essay by Ibiye Camp 2020



Filter development by Ibiye Camp 2020

Interactive Art +  
Honorary Mention

*Behind Shirley* deconstructs and rethinks the colonial narratives in the development of facial recognition systems, exploring how darker skin was not taken into account in film chemistry and is now ignored in facial-recognition software.

In photography, “Shirley cards” were used as a standardized reference for color-balancing skin tones. These cards generally showed a single Caucasian woman dressed in bright clothes, and colored square blocks of blue, green, and red. The chemicals distorted tones of red, yellow, and brown, which led to faults when photographing darker skin. Film was not improved until furniture and chocolate makers began complaining that it was unable to capture the difference in wood grains and chocolate types. The default towards lighter skin in technology is still present today, with facial recognition occasionally not registering people of color.

The algorithmic bias that exists in digital-imaging technology is due to human biases. When trying to make artificial intelligence, we inevitably recreate human intelligence. AI finds patterns from within pools of data, reflecting our own behavior and often exacerbating its negative aspects. Empathy has a growing importance in artificial intelligence, datasets and algorithms, fields whose inherent perspectives require further interrogation.

*Behind Shirley*, Film 5'58", by Ibiye Camp  
With support from: 5th Istanbul Design Biennial

<https://u.aec.at/13BC681E>



**Ibiye Camp** (GB) is an artist whose work engages with technology, trade, and material within the African Diaspora. Ibiye’s work utilizes architectural tools to create sound and video, accompanied by augmented reality and 3D objects, and highlights the biases and conflicts inherent to technology and postcolonial subjects. Ibiye tutors at the RCA with architectural design studio ADS2, titled “Black Horizons: Worlding within the ruins of Racial Capitalism.” Ibiye co-founded Xcessive Aesthetics, an interdisciplinary design collective exploring data through immersive technologies and public installations.



Face Filter in  
London Protest  
by Ibiye Camp  
2020



Face Filter in  
Freetown by  
Ibiye Camp  
2020

# Brave New Commons

Masaki Fujihata



I had been thinking that making copies and distributing was the only way to make digital artwork last for the future, similar to Public Domain Software. Now the NFT came in, but the current economics surrounding NFT art is too speculative. Therefore this project was realized to criticize the condition of NFT art.

The project launched in a group show *Coding Theory*, at 3331 Arts Chiyoda, Tokyo, where my 30 artworks were listed and sold. I made these in the 80 and 90s by using MacPaint on Macintosh SE and recently excavated from the old floppy disks. Most of them were not published and some were not completed, existing as temporary saved files, while two of them are actually titled “tmp.” This incompleteness becomes a key to realizing this project. After the show was over, the additional participation continued on the web site until the end of January in 2022.

Actually, one of the artworks was set at 1 million JPY at the beginning but it went down to the cheapest price 1,096 JPY(=9.5 USD) at the end, because it was distributed to 912 participants. If it gets 1 million participants, it would be less than 1 JPY. It means an artwork becomes public property, not in a public museum, but owned by a community as one of the final destinies of artwork.

Conceived by Masaki Fujihata  
Exhibition *Coded Theory* 2021, 3331 Arts Chiyoda, Tokyo, organized by Masato Nakamura (commandA LLC)  
Coordinator: Himi Tsukayama (nutriment), Arasuke  
Supported by Aiko Konabe (Startbahn Inc)  
Website development by Akihiro Kato (drawCircle Inc), Daishi Tajima (TISSUE org.)  
Special Thanks to Taihei Shii (Startbahn Inc.)

*Brave New Commons* is a project considering the new type of ownership of digital artwork made possible using NFTs, not based on a uniqueness rooted in conventional materials, but as a novel means of ownership utilizing the properties of digital data. In contrast to the open ascending price auction, I named it “subdivision method,” which determines the price of an artwork by divid-

ing an arbitrary price set by the artist by the number of purchasers. A higher number of purchasers results in a lower price. Also, as there is no distinction between the original and duplicate in digital data, multiple numbers of people will own the exact same artwork, creating a form of “distributed ownership” different from what some call “co-ownership.”

Joi Ito



**Masaki Fujihata** (JP) is one of the pioneers of new media art. He started his career in the 1980s exploring computer graphics and later produced canonical interactive art pieces *Beyond Pages* (1995–1997) and *Global Interior Project* (1995, Ars Electronica Golden NICA Award in 1996.) While practicing art, Fujihata has also spent more than 20 years as a professor at Keio university and at the Graduate School of Film and New Media, Tokyo University of the Arts. In 2016, he received the Medal of Honor with Purple Ribbon, from the Cabinet Office, Government of Japan. In 2020, he was a regent professor at UCLA. The most recent AR (Augmented Reality) project, *BeHere / 1942* launched at

Japanese American National Museum in Los Angeles, 2022, focused on Japanese American internment in 1942. <https://www.janm.org/exhibits/behere1942>

<https://u.aec.at/E607B9CE>



# BLACKTRANSARCHIVE.COM / WE ARE HERE BECAUSE OF THOSE THAT ARE NOT

Danielle Brathwaite-Shirley



Tina Rivers Ryan



Kai Werner Schmidt



Kai Werner Schmidt



Kai Werner Schmidt



Kai Werner Schmidt

Traditionally Black Trans people have been misrepresented or absent within archives. *BLACKTRANSARCHIVE.COM* also known as *WE ARE HERE BECAUSE OF THOSE THAT ARE NOT* is an archive built and designed by and for Black Trans people. The archive's aim was to find a way to more accurately store Black Trans Existence, an archive that would erase us as it attempts to remember us. Culminating in a 3D animated game, the project preserves the stories of Black Trans people generating a space where our existence cannot be ignored. The piece, designed alongside artists Ebum Sodipo, Tobi Adebajo, Jacob V Joyce, and contributors, was assembled from the ground up by a team of Black Trans people using their own lived experiences as the bases for development. From these conversations, all characters, landscapes, and stories were fleshed into a breathing resemblance of themselves. Using the style of a "Choose Your Own Adventure" as well as influence from PS1 games, visitors are required to reveal their own identity in order to access the work. Depending on how you treat the archive, your journey through the work will mirror your treatment of it.

Directed by Danielle Brathwaite-Shirley  
 Programming, coding: Emily Martinez  
 Contributors: Danielle Brathwaite-Shirley, Marikiscrycrycry, Pacheanne, Tobi Adebajo, Ebum Sodipo, Bernice Mulenga, Ornella Ospino, Blkmoodyboi, Jacob v Joyce, Shay P-W, Zamy, Camus-Doughen, Elijah Che, Travis Alabanza, Raks, Arthur Kibet, Vik, Aaron Marlowe, Christopher  
 Special thanks to METRO Transcend  
 Commissioned by Science Gallery

"WE ARE HERE BECAUSE OF THOSE THAT ARE NOT"  
 WELCOME TO THE  
 PRO BLACK PRO TRANS ARCHIVE  
 THIS INTERACTIVE ARCHIVE WAS MADE TO STORE AND CENTRE BLACK TRANS PEOPLE TO PRESERVE  
 OUR EXPERIENCES  
 OUR THOUGHTS  
 OUR FEELINGS  
 OUR LIVES  
 TO REMEMBER US EVEN WHEN WE ARE AT RISK OF BEING ERASED  
 YOUR OWN IDENTITY WILL DETERMINE HOW YOU CAN INTERACT WITH THE ARCHIVE AS WELL AS WHAT YOU WILL BE ABLE TO ACCESS  
 BE HONEST WITH THE ARCHIVE  
 TO USE THE ARCHIVE TAKE A SEAT IN THE CHAIR IN THE CENTRE OF THE ROOM.  
 USE THE BUTTONS 1,2,3 TO NAVIGATE THE CHOICES WHEN THEY ARE PRESENTED.  
 IN ENTERING THIS SPACE YOU ARE AGREEING TO CENTRE THE BLACK TRANS EXPERIENCE  
 THIS IS A PRO BLACK PRO TRANS SPACE  
 THIS IS NOT YOUR SPACE  
 THIS IS OUR SPACE  
 YOU MAY FEEL UNCOMFORTABLE  
 IF YOU DO NOT SUPPORT BLACK TRANS PEOPLE THEN YOU ARE NOT WELCOME IN

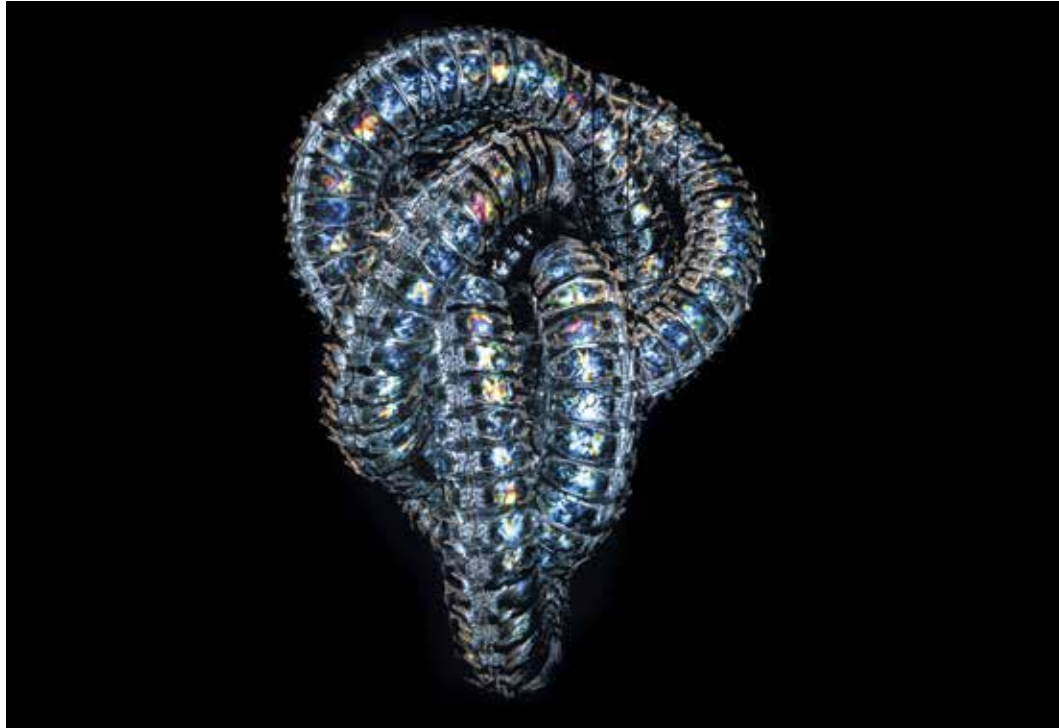
<https://u.aec.at/1743D180>



**Danielle Brathwaite-Shirley** (GB) was born in London in 1995 and lives in Berlin. They work predominantly in animation, sound, performance, and Video Games to communicate the experiences of being a Black Trans person. Their practice focuses on recording the lives of Black Trans people, intertwining lived experience with fiction to imaginatively retell Trans stories, as Black queer and Trans people have been erased from the archives throughout history. Brathwaite-Shirley's work has been shown in Arebyte, Quad, David Kordanski, Science Gallery, MU, Barbican, Tate, and Les Urbains as well as being part of the BBZ Alternative Graduate Show at the Copeland Gallery.

# Chroma

Yunchul Kim



In this soft kinetic installation *Chroma*, light, sound, material, and machines intra-act, forming a chromatic knot. A 15-meter-long parametric structure with 7 crossings and 320 cells all kinetically linked, its curves, while mathematically generated, are determined by a physics-based algorithm; the topological knot is formed by gravity and the collision modeling algorithm. Each cell, differently shaped, is made of a highly transparent laminated polymer, and fine deformation along with surface friction (shear stress) is kinetically applied to polymer layers, the photo-elasticity (birefringence) of which enables chromatic and optical variations; concurrently, the cellular automata algorithm of the main computer program activates the parameter of phenomenal changes in the knot, the speed, direction and brightness of its

light in particular, as shown on its chromatically dynamic surface. The depth of the material is revealed through this iridescent light.

*Chroma* creates its own “matterreality” in time-space as “mattereal” events unfold around and through it. So what matters in the knot, a gyrating vortex, is its topological dimensions rather than its size, scale, or our relative distance from it. A kind of hieroglyph that connects non-human elements to humans, this labyrinthine figure that has fascinated us since ancient times appears in strong symbols such as the ouroboros, DNA structures, the motion of Milky Way stars, etc. *Chroma*, which emerges with a knot generated rather than defined, turns into an eventual subject, the subject of eventuation, pulsating, and transmatting through space-time for us.

Interactive Art +  
Honorary Mention



Courtesy of the artist

<https://u.aec.at/1AEB81A8>



**Yunchul Kim (KR)** is a transdisciplinary artist and electronic music composer who works in installations, drawings, sound, texts, and other media. Dynamically integrating science, technology, music, philosophy, and poetry into his practice, Kim unravels a universe of “mattereal” entanglements. His transmaterial work has been recognized with the 2016 Collide International Award (CERN) and awards at VIDA 15.0, Ars Electronica and Transmediale, among others. Also an active member of many cutting-edge collaborative research projects such as *Matterreality* (KIAS, leader), *Liquid Things* (Univ. of Applied Arts, Vienna), and *Fluid Skies*, in 2014 he founded the Studio Locus Solus in Seoul. His current solo show, *Gyre*, is at the Korean Pavilion of the Venice Biennale, 2022.



# How to Make an Ocean

Kasia Molga



Can a human body—or its unwanted leaking substance—namely tears—sustain a new marine ecosystem, and in that way help us heal our relationship with endangered oceans? In Autumn 2019 I lost three people who were close to me. The world's governments declared an environmental emergency and environmental anxiety has been recognized as a mental health condition. Then the pandemic began and the anxiety became unbearable, induced by news headlines delivered to my social media by “ever-so-helpful” algorithms. While grieving, I cried a lot. Then I started using tears as a way to relieve and manage my anxiety. I had so many tears so that I started to collect them. Oceans have always played an extremely important part in my life and so I asked myself whether I could use my tears to create a mini ocean with this liquid.

What followed was 18 months research combining bio-art and data gathering, machine learning and bot programming, a tool for tears harvesting making and performance designing exploring the composition of human tears, their nutritional values for basic marine organisms, reasons for crying, crying stimuli, and whether in our increasingly digital life there is a space for tears and grief—and what all of that means for the empathy towards the system which we are part of.

The result—*How to Make an Ocean*— is an experience made of several parts: 1) a collection of mini oceans made out of my tears and the tears of participants in my performances 2) a Moirologist bot— Moirologist being a job from the past—a professional crier helping to shed tears. Here it is in the form of AI—a selection of videos with music—selected for viewing based on its assessment of the environmental news headlines 3) a lab with tools to collect tears and make a mini ocean and 4) a meditative workshop-performance during which I, together with the Moirologist Bot, guide the audience through a number of actions to make them cry and thus contribute to the collection of mini marine eco-systems.

Artist: Kasia Molga  
Tech support: Erik Overmeire  
Product design: Gosia Siwiec  
Video: Ivan Marevich  
Additional support: Davor Delija

*How to Make an Ocean* has been possible thanks to EMAP / EMARE residency conducted at Ars Electronica. Co-funded by the Creative Europe Programme of the European Union. Additional support from scientists from The DEEP in Hull.

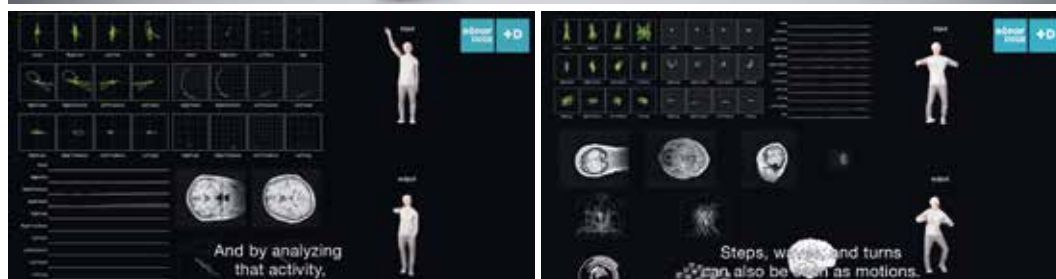
<https://u.aec.at/2A21E76C>



**Kasia Molga** (GB) is a design fusionist and media artist questioning the impact of accelerating technology on our perception of the natural environment. Her work establishes ways to care and collaborate with other living species and entities, treating them as equal co-designers of our future habitats. The technology is often human “un-centered” in the attempt to hijack the typical exploitative perspective. Kasia is the founder and director of Studio Molga Ltd, where she heads a team of creative technologists and architects delivering socially engaged commissions and educational projects.

# morphecore

Daito Manabe + Shingo Oono + MIKIKO



*morphecore* was an experimental lecture-performance that probed new possibilities for performance at the intersection of neuroscience and dance. Armed with fMRI and brain decoding technology, the project reconstructed bodily poses from visual cortex activity, generating choreography that was further manipulated to test a range of physical variables—from the effects of gravity to muscle elasticity and joint rotation—in an exploration of what modes of dance might arise free from real-world constraints. The results were presented in a video narrated by a Daito Manabe avatar, culminating in a dance performance by this digital Daito that became increasingly abstract as it transcended the physical limits of the human body. The dance performance drew on 3D scan data of Daito Manabe, visual cortex activity recorded by fMRI, and motion capture data from Shingo Oono and ELEVENPLAY dancers.

By parsing and reconstructing dance as three constituent elements—pose, motion, and choreography—we sought to probe modes of physical expression free from the constraints of gravity and the physical limits of the body’s range of motion. Further studying the “noise” and “glitches” that arise in chaotic neural processes, the project anticipated a future when dance might be generated by sound stimuli to the brain that produce an interactive response in the body.

As the coronavirus pandemic prevented the gathering of new data from in-person test subjects, the work was produced as a prototype based on simulations created with reference to prior fMRI data and procedures acquired in 2018. Although a future actual data set will inevitably elicit different results, the brain decoding methodologies underlying the project remain the same. It is a work in progress.

## Research

Since 2014, Daito Manabe has experimented with the brain decoding technology being researched by Dr. Yukiyasu Kamitani at Kyoto University. “Brain decoding” seeks to look into the mind’s eye by reconstructing images seen by test subjects based on brain activity in their cerebral cortex. In 2018, Manabe adapted this technique in a series of installations and live shows that generated images imagined when listening to music, in a novel departure from conventional artificial synesthesia and VJ approaches to visualization that rely on music waveform and spectrums. In *morphecore*, brain decoding technology was used to extract poses imagined in the mind. These poses were assembled with motion data and choreography to create a dancing CG Manabe avatar.

Motion capture dancer and choreographer: Shingo Okamoto  
 Supervisor: MIKIKO (ELEVENPLAY)  
 Music co-producer: Hopebox  
 Editing director: Kenichiro Shimizu (PELE)  
 CG director: Kenta Katsuno (+Ring)  
 Effects artists: Tetsuro Takeuchi (quino grafix)  
 Effects artists: Jun Satake (TMS JINNIS)  
 Effects artists: Tai Komatsu (cai), Keisuke Toyoura (cai)  
 Effects artists: Mikita Arai (Freelance)  
 Effects artists: Tsukasa Iwaki (+Ring)  
 CG producer: Toshihiko Sakata (+Ring)  
 Data processing: 2bit  
 Motion capture: Crescent, inc.  
 3D scan: K’s DESIGN LAB  
 Composer: Naoya Kawata (PELE)  
 Project manager: Naoki Ishizuka (Rhizomatiks) + Yurino Nishina (PELE)  
 Producer: Takao Inoue (Rhizomatiks)

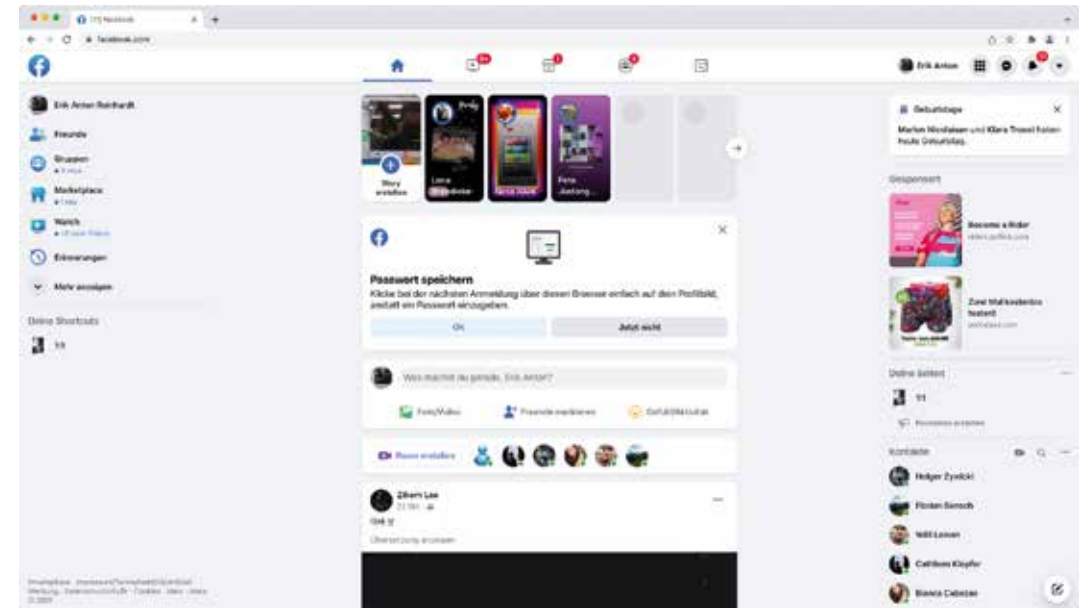
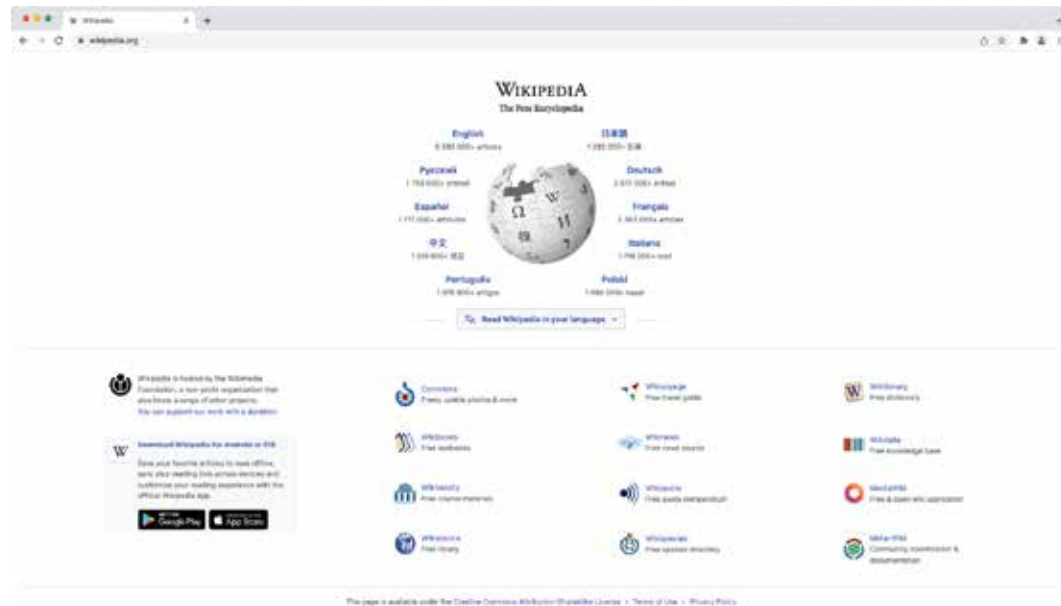
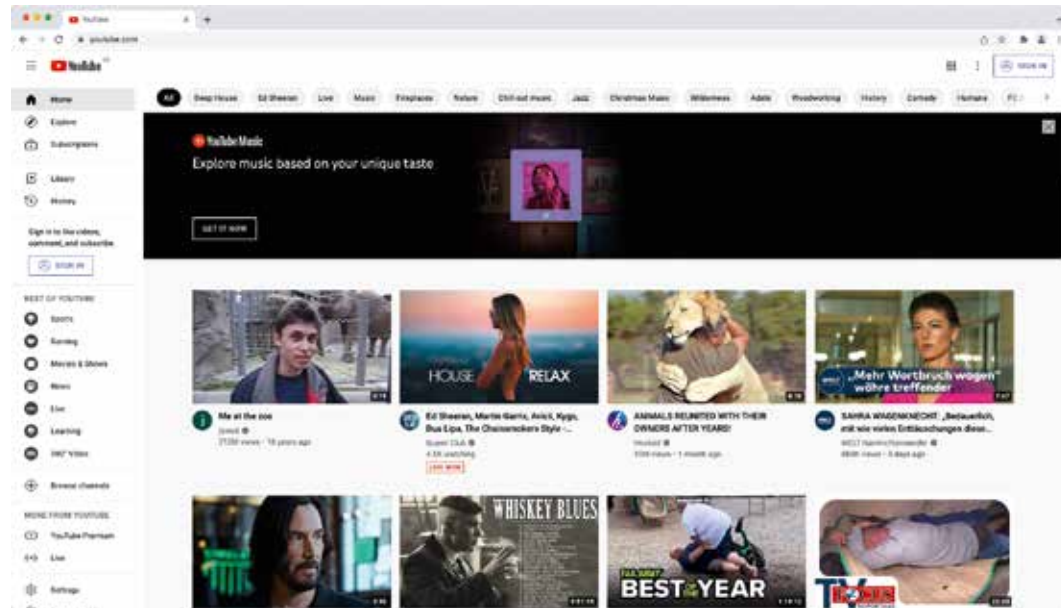
<https://u.aec.at/5EDE4149>



**Daito Manabe** (JP) Artist, programmer, and DJ. Launched Rhizomatiks in 2006. Specially-appointed professor at Keio University SFC. Manabe’s works, which range over a variety of fields, take a new approach to everyday materials and phenomena. However, his end goal is not simply rich, high-definition realism by recognizing and recombining these familiar elemental building blocks. Rather, his practice is informed by careful observation to discover and elucidate the essential potentialities inherent to the human body, data, programming, computers, and other phenomena, thus probing the interrelationships and boundaries delineating the analog and digital, real and virtual.

# NoSearchBar

Erik Anton Reinhardt



A distinction can be made between specific and non-specific software-related data access: The specific search hardly has any surprises in store, due to its purpose of existence. We find what we are looking for, the problems, preferences, and needs are specifically individual, predominantly environmental, and self-driven. However, the amount of data gathered by websites appears to be too large. A trivial or complex speculative form of sorting, categorization, and curation is required—the unspecific access. Examples of this are forecast systems, sorting, categories, and recommendation systems, which try to anticipate users' problems, preferences, and needs but often

also to create new ones. By removing the Search-Bar, we are exposed to an ideological software anticipation. We no longer have the opportunity to articulate our own problems, preferences, and needs but are always left with mixed feelings between frustration and hope that the right thing could still emerge.

Finn Jakob Reinhardt, New Media Class (UdK Berlin)

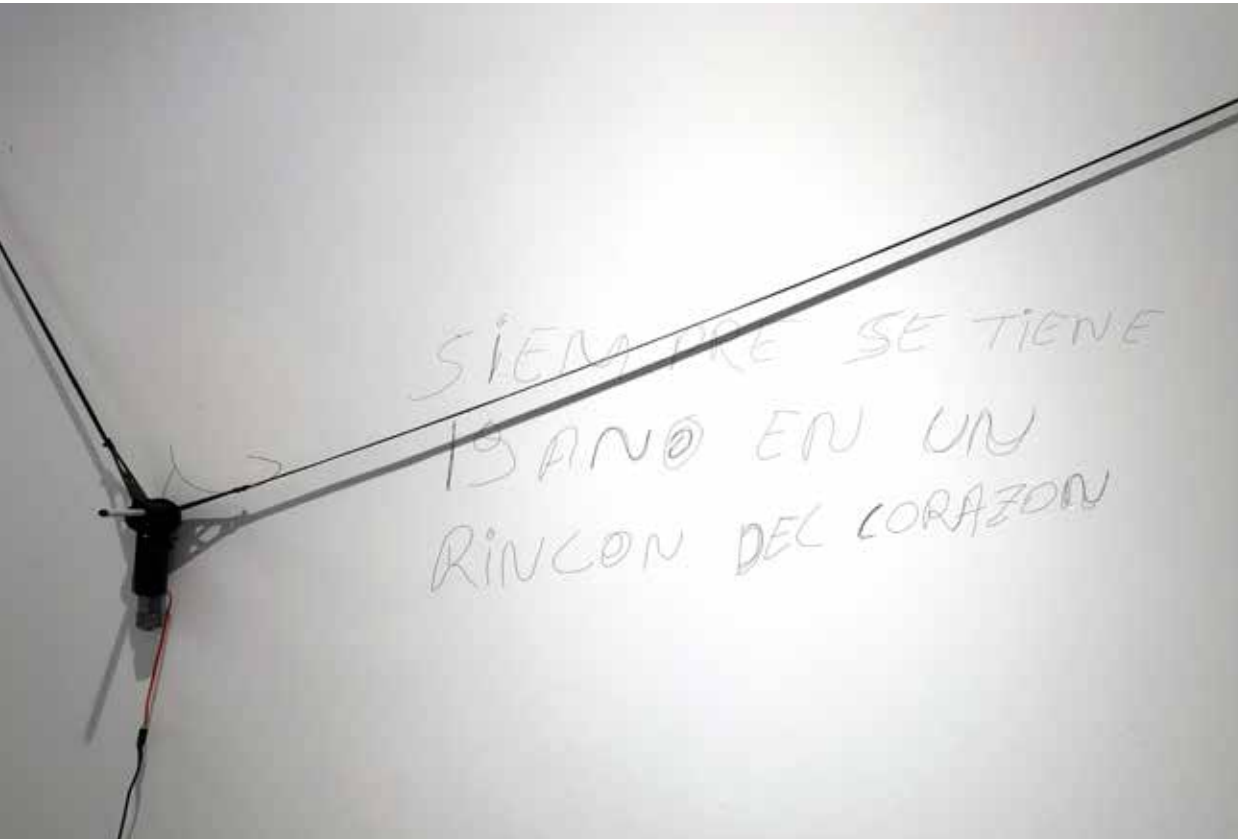
<https://u.aec.at/9D44CE3B>



**Erik Anton Reinhardt** (DE) is a Berlin-based designer with conceptual media art practice. He is currently studying Visual Communication at Berlin University of the Arts with a focus on New Media and intervenes behind the shiny surfaces of our digital society. He is mainly concerned with cultures and ideologies embedded in techno-social systems.

# Siempre se tienen 19 años en un rincón del corazón

Gabriela Munguía, Germán Pérez



Gabriela Munguía, courtesy of the artist

The still functional architecture of the Espacio de Arte Contemporáneo, now the cultural epicenter of the city of Montevideo, constantly evokes its past. From the time when this building, now dedicated to the arts and culture in the heart of the historic center, functioned as a detention center for almost 130 years, better known as the Migueletes Prison. This great panoptical machine dedicated to confinement and isolation was deployed as an instrument of modernity to control and erase bodies. How can we reconstruct this great machinery into a device for the memory of bodies and matter that layer by layer juxtapose and recompose again and again this physical and symbolic space that we inhabit?

*Siempre se tienen 19 años en un rincón del corazón* was born as an anarcheological exercise that tries to embrace a past whose scars and wounds are still latent, even 20 years later. In this search, the technological device was interwoven as a sensitive interface that helps to make visible the depth of our contemporary biopolitical architectures.

This work consists of an installation composed by two drawing machines that rewrite on the walls different texts found in the abandoned cells of the prison, written by the prisoners once confined in this space. These machines for memory interact as gestures in the story of this space that still disputes its identity, articulating a dialogue between the latency of the past and the present traces of the bodies and its material memory.

This project was deployed as an exploration to develop machines and algorithms that allow us to experiment the human-machine-architecture interaction as a collective experience of territories. Through a transdisciplinary approach this project explores digital open source technologies to recover the structural memory of a place, bringing into tension the systems of power in dispute with the bodies that inhabit it and shape it along with its symbolic and material new resignifications, ruins, and fissures.

Video\_installation1 by Gabriela Munguía

This video shows the beginning of the machines drawing in the exhibition space at the Espacio de Arte Contemporáneo in Montevideo.

Video\_installation2 by Yessica Duarte

This video shows the drawing process of the machines over time.

This artwork was commissioned by the Espacio de Arte Contemporáneo de Montevideo, Uruguay to participate in its 10th anniversary exhibition *Delitos del Arte*.

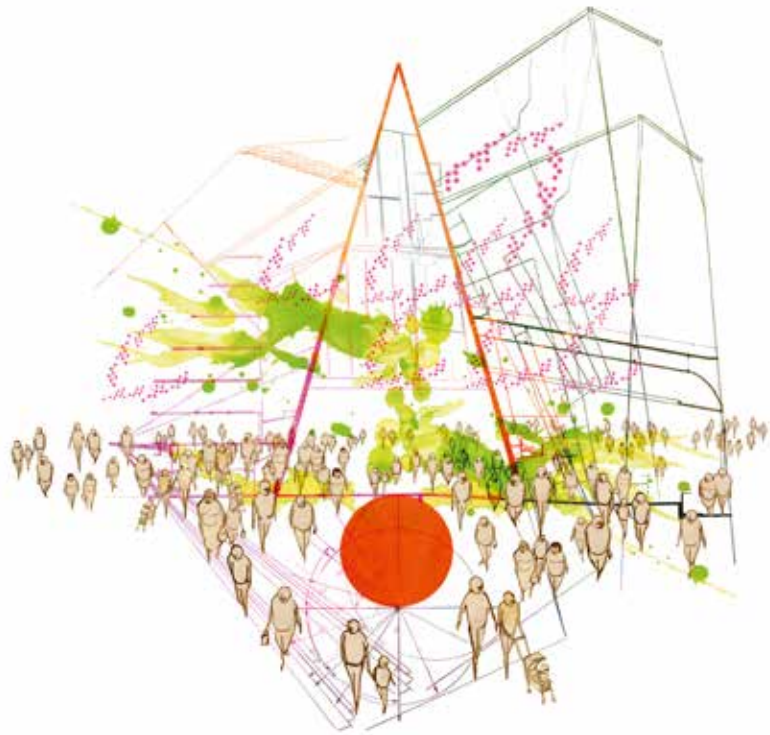
<https://u.aec.at/86EE1DDB>



**Gabriela Munguía** (MX) is a transmedia artist and researcher based in Buenos Aires. Recently she was awarded by the Prince Claus-Goethe Institute Mentorship Award for Cultural & Artistic Response to Environmental Change and CIFO-Ars Electronica Award. **Germán Pérez** (AR) is an independent developer and programmer with former experience in open source technologies and digital fabrication for artistic-technological applications. Together they have created an experimental art studio where they focus on different Latin American cosmovisions, speculative thinking, and ecomaterialisms to address issues related to geo-biopolitics, human and non-human phenomena studies, and environmental justice, promoting entanglements among environmental humanities, science, and technology. Their work has participated in renowned exhibitions and festivals in the Americas, Europe, Iran, and Egypt.

# Technologies of Hope & Fear: 100 Pandemic Technologies

Marek Tuszynski, Stephanie Hankey



Ann Kiernan

*Technologies of Hope and Fear* is an artist archive of 100 data-driven, machine learning, and AI-enabled technologies developed, marketed, and implemented to manage the pandemic and ultimately help societies “get back to normal.”

Whether attached to our bodies, installed in hospitals, schools, and train stations, hovering in the air, or scraping information from social media, this project bears witness to the ambient, biometric, mobility, and behavioral surveillance and intelligence revolution that the pandemic has enabled. The project creates a snapshot in time at the beginning of the pandemic. It is a curated artist archive of rapid shifts in the uptake of data and intelligence as a response to the crisis. Chosen from over 250 technologies worldwide, the artist archive investigates how data-driven “disaster capitalism” morphs in response to the crisis and the linguistic and aesthetic modes of corporate narratives captured by promotional videos and

visual metaphors. It documents transgressions between public and private spheres around the world in the context of the pandemic.

By exploring the trade-offs between safety and freedom, surveillance and control, the project intentionally deals with questions of scale between the individual and millions of individuals, feedback loops that create individual and collective insights. It charts the rise of the “pandemic pivot,” a range of solutions looking for problems.

Some of these technologies bring hope, and some play into our fears. Ultimately the project asks: What kinds of societies are we building? What trade-offs are we willing to make? And do these techno-solutions help us succeed in controlling the virus, or only in controlling the hosts?

*Technologies of Hope and Fear* was exhibited as part of the AI exhibition “You and I: Through the Algorithmic Lens” in Athens, 2021.

Interactive Art +  
Honorary Mention



Ann Kiernan

Creation, research, and direction: Stephanie Hankey and Marek Tuszynski

Tactical Tech team contributors:  
Design: Yiorgos Bagakis  
Technical direction: Laurent Dellere  
Editorial: Christy Lange  
Copy-editing: Alexander Ockenden

Collaborators:  
Research and production: Patrick Harvey  
Illustrations: Ann Kiernan  
Engineering: Bernardo Loureiro  
Special thanks to Daphne Dragona

With support from: The Onassis Stegi: Concept development, artistic direction and digital production support. The project was produced during the “Geographies of AI” residency by Onassis Stegi, organized in the context of the European ARTificial Intelligence Lab 2020. Co-funded by the Creative Europe program of the European Union. The Swedish International Development Cooperation Agency (SIDA): Support on the international research component of the project.

<https://u.aec.at/928C4C7F>



**Marek Tuszynski** (PL), Chief Creative Officer and co-founder of Tactical Tech, produces creative and social interventions that span various media, from film and radio to television, books, exhibitions, and the web. For the past 30 years, he has been working at the nexus of technology and politics, information and activism, and on the consequences of living in a quantified society. **Stephanie Hankey** (GB), Executive Director and co-founder of Tactical Tech, is a designer, activist, and social entrepreneur with over 20 years’ experience, exploring the social and political impact of technology on society. She works across disciplines—as a curator, educator, and maker, and is currently a Loeb Fellow at the Graduate School of Design, Harvard.

Technologies of Hope & Fear:  
100 Pandemic Technologies

# The Zizi Show

Jake Elwes



ACCURACY SCORE: 47%

ITERATIONS: 100

TRYING TO IMPROVE SCORE (LOSS)  
WITHOUT SEEING ORIGINAL IMAGE



Interactive Art +  
Honorary Mention

“If AI holds a mirror up to society, then Zizi applies the makeup.”  
Drew Hemment

## Drag Queens, Drag Kings, Drag Things and... Artificial Intelligence.

*The Zizi Show* (2020) is a deepfake drag cabaret, a virtual online stage hosting a groundbreaking new show with a twist. It features acts that have been constructed using deepfake technology, developed in collaboration with the London drag community. *The Zizi Show* dissects one of the dominant myths about AI, the notion that “an AI” is a thing we might mistake for a person. It is also about how we can create our own datasets and take back control, and as a queer community whether we want to be recognized by these systems, and how can we queer these systems.

The bodies in the show have been generated by neural networks trained on a community of drag artists who were filmed to create training datasets at a London cabaret venue closed during COVID-19. The project opened up safe spaces for creative expression, in person and online.

*The Zizi Show* constructs and then deconstructs a virtual cabaret that pushes the limits of what can be imagined on a digital stage. During each act audiences are invited to interact with the website and play with which deepfake bodies perform which songs. The deepfakes were created collaboratively in celebration, resisting the exploitative and oppressive nature of deepfakes. At times this breaks down when the AI tries to conceive impossible positions or combines multiple different queer identities; it can even reveal the skeleton tracking the deepfake is built on.

*The Zizi Project* (2019 – ongoing) is a collection of works by Jake Elwes exploring the intersection of AI and drag performance. It is a partnership with the Experiential AI research group at Edinburgh Futures Institute. Drag challenges gender and explores otherness, while AI is often mystified as a concept and tool, and is complicit in reproducing social bias. Zizi combines these themes through a deepfake, synthesised drag identity created using machine learning. The project explores what AI can teach us about drag, and what drag can teach us about AI.

Artist, coder & producer: Jake Elwes  
Director of Drag: Me the Drag Queen  
Web & development: Alexander Hill  
Camera & lighting: Toby Elwes  
Filming location (LGBTQ+ Cabaret Venue): The Apple Tree  
Cast of drag artists: Bolly-Illusion, Cara Melle, Chiyo, Dakota Schiffer, Lilly SnatchDragon, Luke Slyka, Mahatma Khandi, Mark Anthony, Me, Oedipussi Rex, Ruby Wednesday, Sister Sister, Tete Bang  
*The Zizi Show* is part of The New Real by Edinburgh Futures Institute at Edinburgh International Festival



<https://u.aec.at/C84799C0>



Clemente Lohr

Jake Elwes (GB) is an artist living and working in London. Searching for poetry and narrative in the success and failures of AI systems, Elwes investigates the aesthetics and ethics inherent to them. Elwes's practice makes use of machine learning's sophistication while finding illuminating qualities in its limitations. Across projects that encompass moving image installation, sound and performance, Elwes seeks to queer datasets, demystifying and subverting predominantly cisgender and straight AI systems. While it may seem like the AI is a creative collaborator, Elwes is careful to point out that the AI has neither intentionality nor agency; it is a neutral agent existing within a human framework.

# Voz Pública

Dora Bartilotti

Leonardo Aranda



Leonardo Aranda



Platohedro



Rhizomes Films

*Voz Pública* is a tactical mediation and participatory art piece that seeks to amplify the protest against gender violence in the urban context of Latin America. The intention of the project is to be a “voicing and amplifying” mechanism for those voices that have remained neutralized as a result of a society that still discriminates against women, a society that makes invisible the violence that crosses us, as a complaint and collective demand to recover our right to the city.

From a commitment to creative activism, the project is made up of three parts working together: The first part consists of an online participation and visualization platform ([www.vozpublica.cc](http://www.vozpublica.cc)), where women and non-binary people can share, in a textual and anonymous way, personal stories related to this problem. From these contributions a database is generated that is linked to the other two parts of the project.

The second part consists of an electronic textile that “gives voice to and amplifies” these stories through a voice synthesizer, giving them physical presence in the public space. This textile takes as visual reference the Latin American textile tradition, and graphics related to activist and feminist struggles. The electronic part of the textile consists of an embedded computing system, conductive thread, and an array of micro-speakers. In this way, the textile connects to the Internet, downloads the database of testimonials, converts them into voice, and amplifies them in an automated way.

The third part consists of a series of artistic laboratories called “La Rebelión Textil” (The Textile Rebellion). These laboratories aim to be convivial spaces for reflection and exchange of knowledge, as well as for the appropriation and collaborative creation of electronic textiles based on the initial prototype. The ultimate goal of these laboratories is to generate collective performative actions to activate these devices in public spaces, as a demand to recover our right to the city. Currently seven editions of *La Rebelión Textil* have been developed.

Project by: Dora Bartilotti – Original idea and conceptualization, textile design and production, graphic and web interface design, design and teaching of Laboratories, performative actions, textile programming and electronic Web and electronic programming; Leonardo Aranda  
Special thanks to all the participants of the seven editions of *La Rebelión Textil*.

With support from: Virtual Residence – FEM TEK (Bilbao); Artistic Residences program – FONCA (Mexico); Immersion Laboratory Residence – Digital Culture Center (Mexico)

<https://u.aec.at/B4656DEF>



**Dora Bartilotti (MX)** (1988) is a Latin American feminist and multimedia artist from Veracruz, Mexico. Through her work she seeks to generate critical dialogues between art, design, pedagogy, and technology. Her processes are woven through participatory practices and micropolitical action in the public space. She is part of Medialabmx where she directs the projects *Voz Pública* and *Costurerx Electrónica*, in which she explores the materiality of textiles and electronics as a tactical means for feminist activism and collective action. Her work has been featured in Mexico, UK, Brazil, Japan, and Colombia.

# Digital Communities



# (re)claiming Spaces

Rashmi Dhanwani, Thomas Gegenhuber, Sarah Kriesche,  
Farah Salka, Simon Weckert

Let's do something good: "Community" as a common word in everyday language is also used in a symbolic sense to convey good intentions. As easily as it passes lips, the structures that describe a community and its interpersonal relationships could not be more complex. Although every community organizes itself with an identity-forming narrative and tries to satisfy the needs of its members, each community at the same time functions completely differently depending on culture, technology, and local structures, as well as backgrounds and experiences of its members. As an essential social structure, communities not only represent the foundation of our cultural, economic, and social development, their ambitions, goals, and statements also reflect the global Zeitgeist. Digitization has enabled new forms of expression and connections which would have been unimaginable just a few decades ago.

The projects submitted in this year's Prix Ars Electronica category Digital Communities reflect in their diversity both social challenges as well as the different forms of self-understanding in the broader context of a society, a region, the world, or even the universe. The range extends from the microcosm to macrocosm, from philosophical

approaches to concrete missions, i.e. to highlight grievances, give visibility to communities, or name the unspoken. The diversity of submissions has thus also reflected the challenges of the times, where for many it feels like one crisis hitting the next. The devastating war in Ukraine, the coronavirus pandemic, or the climate crisis are just some of the topics reflected in submissions.

The submissions also represent the variety of approaches to tackle the question, what it means to be a community or to engage in work that makes communities better places. The jury's selection criteria this year were how innovative a submission is, e.g. does it showcase novel and valuable ways of altering the practice of community organizing, or enable new forms of community access, as well as the submissions' artistic excellence. In short, does a submission push the boundaries and provoke us to think about (digital) communities in novel ways. We were looking for submissions that strive to create an impact and facilitate change or that show the potential for impact. Whilst taking factors like scale and reach into consideration, the jury's assessment was also inspired by the impact of small and local action, based on the fundamental question of how they address challenges that our societies face—both today and in the future.

## Golden Nica

### Avatar Robot Cafe DAWN ver.β

Ory Yoshifuji, Ori Lab

[dawn2021.orylab.com/en](https://dawn2021.orylab.com/en)

Technology in its original thought has an enabling function. Robots as avatars to grant a barrier-free access to society, as well as the concept of a futuristic-looking café, combines the best of the analog and digital worlds to redefine inclusion and how people can live and interact together. What makes the *Avatar Robot Café DAWN ver.β* outstanding is how it stimulates us to think in novel ways how socio-technological arrangements can enable (marginalized) people to participate in communities. Particularly in times where people are seduced into commercialized and unsustainable virtual worlds, we should think about other forms of resilient community-enabling arrangements. Behind the coffee house itself is an economic concept that is sustainably conceived and future-oriented. Both in terms of the self-evident integration of vulnerable groups into society, as well as the design, the culinary arts, and the interaction between (wo)man and machine, the *Avatar Robot Café DAWN ver.β* is an outstanding project and from the jury's point of view a prime example of what a digital community can do and achieve.

## Awards of Distinction

### Families For Freedom

Amina Khouliani

<https://syrianfamilies.org/en>

*Families for Freedom* is a community of Syrian families demanding freedom for all of the country's sons and daughters, the hundreds of thousands of Syrians detained or disappeared, the majority of whom are in Syrian regime prisons but also other parties to the decade long war. The jury is particularly inspired by the heart and soul of this campaign, the drive of this women-led movement, mostly mothers led to free their loved ones. They have really well-articulated demands and use exemplary ways of advocacy and pressure to communicate with various sides, in Europe and beyond, who could do more to put an end to these miserable cycles of human suffering. Their collective action, shared purpose, and unified voice provides ample hope to similar communities in distress, they organize across several countries between UK, France, Germany, Syria, and Lebanon and keep pushing for hope where there is so little to cling to. They deserve our respect, support, and admiration.

## STRONG HAIR

Yatreda

<https://foundation.app/collection/strong>

Hair can be wavy, curly, straight, thick and plentiful, or short, thin and patchy.

It is a fundamental component of both personal and political selves and can be a social signal and a status symbol. In Ethiopia, hairstyles are sculptures full of meaning. With their hair people are able to identify their ancestry and distinguishing traits based on their culture, nation, or tribe. When we lose a hairstyle, we lose a visual language, an expression that has been created in over thousands of years that may never be repeated again. The project *STRONG HAIR* wants to save that culture of hair styles from getting lost, which is so important for the local communities. It wants not only to preserve what remains by creating a portrait exhibition to encourage women of color to embrace their crown of hair but also to bring back these styles. Not just for Ethiopia, not just for Africa, but for the world. The project shows how with the use of NFTs, blockchain technology can potentially help to preserve cultural heritage and identity while empowering local communities. These cultural hairstyles can be celebrated and preserved and can be shown to the world as a resource and an asset that is useful for Ethiopia and any other place.

## Honorary Mentions

### All the Stars We Cannot See

Gao Yujie, Megan Smith

[allthestarswecannotsee.space](http://allthestarswecannotsee.space)

*All the Stars We Cannot See* as an interactive immersive installation addresses (wo)mankind as a global community in an upgraded look up to the stars we've always been relying on. Be it for orientation, for guidance, for reflection, or as an inspiration. The estimated 10,000 stars we can see on a clear night with the unaided eye give way to the 23,000 satellite objects orbiting the earth

nowadays, highlighted in the virtual sky of the installation. This new view, which emerged out of a research project, opens up new perspectives on fundamental questions like eternity, mortality, or, for that matter, technology, which surrounds us as a partly invisible net, giving us new possibilities of orientation, communication, and education as well as surveillance. The jury praised the successful interplay of scientific work with artistic elements as well as an appealing aesthetic, which, as an installation, allows every visitor to individually discover and reflect on the evolution of humanity in the context of *all the stars we cannot see*.

### Alsaha Archive

Akhbar Al-Saha

<https://www.akhbaralsaha.com/archive>

Akhbar Al-Saha is an independent grass-roots media platform in Lebanon that covers protests (from the October 2019 revolution and beyond) directly from the streets, reporting on events from the point of view of the demonstrators, providing the viewers with a direct, verified but unfiltered account of what is happening in the areas where protests are taking place, and in the longer run, building a rich archive of the material collected over the years. In a context where mainstream media in Lebanon and the region presents society's issues as being independent and absolutely island-like from each other, the Akhbar Al-Saha advocates for social justice through an intersectional vision whereby they insist there is no justice without an equal distribution of wealth, the fight against patriarchy, capitalism, sectarianism, class, racism, and the systematic impoverishing of all people in Lebanon. The jury particularly admires their decentralized but vast network, their liberating approach and intersectional lens in archiving revolutionary times, and their engagement of refugee voices and expertise and all the hard labor put into creating this archive. We believe this project can cultivate and inspire a ripple effect for other communities surviving similar circumstances and wishing to build up an archive of their own.

### Atomfa (and other stories)

Joanna Wright

[www.atomfa.com](http://www.atomfa.com)

The word “development” evokes fast growth and infinity, and speaks of hope for a better future. But what happens when the future upon us has transformed this beacon of hope into a ruin that must be relegated to the past? How do you describe the legacy of development to those who inherit a future that is to be dismantled? Joanna M Wright's *Atomfa* alludes to these complex questions through a many media project documenting the closure of Trawsfynydd Nuclear Power Station in Wales, in collaboration with past and present workers at the site. In creating a collaborative archive replete with video, oral narratives, and text, it invites the community that supported the development of the nuclear reactor then and its decommissioning now to lead the narrative of this transition. More critically, it also holds space for the complex and frighteningly fragile questions we must ask of ourselves about the futures we are building. The archive serves both as a resource, and a tentative but much needed dialogue around these questions.

### Blank Noise

Jasmeen Patheja

<http://blanknoise.org>

The jury honors *Blank Noise* for its longevity as a community of Action Heroes/ Heroes/ They-roes; citizens taking agency to end sexual and gender-based violence in India over two decades. Its participatory projects invite women, girls, and allies to respond to their relationships with public spaces and their lived experiences with violence. An environment of victim blame only justifies and therefore perpetuates sexual violence. *Blank Noise* works to end victim blaming through a range of interventions located in the “I Never Asked For It”-mission; something that resonates with the jury unequivocally irrespective of the jury members' gender, nationality, and context. Its projects are simple and accessible and speak of unmoored universal truths, such as the “testimonials of clothing”

march that had women walking with thousands of garments that were purportedly worn during experiences of gendered violence. *Blank Noise* practices a movement-building approach to end gender-based violence and victim blame—an aspect that is so key to the digital communities that we know—and brings immense value to its societies.

### Center for Political Beauty

<https://politicalbeauty.de>

The jury honors the *Center for Political Beauty* for their work which is a fresh, original interpretation of the relationship between fiction, reality, and history in political activism. The group is well known for their controversial actions as well as their modus operandi. Their powerful statements are carefully planned and well thought through. With their interventions they show again and again how forceful one can and should be when it turns to humanism. The Center plays an important role in the political sphere of the contemporary world to sensitize the general public to the dangerous changes occurring right across Europe.

### Commons Cargobikes

wielebenwir e.V.,

Commons Cargobike Initiatives

<https://commons-cargobikes.org>

*Commons Cargobikes* is a project on new mobility. Traffic jams, air pollution, noise, and wasted spaces for parking have been a major problem in cities. *Commons Cargobikes* wants to proactively shape the traffic turnaround by providing a sustainable, agile way for the people to transport goods. They use cargo bikes as a means to ensure the availability of affordable and shared mode of transportation to everyone. The project provides a civic approach to urban planning, is cost-effective and environmentally friendly. The grassroots initiative advocates free and open access, social commons to facilitate a collaborative city. It shows that there are new possibilities of access to our public spaces and demonstrate that there are a lot of possibilities to make our city more livable and inclusive.

### **FragDenStaat** [fragdenstaat.de](http://fragdenstaat.de)

Information is power. Governments and their administrations have information that is out of reach of citizens. Consequently, transparency and access to information are vital because they enable civil society to exercise control over those in power. Transparency is thus a means to counter the power asymmetry between governments and their citizens. The jury agrees that several aspects make the platform FragdenStaat (Ask the Government) remarkable. First, the legal-tech solution with high usability empowers citizens to exercise their granted freedom of information rights meaningfully. Second, the platform harnesses the power of the crowd/communities in several ways—ranging from aggregating all individual requests into an online archive to using mass requests to circumvent other laws preventing the publication of information. Third, their successes showcase that the continuous hard work to shift norms and practices from governmental secrecy to more transparency can pay off.

### **Internet Freedom Foundation** Ashlesh Balaji Biradar <https://www.internetfreedom.in>

The internet and its stepchild, social media, have changed the world as we know it—they have manipulated democratic elections and free choice, they have allowed us to survive and thrive during epoch-defining lockdowns, and to share pictures of our cute cats. Regulating the internet has been hard, harder, hardest depending on one's distance from the power and money capitals of the world. For India, the world's largest democracy, *Internet Freedom Foundation* (IFF) aims to ensure that the internet remains free on the same democratic principles that the country stands on—a job made

harder by complex policies and limited citizen participation. IFF makes digital rights issues comprehensive yet understandable for its citizens using a framework of civic literacy and engagement through online campaigning channeled towards institutional change. They strategically engage with courts, regulators, and other legal institutions across India to create swift policy changes and raise red flags, when need be, leading to real on the ground change. The jury honors this bootstrapped, domestically funded, and transparent organization for legislative successes across issues of net neutrality, facial recognition, censorship, internet shutdowns, etc. while creating a series of best practice campaigns *Project Panoptic*, *Zombie Tracker*, and *Keep Us Online*, among others.

### **Salvage Garden: Computers Against Covid** <https://salvage.garden>

Computers and electronic devices with internet access have really become a necessity nowadays, especially for educational purposes, such as homeschooling. Laptops and computers are in high demand! That is why *Salvage Garden* has been fixing computers and the jury honored the project because, well, it's filling a gap in the community and filling a social need for people who can't afford a computer that was—and for that matter still is—so important for students at home. The project is also a good example of how any local group with a passion and a little creativity can do something to change lives towards a greener environment by repurposing or recycling leftover e-waste parts of laptops. The project is also a very good reminder to fix your things and prolong their life, and shows how important it is to be capable of repairing electronic devices and not necessarily throw away things that are still usable.

### **Sisyphus** Kachi Chan <https://www.kachi-chan.com/projects/sisyphus>

The imagery of a social structure—be it a community, society, or institution—makes us think that it cannot be destroyed once we build it. But a religion without people practicing the culture, a democracy without people going to elections, or a community without participation means that structures perish. Therefore, we cannot take any social or societal achievement for granted. Social life is a recurring process of creation and destruction. This installation speaks to this very fundamental idea. Moreover, it highlights the unruly role of powerful forces seeking to destroy institutions dear to us. But the piece also contains a hopeful message: Even if the foe is powerful, we should not give up. Instead, the people persistently maintaining, re-creating, and re-building what they hold dear can persevere.

### **Total Refusal—pseudo-marxist media guerilla** Total Refusal, ZKM Karlsruhe <https://totalrefusal.com>

*Total Refusal—pseudo-marxist media guerilla* highlights the unseen and questions the accepted of everyday society, as it's represented in Blockbuster games. Ignoring the actual gameplay and the general narrative players follow to reach the pre-defined goals, *Total Refusal* analyzes the open worlds in which the games take place, taking the audience on a guided tour, documentary-style, through the side streets of dystopian towns to take a look at the architecture, or analyze the tasks of NPCs. These “non playable characters” are an important ingredient for gameplay as they breathe life into the virtual worlds to intensify the immersive gaming experience. As NPCs fulfill everyday duties, the virtual dive into their daily routine, their

jobs, and pre-programmed tasks can also be seen as a reflection of how social structures, prejudices, or the value of human labor are nowadays perceived, and how societies are seen, and how they are represented in games. Since both game culture is found in everyday life and culture is found in games, the interaction makes it possible not only to reflect on values conveyed in games, but also to understand them as a handle for gaining a different perspective on existing social norms and their meaning. The jury also appreciates the fact that *Total Refusal* focuses on the large genre of games, which is often unquestioned in broader discussions, in order to examine and scrutinize visions as well as social structures and the role of a society represented in games and gameplay.

### **Twisted Gravity – Inspired By A Sustainable Future For Clean Water** Lynn Hershman Leeson in collaboration with Dr. Thomas Huber and Richard Novak/ The Weiss Institute Harvard <https://www.lynnhershman.com/project/twisted-gravity>

It is a shame how we treat our planet. The consequence of our actions is the climate crisis. This also means that water purification has rapidly gained more relevance. In addition to the excellent artistic approach, we were struck by the generativity of a dialogue between the arts and commercial science projects addressing the urgent societal challenge. Through the interaction with artist Lynn Hershman Leeson, the commercial science partner learned that water purification based on plastic is not sustainable, and this artistic-driven dialogue led to the pursuit of a more climate-friendly bacteria-based approach. Crossing and blurring boundaries between disciplines is a risky and challenging endeavor. But it can be gratifying, as the project *Twisted Gravity* amply demonstrates.

# Avatar Robot Cafe DAWN ver.β

Ory Yoshifuji, Ory Lab  
dawn2021.orylab.com/en

**Beyond Disabilities, Beyond Distance: Serving and interacting with customers via robots creates valuable relationships and gives everybody a chance to work with their peers and connect with society.**

In addition to developing the avatar robots *OriHime* and *OriHime-D*, which users regardless of age, gender, or disability can remotely operate as their avatar, Ory Laboratory has envisioned the *DAWN Avatar Robot Café* concept, where users work or virtually visit via robots. Through our company's Avatar Guild remote staffing agency, users can

seek employment, which provides a way for people to remain active in society. The goal is to demonstrate that with the right tools, even people who have difficulties in moving about freely can participate in physical labor and customer service from the comfort of their homes via an avatar robot.



MIYOGRAHY

The development of avatar robots is the foundation for this groundbreaking project, removing the barrier between job seekers and employers. It provides a place for job-hunting and training for those with disabilities, and successfully led to permanent placements at conventional companies. Visiting reveals how the café is designed to provide customer service with a human touch, via robots. The robots serve as a medium for lively interaction between those with and without disabilities, and thus far we have seen how invaluable this is.

For those who hesitate to venture outside due to physical/psychological challenges, past accidents or the like, the avatar robot *OriHime* provides another means for physical expression and action. *OriHime* is controlled remotely by “pilots” who interact with the world outside through robot-mounted cameras, speakers, and microphone. In this way, the robots offer virtual outings even for paralyzed pilots, by using a line-of-sight input device to speak with others.

The creation of the avatar robot was largely motivated by the personal experiences of Ory Yoshifuji, current CEO of Ory Lab. Health issues prevented Ory Yoshifuji from attending elementary school for

about three and a half years, making it so unbearably lonely that life hardly seemed worth living.

Even later, it was harrowing for him to imagine relapsing into this kind of isolation. The despair that his health problems might possibly return prompted him to prepare. He explored how loneliness might be alleviated, which led to the development of avatar robots, a way to feel human connection regardless of one's physical or psychological state. To Ory Yoshifuji, who designed a wheelchair while in high school, avatar robots are like wheelchairs that carry the user's heart.

Rather than seeking mechanically efficient robots, Ory Yoshifuji designs robots that convey the presence of the user: “We'd like to give people lifestyle choices that can lead to friendships and fulfilling roles in society regardless of any physical barriers. For myself as well, one day when I'm no longer able to move around freely, I'd like to be prepared. That's our goal with *OriHime*—our vision of how we can eliminate people's loneliness.”

The café is involved in arranging employment opportunities for their pilots by matching them with companies or organizations looking to hire people with disabilities.



The *OriHime* and *DAWN café* projects may in some ways seem like welfare programs for those confined to their bed or house due to illness, but the pilots are not the only ones who benefit. The café visitors they serve are reminded of the value of human connection. The sudden outbreak of COVID-19 forced us into isolation, separated us from society, and forced us to be alone. This raised awareness about how people isolated from society felt and how much we need to be in touch with others.

Regardless of physical constraints, there is hope in knowing that interacting with people and participating in society is still possible in places like *DAWN café*. It is somehow reassuring that there are reliable and experienced SENPAI (mentors) at *DAWN café* whose piloting methods are becoming a storehouse of knowledge. And again, these efforts show us the significance of human connections.

Ory Lab Inc. <https://orylab.com/en/#about>  
 OYAMATSU Design Studio  
<https://oyamatsu.co.jp/en/index.html>  
 TASUKI Inc.

Sponsored by: NTT Corporation, <https://group.ntt/en/corporate/overview>; Biogen Japan Ltd.  
<https://www.biogen.co.jp>; Mitsui Fudosan Co., Ltd.,  
[https://www.mitsui-fudosan.co.jp/english/corporate/about\\_us/outline](https://www.mitsui-fudosan.co.jp/english/corporate/about_us/outline); charity by crowdfunding  
 "CAMPFIRE" by 2156 ppl ¥44,587,000,  
<https://camp-fire.jp/projects/view/405051>

<https://u.aec.at/D50024BC>



Ory Yoshifuji (JP), at the age of 17, after three and a half years of withdrawal, decided to devote his life to the "elimination of human loneliness," and in 2010, he revealed *OriHime*, a robot that is an avatar, a tool to abolish loneliness and enable social participation even when it is difficult to go out. In collaboration with many SENPAI with physical disabilities, we had four time-limited cafes and opened a permanent café in June 2021 where over 70 people, who for various reasons have difficulties in going out, work. He has helped create roles for people who have lost contact with society and were isolated, and ways of employment at companies that want to hire people with disabilities, resulting in facilitating the employment of many people in private companies and public offices.

# Families For Freedom

Amina Khoulani

<https://syrianfamilies.org/en>



The Syria Campaign, Artino Van Damas



The Syria Campaign, Paul Wagner

We are a women-led movement of families that demands that all arbitrarily detained and forcibly displaced Syrians are freed. We are 250 members across chapters in Syria, the UK, Germany, Turkey, and Lebanon. We have met senior policymakers in the UN and leading donor governments to advocate for justice. We run public digital campaigns demanding freedom for all of the country's sons and daughters. Our position is against enforced disappearance and arbitrary detention by the Syrian regime and all parties to the conflict. We want to mobilize the public to pressure all sides to comply with our demands.

### Our Demands:

We, as families, demand the immediate release of our relatives who have been unlawfully detained. And until then, we call on the Syrian regime and all warring sides, and all those who may influence them:

1. To immediately release a list of names of all detainees, along with their current locations and statuses, and to immediately stop torture and mistreatment. In the case of death of a detainee, a death certificate along with a report on causes of death and burial location must be presented to the families.

2. Pressure the Syrian government to allow international humanitarian organizations to immediately deliver food and medical aid, and to grant international rights groups access to detention facilities to closely monitor living conditions in order to guarantee civil detention facilities to meet healthy living standards.
3. Abolish exceptional courts, especially field, war, and counter-terrorism courts and guarantee fair trials under the supervision of the United Nations.
4. Hold to account all those responsible from all sides, and particularly the Syrian government, for the violations they have committed and continue to commit against the arbitrarily detained and their families as an essential step toward justice.

<https://u.aec.at/FE513141>



The Syria Campaign, Artino Van Damas



The Syria Campaign, Paul Wagner

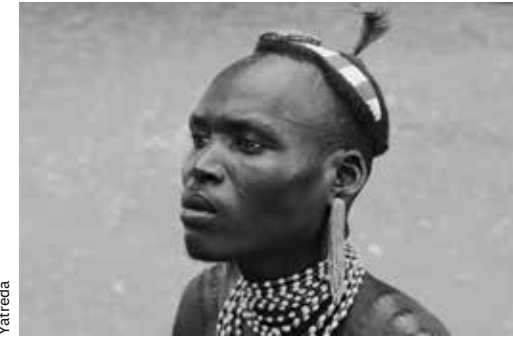


**Amina Khoulani (SY)** is a former educator and a civil society activist with a Master's degree in History and a Diploma in Education from Damascus University. She co-founded Darayya Youth Group for Peaceful Change, whose members were arrested by the regime in 2003. After the revolution, she was arrested with her family on the basis of their peaceful activism, she and her husband survived detention, but her three brothers are still under enforced disappearance by the Syrian regime. She is the co-founder and the general coordinator of Families for Freedom. Amina has briefed the United Nations Security Council on detention in Syria in 2019 and was awarded the International Women of Courage award by the US State Department in 2020.

# STRONG HAIR

Yatreda

<https://foundation.app/collection/strong>



*STRONG HAIR* ጠንካራ ፀጉር is a collection of 100 unique looping portraits which merge the diversity and power of African hair with the blockchain. A diverse range of ethnic groups from all over Ethiopia were featured, representing the country's cultural mosaic of over 80 different ethno-linguistic groups. In Ethiopia, hairstyles are sculptures full of meaning. Sometimes just by looking at someone, you can identify their nation or tribe. Hair can be a social signal and a status symbol. Many local African hairstyles are disappearing. When humanity loses a hairstyle, it loses a visual language that may never be repeated again. Thousands of years of culture has created these looks. Each hairstyle was captured using a homemade metal platform with a 360 degree spinning camera arm. The rig was made completely with accessible materials in order to inspire the local community that anything can be done by hand. The circling videos were then looped, so that playback can be continuous without a discernible beginning or end. The collection was "minted" as a non-fungible tokens (NFTs) on the Ethereum blockchain, with the video files stored permanently across a distrib-

uted network of computers. This preserved the precious cultural vessels on a fully decentralized blockchain. Art collectors from around the world participated in the NFT auctions, including from the Ethiopian diaspora, collecting the *STRONG HAIR* pieces into their decentralized crypto wallets. Using a custom smart contract, 10% of the crypto earnings were automatically distributed into a separate wallet, the "Yatreda Ekub," which is used to help other African artists pay the fees to mint their first artworks, and to collect meaningful works of art from others around the world.

Photographer / Director / Cinematographer: Kiya Tadele  
 Logistics and production: Nibret Adem  
 Research: Roman and Suzy Tadele  
 Technical assistant: Nebiyu Bekele  
 Post-production: Kiya Tadele and Joey Lawrence

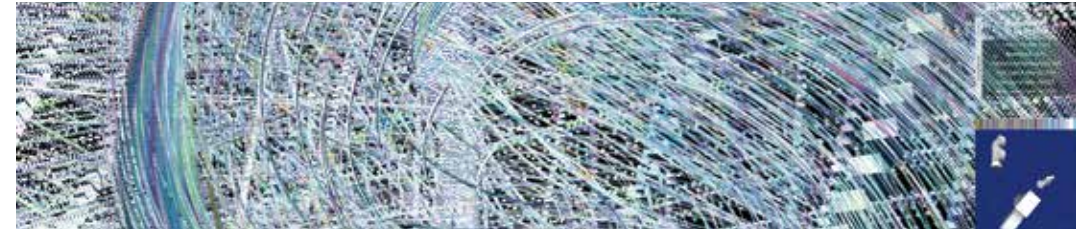
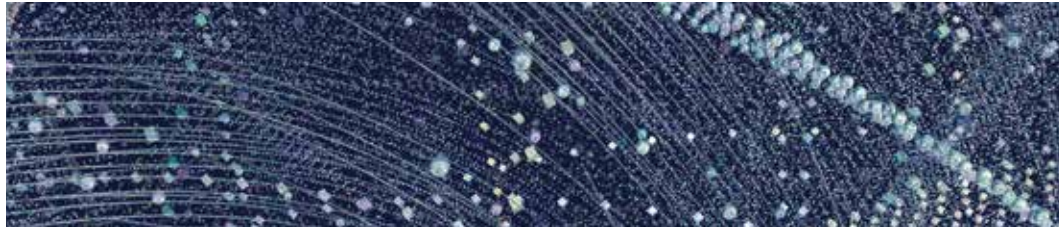
<https://u.aec.at/BCFFAC15>



**Yatreda** ያጥራዳ (ET) is a family of artists in Ethiopia creating in the style of tizitana nostalgia and longing for the past. Led by photographer Kiya Tadele, the group creates artwork which balances the new, like blockchain technology, with the old, preserving classic legends of historical and cultural significance. This blend suggests the timeline of African history doesn't simply end, and the stories are not finished. The art is about rediscovering Africa's original self once again.

# All the Stars We Cannot See

Gao Yujie, Megan Smith  
allthestarswecannotsee.space



*All the Stars We Cannot See* is an immersive installation that situates participants within a virtual sky activated by 25,500+ satellites orbiting Earth. Smith & Gao are working to render visible the global impact of satellite density. This artwork was made to build opportunity for discussion on the impact of colonizing space, and to bring awareness to growing surveillance and the political and economical driving forces that are currently occupying space.

The piece is developed in TouchDesigner, a node-based visual programming system, and it is produced by pulling real-time data from N2YO using their Application Programming Interface (API). The satellite positional data (latitude, longitude, and altitude) is stored to a lossless image where each pixel's individual RGB values contains a specified position for a satellite, at a specific moment. This forms a unique method for mapping and visualizing satellite locations over time. The real-time data is updated every 15 seconds, enabling the viewers to identify movement. Through the construction of the database, and visualization of this data, the artists were struck by the number of human-made satellites circumnavigating the globe. As this volume increases year upon year, this project applies quantitative data in an evocative way, where emotional reactions to the shared information are felt and can then build an urgency to discuss the colonization of space.

This installation is designed for a 270-degree panoramic screen, and opened to the public in April 2022, at the Visualization & Emerging Media Studio at the University of British Columbia, Okanagan, Canada. This work has also been presented at EVA London 2021, and Technarte Bilbao 2022. The artwork is an immersive experience that makes visible a veiled political space.

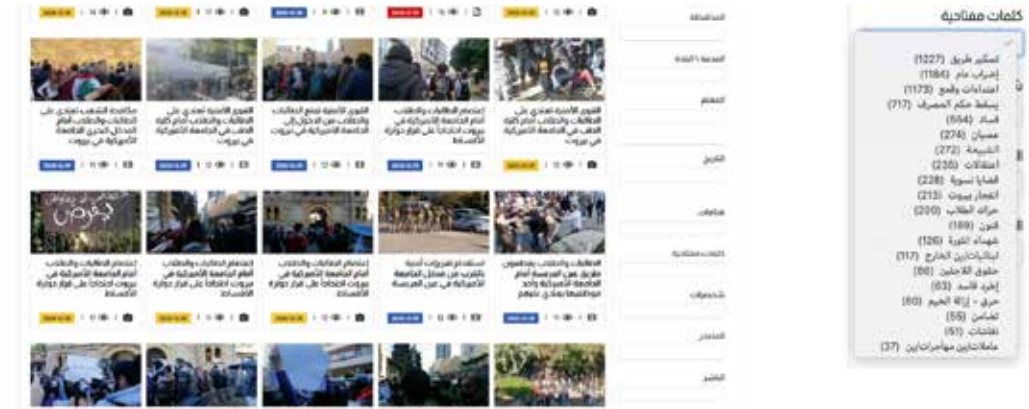
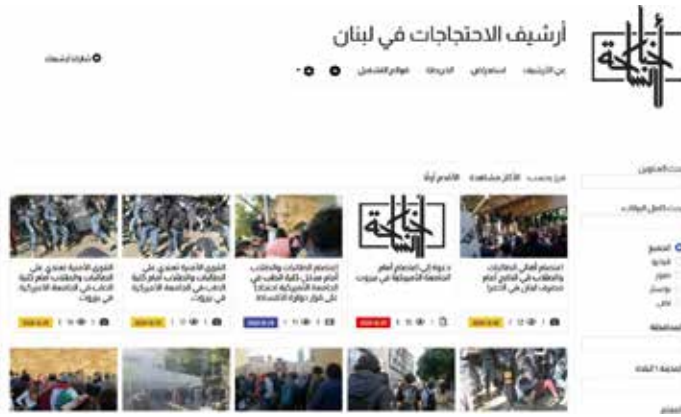
Artists: Megan L. Smith & Gao Yujie  
Technical assistance: Aristotle Roufanis  
Support received from: University of British Columbia,  
Canadian Foundation for Innovation

<https://u.aec.at/550E3AC6>



**Gao Yujie (CN)** is an interdisciplinary media artist and a PhD candidate at the University of British Columbia. Her generative participatory performance work studies the materiality of duration and explores the elasticity of space and time in rule-based interactive environments. **Dr Megan Smith** is a UBC 2022 Killam Laureate, and Associate Professor in New Media at the University of British Columbia. Her practice-based research probes systems for delivering syndicated data through narrative structure and she often works with virtual and augmented reality, geo-location, live-feed installation, and performance as methods for storytelling.





Alsaha Archive is a project that weaves a collective narrative of recent revolutionary history in Lebanon. The archive is built by a decentralized network of anonymous citizen / refugee journalists, who have documented protests all over the country since the summer of 2019. The team covers critical events from the ground, giving a platform to stories that corporate media censors and keeps from the public eye.

Our choices around what to cover and how to tag it are politically skewed to the margins of society, which we also inhabit. In content, the material covers moments of uprising in Palestinian refugee camps, the October 17 revolution, feminist and student movements, as well as the ongoing economic crisis. In form, it encompasses creative expression—from street to digital art and video documentation, from police brutality to moments of victory, sounds from the people's chants, and texts of statements and calls to protest.

In 2020, an academic study cited Akhbar Alsaha as “one of the most reliable sources” of information on the historic mobilizations. When the Covid-19 pandemic brought protests to an abrupt pause in March 2020, the team, confined to homes and laptops, turned their attention to building the

Alsaha Archive. The archive, completely in Arabic, preserves, digitizes, indexes, catalogs, and provides public access to thousands of visual and audiovisual files on an open web platform.

The platform currently encompasses over 10,000 files and is going through its last edits in anticipation of its launch in June 2022. Users will be able to filter through various tags of metadata and download any of the material, curating their own lists and drawing their own analyses.

While we view documentation, archiving, history preservation, as well as the liberation of information as participatory processes, we encourage our audience to support our vision of increasing our archive by contributing with new content via a secure form.

Amidst the ongoing health, economic, and security crises in Lebanon today, our hope is that the Alsaha Archive will reignite the public imagination towards possibilities of better futures, and to remind us of the revolution we created together in the very recent past.

<https://u.aec.at/47CB393E>



Akhbar ALSaha. We are a network of anonymous citizen / refugee activists and journalists, who have created a platform for grassroots journalism and documented protests all over the country since the summer of 2019. The team covers critical events from the ground, giving a platform to stories that are often censored by corporate media and kept from the public eye. Our way of working is simple and collaborative. It is based on what each contributor is able to provide in terms of time, attendance, Internet access, technology, political and editorial expertise. Due to the nature of this work, most of the Arena News team has a high turn-over rate that is highly dependent on their availability and capacity to commit.

# Atomfa (and other stories)

Joanna Wright

www.atomfa.com



Joanna Wright

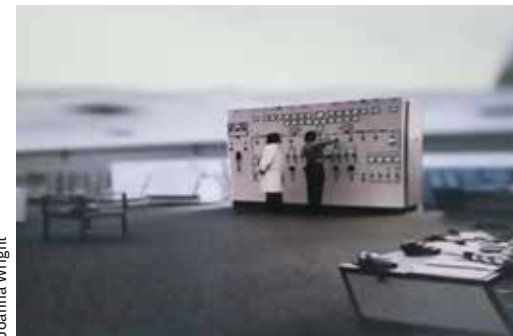
*Atomfa (and other stories)* is a longterm, ongoing, iterative, interactive, and landscape based documentary that frames images, memory, and questions from the final days of a rural nuclear power station. From local mythologies and the promise of the atomic age to the space age. From the past, the present, and long into the future. Atomic power came to the mountains of rural north Wales over sixty years ago. Now the people of Trawsfynydd are dismantling the nuclear power station built and run by parents and grandparents, a job that won't be completed in our lifetime. With unique access to archive material from the power station itself, the project is built on a co-creative process, in collaboration with the diverse communities that live around and work within the power station, to create new and future archives for the site.



Joanna Wright



found archive



Joanna Wright

Collaborators & thanks to: Ysgol Bro Hedd Wyn, Naomi Jones, Trawsfynydd Site Stakeholders Group, Gwynedd Archives: Meirionnydd Record Office, Alex Ashcroft, Ed Edwards, Margaret Matheson, Isgoed Williams, Rory Trappe and all present and former staff and neighbours of Trawsfynydd power station who have contributed stories, images, ideas, and support. With support from: CyMAL: Museums Archives and Libraries Wales, Parc Cenedlaethol Eryri, Ffilm Cymru Wales / BFI Horizons Fund, Arts Council Wales, iFLAB, MIT Open Documentary Lab & Co-Creation Studio, British Council Film, Arts Territory Exchange.

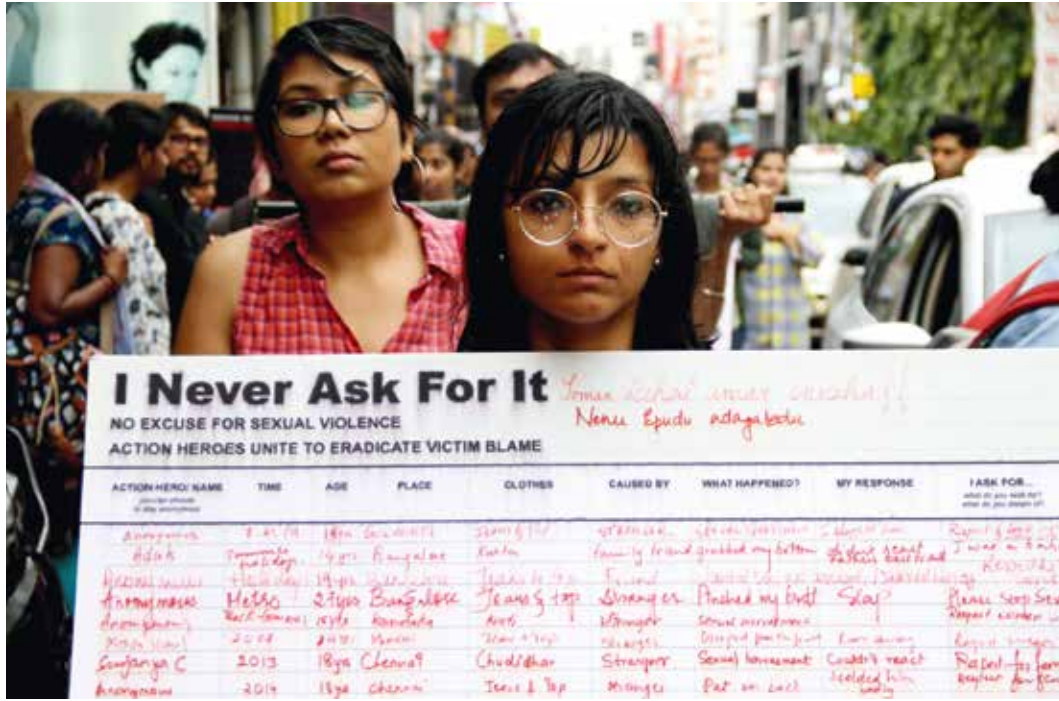
<https://u.aec.at/36744BB0>



**Joanna Wright** (GB) is a Welsh artist who works with photography, film, archives, and digital platforms, often working on long term collaborations with communities, collections, and scientists on projects that re-examine established narratives. Her work has been supported by The Space, Arts Council Wales, the British Film Institute, and Ffilm Cymru Wales and exhibited in Wales and internationally, including at Ceredigion Museum, Oriel Davies, the British Film Institute, Channel 4, BBC, The British Council, The Institute of Contemporary Art London, Seattle Film Festival, True/False Documentary Festival, and at the United Nations. She is a fellow at the MIT Open Documentary Lab, USA and honorary senior research fellow at Bangor University, Wales.

# Blank Noise

Jasmeen Patheja  
<http://blanknoise.org>



Blank Noise is a growing community of Action Sher-oes / Heroes / Theyroes ; citizens taking agency to end sexual and gender-based violence. Blank Noise designs methodologies to build testimonials of sexual violence. Blank Noise also designs public participatory projects to shift relationships of women / non-binary persons with their bodies and cities; from fear to belonging, from shame to pride. All of Blank Noise is built on the lived experiences of its community.

Most women and girls, in India and beyond, have been raised in an environment that warns them to “be careful and to protect yourself,” and to not draw attention to yourself. This translates to: “If you’ve experienced sexual violence, you weren’t careful enough and you deserve it.” As a result, most experiences of sexual violence are silenced and untold, due to the fear of being blamed, judged, and shamed. An environment of victim blame justifies and perpetuates sexual violence. The I Never Ask For It mission is a long-term effort to end victim blame by building testimonials of clothing. Action Sher-oes bring in the garment they wore when they experienced sexual violence. The garment is a witness, memory, and voice to the

community members’ experience. The project envisions ten thousand garments assembled at sites of public significance by 2024. The project is motivated by the feminist solidarities it can be built by and the healing it may offer to those who shape it with their testimonies. The project works to create a place for an unnamed yet unforgotten memory. The opposite of being blamed is being believed. When our memories are revisited and released, they deserve to be kept safe. I Never Ask For It is an invitation to release if it serves the speaker, and a commitment to listen for those who witness it. The project Meet To Sleep mobilizes communities of women across identities to sleep under open skies. The community fights fear with the right to trust. Meet To Sleep is a conversation with fear that demands the right to be defenseless. It embodies #INeverAskForIt.

Thousands of Action Sher-oes / Heroes / Theyroes who have shaped Blank Noise with their labor, experience, insight, reflection, and action, since 2003.

<https://u.aec.at/E704565D>



Blank Noise is a growing community of Action Sher-oes, Theyroes, Heroes; citizens and persons who are taking the agency to end sexual and gender-based violence. The community has comprised citizens across disciplines, including bloggers also, journalists, writers, lawyers, college students, high school students, feminist allies working with their communities of women/girls and non-binary persons. Jasmeen Patheja (IN), an artist in public service, committed to ending violence against women, girls, and all persons, is the founder, facilitator of Blank Noise. She builds ideas and methodologies, for public and collective action. Patheja initiated Blank Noise as a student project in 2003. Over almost 20 years, Patheja worked with multiple communities and designed a wide range of interventions and methodologies, across various forms of media, to shift public consciousness and build ownership of gender-based violence.



# Center for Political Beauty

<https://politicalbeauty.de>



“Other parties have members to distribute their flyers out of convictions. The AfD has only the Center for Political Beauty—and they do not distribute any flyer out of conviction.”

Deutschlandfunk

In the German *Superwahljahr* (Super Election Year) 2021, the Center for Political Beauty founded the *Flyerservice Hahn*: the best flyer service in Europe! Unbelievable, but true: A non-existing company with no real business address, no commercial register entry, and no tax number made the AfD an offer it just couldn't refuse. A fictive company acquired orders worth millions. Why should a real super political party and real "Alternative" for Germany distribute flyers by hand, like all the idiots from the old-fashioned parties? The result: 85 lazy local, district, and state groups of the AfD supplied the nationwide logistics center of the new global leader of non-distribution. In the end our storage unit contained 5 million flyers. 72 tons of AfD garbage. Welcome to the *Flyerservice Hahn*!

The public was able to visit the AfD recycling center in the center of Berlin. Thousands of investors were happy to support a flyer service whose highest priority was the dissatisfaction of its best (and only) customer. The shareholders of the company were invited to take a unique bath in fresh Nazi propaganda, which was saved from polluting the election campaign with their help. They could experience firsthand what otherwise would have found its way into their letter boxes. In the end the garbage was taken, where it belongs—to a shredding facility. It was finally transformed into toilet paper.

## Our activities:

We are the “assault gun of humanism.” The Center for Political Beauty fuses the power of fantasy with the power of history. Our operations crash into German reality at high speed. We built a Holocaust memorial commemorating six million murdered European Jews right in front of far-right German politician Björn Höcke's house, called for the overthrow of the dictatorship in the streets of Istanbul (in memory of the Scholl siblings), chased the notorious Dortmund Nazis with Kalashnikovs and axes, and chartered an airplane to bring 100 war refugees to Europe alive.

Wonders never cease if we just make them happen. We recovered the drowning victims of our refugee policy and buried them in Berlin for the world public to see. Being human is not negotiable for us.

On the 25th anniversary of the fall of the Berlin Wall, we piloted two buses with 100 revolutionaries to the external border of the EU to tear it down directly. We developed 1,000 rescue platforms to combat the atrocious mass drownings in the Mediterranean and deployed the first one.



<https://u.aec.at/C83C3F3C>

The Center for Political Beauty embodies a radical form of humanism. It is an assault troop that establishes moral beauty, political poetry, and human magnanimity. The Center fuses the power of fantasy with the power of history. Our fundamental conviction is that the legacy of the Holocaust is rendered void by political apathy, the rejection of refugees, and cowardice. We believe that Germany should not only learn from its history but also take action. We shape political resistance in the 21st century, arming reality with moral fantasy and the power of history. Resistance is an art that needs to hurt, irritate, and unsettle. We experiment with the laws of reality and fill the space previously occupied by public intellectuals: the moral conscience.

# Commons Cargobikes

wielebenwir e.V., Commons Cargobike Initiative

<https://commons-cargobikes.org>



flotte Berlin



wielebenwir e.V.



flotte Berlin



Nicole Laka

*Commons Cargobikes* is a network of more than 150 grassroots initiatives in Europe that share cargo bikes with their local community on a donation basis. First implemented 2013 by the non-profit organization “wielebenwir” in Cologne, Germany, the movement has quickly spread, with currently almost 500 cargo bikes offered by initiatives in Austria, Germany, Hungary, the UK, and Sweden. The sharing concept has won multiple prizes (“German bike award,” “German mobility award.”)

Cargo bikes are the environment-friendly alternative to cars, and increased usage could fundamentally improve cities: Less pollution, less noise, less space wasted for parking.

Our goal is to make this sustainable method of transportation available to everybody. We involve local institutions (community centers, cafés, shops) as rental stations to facilitate community cooperation. We provide the bikes based on voluntary donations to enable low-threshold access. We believe in sharing resources with the community, and that we can work together to improve our

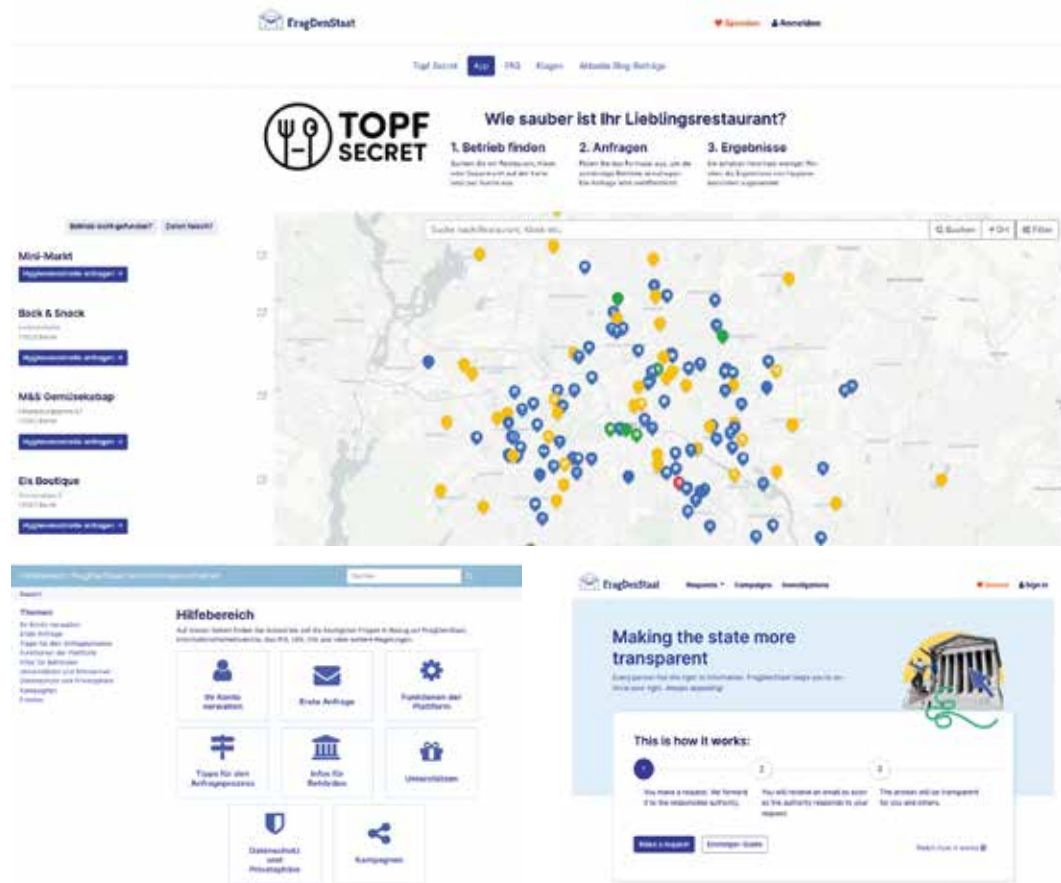
cities. We rely on a variety of digital tools. We gather knowledge about the creation and running of successful projects in a WIKI-based online manual, which also serves as a directory of all *Commons Cargobikes* initiatives and our community home. We built our own custom booking software to facilitate the needs of the initiatives. *Commons-Booking* is a web-based software for the management and (donation-based) booking of cargo bikes and other Common Goods. It is Open-Source and, like the cargo bikes, free to use. We are building a tool that enables groups to easily share goods for free, because we believe in sharing instead of owning, in cooperation, and in the power of grassroots movements.

Original sharing concept, digital tools (sharing software), and manual editing: vielebenwir e.V. Adaptation, manual content, and extensions for digital tools: Commons Cargobike initiatives

<https://u.aec.at/E529BD26>



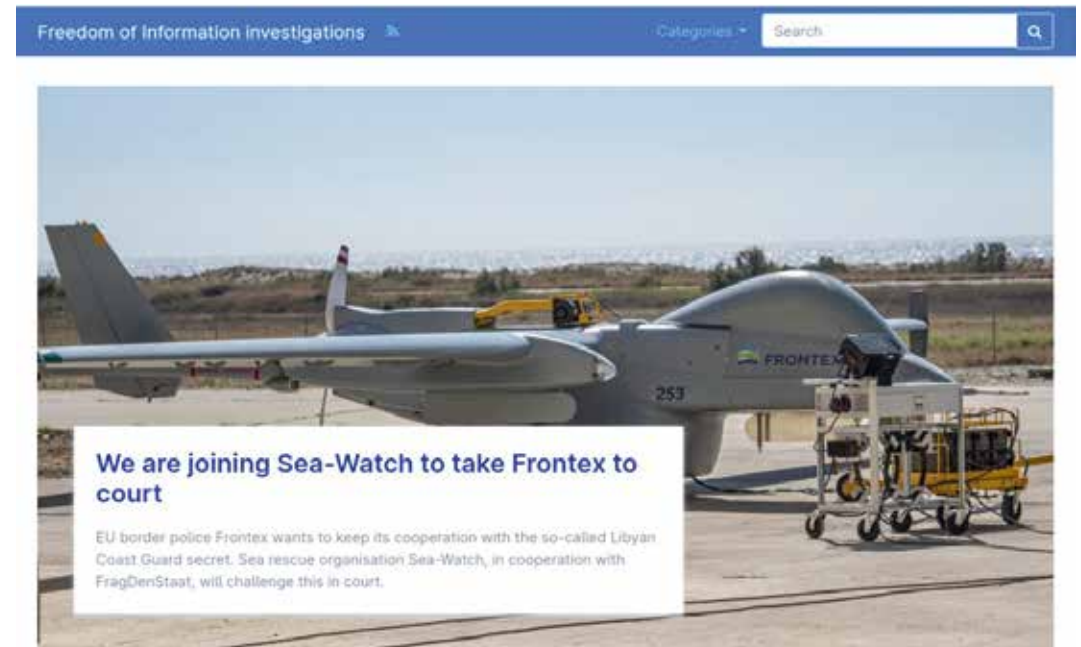
wielebenwir e.V. is a Non-Profit organization founded in 2013 in Cologne, Germany. Concepts, practice, and tools for sharing common goods. **Commons Cargobike Initiatives**, Forum Freie Lastenräder (Union of Commons Cargobike Initiatives) is the alliance of 149 local cargo bike-sharing initiatives currently active in Germany, Austria, the UK, and Hungary. With almost 500 cargo bikes and tens of thousands registered users, the Forum Freie Lastenräder plays an important part in the bottom-up mobility transition.



FragDenStaat fights for freedom of information, both in Germany and in the European Union. It consists of an online platform, campaigns, strategic litigation, and investigative journalism. The online platform FragDenStaat.de, the cornerstone of our work, enables people to easily file requests for information to German and EU authorities and automatically publish the results. The platform therefore also acts as a living archive of over 200,000 documents, released into the public domain. The over 100,000 FragDenStaat users are a vital part of our community as they are the ones who filed those numerous information requests. In order to establish FragDenStaat as a movement in the long term, we focus our work on the conception and implementation of effective, topic-specific

campaigns that invite people to participate via our platform. In our campaigns we always cooperate with other NGOs in order to promote the opportunities of our approach to civil society partners. In view of ever-increasing resources for the executive branch and, at the same time, shrinking spaces for civil society, we want to use freedom of information as a tool for public control of power and for the self-empowerment of citizens. We are convinced a strong democracy needs an informed and active civil society that can challenge power at eye level. We believe official information should be easily obtained and used. For this purpose, we create and build infrastructure to make information transparent and democratically accessible.

Digital Communities  
Honorary Mention



April 21, 2022  
**Resources at the disposal of violence: How European countries make Frontex operations possible**



March 1, 2022  
**Open Letter: 43 Organisations demand transparency over DSA and DMA negotiations**



Oct. 22, 2021  
**Prisons in Paradise: How the EU put refugees behind barbed wire**

FragDenStaat is mainly financed by donations. Additionally, 2021 Luminare, the Schöpflin Foundation, and the European Climate Foundation were our biggest funders. Smaller tech developments or campaigns are financed by several time-limited project funds as well. Our annual report: <https://fragdenstaat.de/en/about-us/funding/>

<https://u.aec.at/79370A0F>

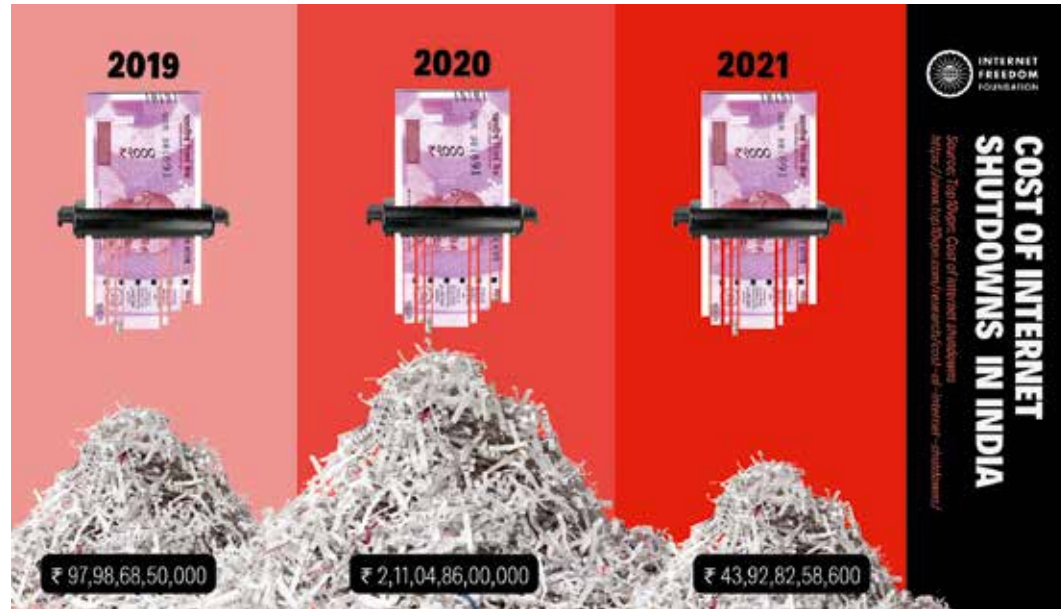


FragDenStaat fights for freedom of information in Germany and the EU. Whether it's a lobbyist's e-mail, an environmental report or meeting minutes, FragDenStaat helps to make it public based on the Freedom of Information Act. The project's four pillars are the inquiry platform, participatory campaigns, strategic lawsuits, and investigative research. We rely on close partnerships with journalists, activists, and NGOs. Since 2014 Arne Semsrott, a political scientist and journalist, has been project lead for FragDenStaat at the Open Knowledge Foundation Germany. For these projects, he accepted the Otto Brenner Award. He is co-initiator of the OpenSCHUFA initiative and has been on the board of LobbyControl since 2018.

# Internet Freedom Foundation

Ashlesh Balaji Biradar

<https://www.internetfreedom.in>



## DIGIYATRA

Facial Recognition authentication at airports

- Boarding
- Self bag-drops
- Entry point checks
- Security check-in

Source: The dangers of DigiYatra & facial recognition enabled paperless air travel | <https://internetfreedom.in/dangers-of-digi-yatra/>

**Isn't this already happening in the US?**  
A similar scheme has been implemented in the United States. However, the system has multiple legal, technical and privacy problems

- ### ISSUES
- 1 No anchoring legislation**  
India has no data protection laws, thus the privacy protection principles in the policy would not be enforceable.
  - 2 Fails to fulfil thresholds of Puttaswamy Judgement**  
The DigiYatra Scheme fails to fulfil the thresholds of legality, necessity, proportionality and procedural safeguards.
  - 3 Low accuracy of FRT systems**  
Facial recognition technology is inaccurate, especially for people of color and women. Thus increasing hassle instead.



Internet Freedom Foundation (IFF) is an Indian digital rights organization working on the full spectrum of fundamental rights at the intersection of our digital society. Our work is guided by the principles of progressive constitutionalism to advance the democratizing potential of technology and individual liberty. Our goal is to ensure that Indian citizens can use the Internet with liberties guaranteed by the Constitution of India. Born out of the volunteer-led SaveTheInternet.in movement for network neutrality, serving ordinary, everyday Indians and protecting their civil liberties is our mission.

The Internet Freedom Foundation is committed to defending and expanding fundamental rights as India gets more digitally connected. As part of this mandate, we strategically engage with courts, regulators, and other legal institutions across India. Our model draws the public into processes that otherwise lack wider engagement. With over 825 million internet users and as more come online, we need to ensure that they advocate for their rights. Our community is a central element of our work and we operate on principles of radical transparency and inclusion. To make digital rights issues comprehensive yet understandable for our community, we have several projects and trackers to keep the citizens of India up-to-date on issues of facial recognition, censorship, internet shutdowns, etc. with *Project Panoptic*, *Zombie Tracker*, and *Keep Us Online*, among others. Our broader goal is to bridge the growing divide between public and policy in India.

Executive director: Apar Gupta  
Policy director: Prateek Waghe  
Chief of staff: Shivani Singh  
Senior litigation counsel: Tanmay Singh  
Associate litigation counsel and case intake manager: Anandita Mishra  
Associate litigation counsel: Krishnesh Bapat  
Associate policy counsel (Regulation and Social Welfare): Rohin Garg  
Associate policy counsel (Surveillance & Transparency): Anushka Jain  
Fundraising and communications manager: Farkhanda Zahoor  
Office manager: DK Rai  
Digital literacy fellow: Ashlesh Biradar  
Capstone fellow: Shivangani Misra  
Capstone fellow: Tejasi Panjiar  
Policy trainee: Gyan Tripathi

With support from The people of India fund IFF through individual and organizational donations and grants. As an early stage, bootstrapped, domestically funded organization that uses a retail fundraising model as its core funding strategy, we have been able to significantly impact the digital rights space in India, which has only been possible because of the support of our community. We have received monetary support from more than 3,000 people in this growing community. These funds are used to promote and advocate a free and open internet that offers freedom, privacy, and innovation. We are transparent about how we use our contributors' funds through public financial disclosures and quarterly members calls.

Organizations like UNESCO, Zerodha, Obvious, Sharechat, OML, IndiaOS, FOSS United, Doosra, Nilenso, and Devfolio have also donated to Internet Freedom Foundation. Our complete list of organizational donations along with the dates and amount contributed can be found at <https://internetfreedom.in/organisational-donors-and-supporter>.

<https://u.aec.at/F6809501>



Internet Freedom Foundation (IFF) is an Indian digital rights organization working on the full spectrum of fundamental rights at the intersection of our digital society. Born out of the volunteer-led SaveTheInternet.in movement for network neutrality, serving ordinary, everyday Indians and protecting their civil liberties is our mission. The Internet Freedom Foundation is committed to defending and expanding fundamental rights as India gets more digitally connected. Our broader goal is to bridge the growing divide between public and policy in India.

# SalvageGarden: Computers Against Covid

<https://salvage.garden>



Terry Koh



saad chinoy



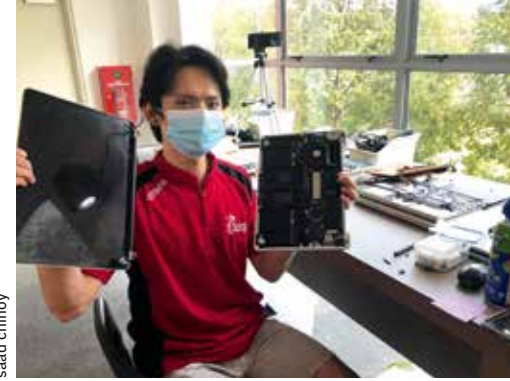
saad chinoy



saad chinoy



saad chinoy



saad chinoy



saad chinoy

In dense urban Singapore, little balcony and common corridor gardens take the place of yards. What is now a community-driven assistive-tech makerspace got its name “SalvageGarden” from the Australian pop duo that resonated with several volunteers who started off working in a tiny back-room in a borrowed office space at EngineeringGood to hold parts of broken laptops donated to the “Computers Against Covid” (CAC) campaign. Laptops and parts were “frankenst-ed” together from salvaged parts to create fully functional “FrankenTop” laptops. These devices together with other refurbished laptops were re-homed with Singapore resident families to support Singapore’s home-based-learning (HBL) and Work From Home (WFH) measures imposed in response to the pandemic. This diverse group of volunteers—mostly working from their apartment dining rooms and coffee tables to patch together “good enough” laptops from donated spares—saw themselves not as techies, geeks, or engineers but as SalvageGardeners, self-taught and responding to a social need in a time of crisis. With a passion for helping others, learning-by-doing, and rapid process iteration, these adaptive skills echoed those of so many essential and healthcare frontline workers responding to ever changing pandemic demands and restrictions. This geeky passion for fixing things and repurposing now serves the wider community as a volunteer driven Makerspace and a safe-space for exploring tech-for-good through DIY Assistive Tech and e-waste up-cycling projects.

With support from: PotatoProductions, SpudnikLab, Team Singapore, EastCoast Mums Support Group, Shrimad Rajchandra Love and Care, New Hope Singapore, Majority Trust, Tan Chin Tuan Foundation, Tinker Tanker, GIC, GovTech Singapore, Deloitte, Lockheed Martin, Microsoft, Charles River, Alstom, Vopak, Telstra Foundation, Ufinity, Seagate, Challenger, Seaco, Dell, Virogreen, HP, Munich RE, Telenor

<https://u.aec.at/CDF54777>



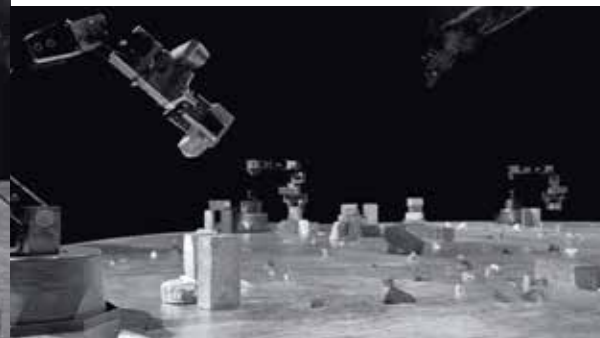
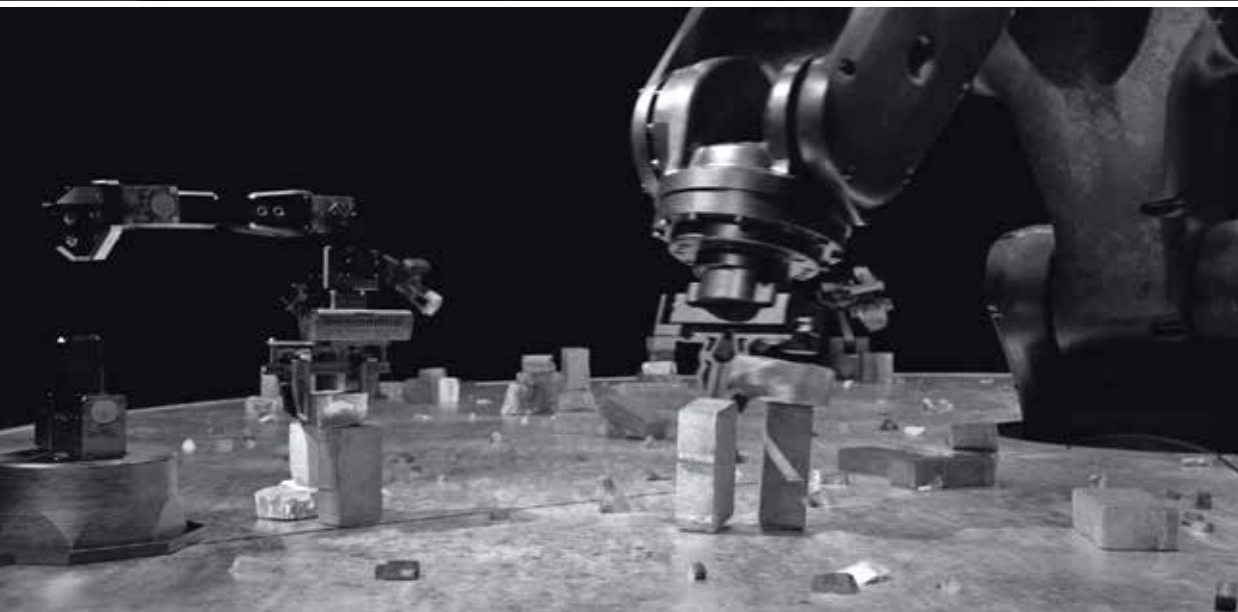
**SalvageGarden** is the assistive technology makerspace that was initiated at EngineeringGood, a non-profit that supports the needs of persons with disabilities. **saad chinoy**, a professional geek with a passion for technology and OpenSource methodology, worked as a volunteer with EngineeringGood where he initiated SalvageGarden, which engages a community of makers, engineers, care givers, persons with disabilities, and care professionals in the research and development of Assistive Tech devices and low-cost solutions. The SalvageGarden Makerspace has recently initiated efforts towards environmental sustainability by engaging consumers to co-create through repurposing or recycling leftover e-waste parts from laptops donated to EngineeringGoods’ “Computers Against Covid” campaign.



# Sisyphus

Kachi Chan

<https://www.kachi-chan.com/projects/sisyphus>



*Sisyphus* is an art installation featuring two robots engaged in endless cyclic interaction. Smaller robots build brick arches, whilst a giant robot pushes them down. This robotic system propels a narrative of construction and deconstruction.

Named after a figure in Greek mythology, who is condemned to push a boulder up a hill every day only to watch it roll back down afterwards. *Sisyphus* is a commentary on the current socio-political climate, where systems of authority and resistance continuously clash against each other. Repetition is explored in this piece through the interaction of two contrasting robotic systems—one small and nimble, the other powerful and oppressive—the Greek Sisyphus representing either or both of them.

Despite the discrepancy that exists between the size of the two robots, their struggle is endless. The giant robot does not make any concessions and continues to crush the brick arches. Even once destroyed, however, the small robots proceed to building new brick arches, thereby manifesting a collective resistance through individual autonomous actions. Here, the status quo is continuously challenged by small, dispersed acts that disrupt the absolute power of the giant robot. The persistence of the small robots and their ability to propagate small-scale, new forms of resistance make all efforts worthwhile, as opposed to “futile.” Hence, *Sisyphus* symbolizes not only the confrontation between power and resistance, but also the hope that comes with the possibility of change.

Director, roboticist: Kachi Chan  
Research: Pat Wingshan Wong  
Creative technologist: Nirav Beni  
Project advisors: Ruairi Glynn, Parker Heyl, Phaedra Shanbaum  
Project developed at: Interactive Architecture Lab, University College London



<https://u.aec.at/4090C591>

**Kachi Chan** (HK) is a multidisciplinary artist interested in employing computational animation, digital reality technologies, and installations as lenses to examine the connections between physical and digital realities. Kachi holds an M.Arch from the Interactive Architecture Lab, University College London, where he developed a keen interest in robotics as an art form. His recent works mainly involve performative robotics as a research method to discuss socio-political and cybernetic topics.

# Total Refusal pseudo-marxist media guerilla

Total Refusal, ZKM Karlsruhe  
<https://totalrefusal.com>



Computer games are at once the poster boy of the capitalist entertainment industry and the neglected mass medium of our time. The artists' collective Total Refusal explores this ever expanding field with artistic interventions. Important impulses are the role of art as a political medium, media upcycling as well as hyper-realism in computer games. Total Refusal was founded in 2018 by Robin Klengel, Leonhard Müllner, and Michael Stumpf, and joined by Susanna Flock, Adrian Jonas Haim, and Jona Kleinlein in 2020. Launched as "Digital Disarmament Movement," the group now defines itself as a "pseudo-marxist media guerilla." The open collective criticizes existing practices in the genre of video games and opens up

a new perspective with tools of appropriation and repurposing of game resources: "Acknowledging that this media is currently failing to realize its cultural potential, we aim to appropriate digital game spaces and put them to new use. Operating within games but casting aside the intended gameplay, we dedicate these resources to new activities and narratives, seeking to create 'public' spaces with a critical potential."

Total Refusal & ZKM Karlsruhe

<https://u.aec.at/A7104322>

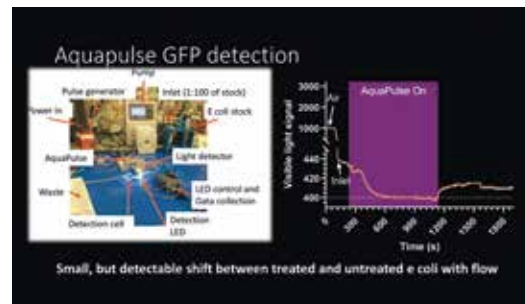
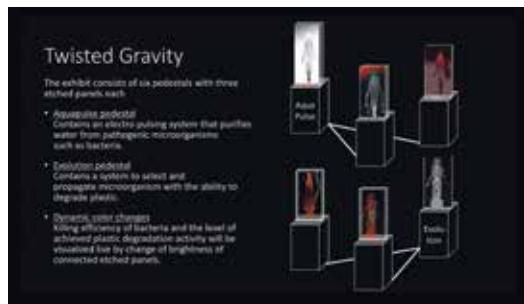
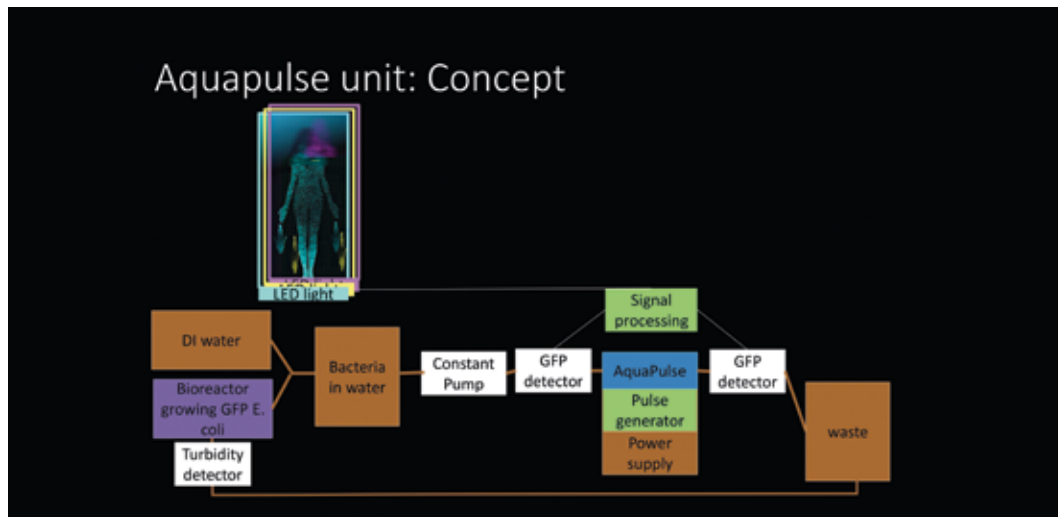
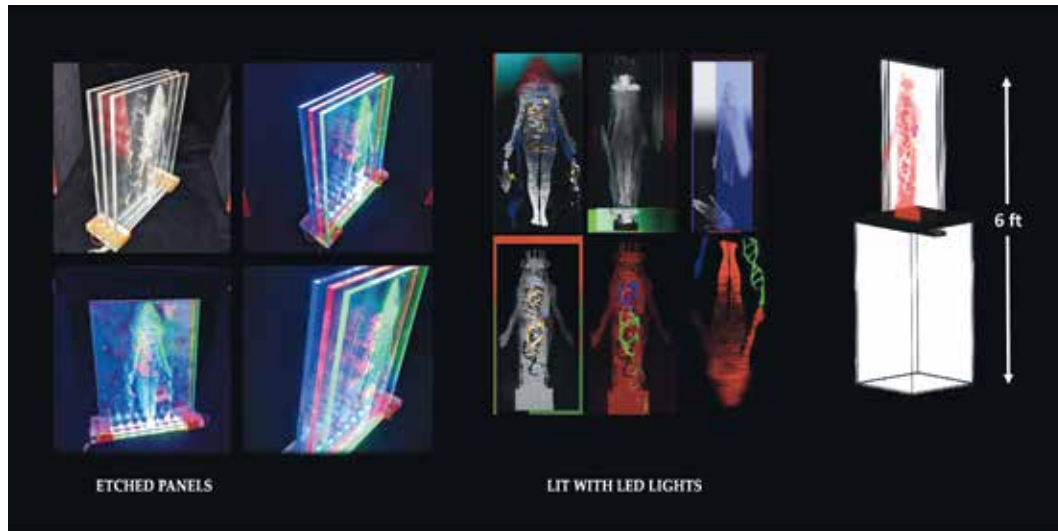


The pseudo-marxist media guerilla **Total Refusal** explores and practices strategies for artistic intervention in contemporary computer games. It works with tools of appropriation and rededication of game resources. Total Refusal are **Robin Klengel** (AT), **Leonhard Müllner** (AT), **Michael Stumpf** (AT), and since 2020 also **Susanna Flock** (AT), **Jona Adria Kleinlein** (DE), and **Adrian Jona Haim** (AT). Since 2018, the work of the artists' collective has been awarded 31 prizes and was showcased at more than 130 international film and video festivals as well as in numerous exhibitions, including the Berlinale, BFI London, Doc Fortnight at MoMA, NY, HEK Basel, Ars Electronica, and the Venice Biennale 2021. Since 2019, Total Refusal is also represented in the ZKM collection.

# Twisted Gravity

## Inspired By A Sustainable Future For Clean Water

Lynn Hershman Leeson in collaboration with Dr. Thomas Huber and Richard Novak/The Weiss Institute Harvard



More than two billion people on the planet are forced to drink contaminated water. An estimated 502,000 people die each year from the conditions of drinking unsafe water that contains plastic, bacteria, parasites, and other contaminants. This “twist” of science and art began with the design of the “bacterial activity indicator” to expose bacteria in degrading plastic. The water purification system AquaPulse kills bacteria. It creates filtration for emergency recovery efforts to clean highly contaminated water. The basic structure of the AquaPulse system can be made fluorescent. By creating a fluctuating “glow” it could be possible to not only emphasize the DNA structure within the selected image of the test tube Water Woman, but also to expose the progressive decrease of toxicity in the liquid through colored lights.

*Twisted Gravity* consists of six pedestals, each displaying three plastic panels etched with the figures of women. Three of the pedestals contain AquaPulse units that use electronic pulses to kill pathogens like bacteria in water, while the other three pedestals contain bioreactors that evolve microorganisms that can degrade plastic. Both the levels of pathogen killing and plastic degradation are reflected by changes in the brightness of the panels.

*Twisted Gravity* premiered in Seoul, South Korea as part of the Gwangju Biennale exhibition in April 2021 and had its US premiere at the New Museum, New York. Water from local rivers will be filtered through this system into purified drinkable water during the timeline of the exhibition.

“*Twisted Gravity* beautifully reflects dual cycles of technology solving one problem but creating another, and nature creating one problem but solving another,” Novak said during the panel discussion. “Working with Lynn opened our eyes to the counterpoint of our water purification system: we’re using a plastic system to kill bacteria, what happens to that plastic? Then the evolution concept came in of evolving bacteria to degrade plastics. That concept has spawned an entirely new research project at the Wyss Institute—let’s use bacteria to solve the human waste problem of plastic. This collaboration didn’t just create an art installation, but new science as well.”

Lindsay Brownell,  
Harvard University Press September 21, 2021

Lynn Hershman Leeson in collaboration with Dr. Thomas Huber (scientific advisor and coordinator) and Richard Novak/The Weiss Institute for biological-inspired engineering and AquaPulse technology Harvard University  
Additional lab team: Elizabeth Calamari, Manuel Ramses, Martines Flores  
Support received from: The New Museum; Poncher Founda@on; 13th Gwangju Biennale; V-A-C Foundation, Moscow; Hotwire Productions LLC



**Lynn Hershman Leeson (US)** is widely recognized for her innovative work investigating issues that are now perceived as key to the workings of society: the relationship between humans and technology, identity, surveillance, and the use of media as a tool of empowerment against censorship and political repression. Over the last fifty years she has made pioneering contributions to the fields of photography, video, film, performance, installation, and interactive as well as net-based media art. Her work is exhibited at The Tate, MOMA, The Whitney, ZKM, SFMOMA and many notable private collections. She received a special award at the 2022 Venice Biennale, and had retrospectives and surveys at ZKM (*Civic Radar* curated by Peter Weibel) and The New Museum NY (*Twisted*, curated by Margot Norton).



<https://u.aec.at/ODB7630D>

# Visionary Pioneers of Media Art

# Visionary Pioneers of Media Art

This category is dedicated to recognizing and celebrating the men and women whose artistic, technological, and social achievements have decisively influenced and advanced the development of new artistic directions.

What began as a technological revolution has since developed into a new cultural and social reality with its own specific forms of communication, cultural techniques, and artistic expressions, the roots of which extend far back into the past and

lead us to encounters with remarkable, extraordinary personalities—the visionary pioneers of media art. Thus, in many respects, these men and women established the foundation of media art as we know it today. With Prix Ars Electronica's Golden Nica for Visionary Pioneers of Media Art, we want to give them the respectful recognition commensurate with their accomplishments, and, at the same time, generate more awareness about the history of media art in general.

## Visionary Pioneer of Media Art 2022: Laurie Anderson

Ars Electronica 2022 recognizes New York-based artist Laurie Anderson as a “Visionary Pioneer of Media Art” whose extensive oeuvre always deals with the relationship between people and technology and is characterized by a high degree of sociopolitical engagement. She is a musician, composer,

filmmaker, author, and media artist who is nearly unrivalled in her ability to transcend and merge the various genres, thus becoming one of the most influential and style-defining icons of the media-art avant-garde.



Ebru Yildiz

“I say I tell stories. And those look like paintings sometimes. They look like, you know, songs. They look like films. They’re just stories. What is a story? What is its function? How does it work? Who’s telling it? To who?”

Laurie Anderson in an interview with Anderson Cooper, CBS, 2022

Geraldine Pontius



*Institutional Dream Series*, 1972–1973, Coney Island, January 14, 1973, 4–6 pm

John B. Cavanagh



United States Parts 1– 4, 1983, performance; BAM, Brooklyn, NY



Paolo Rocci

Laurie Anderson performing *Duets on Ice* in Genoa, 1975



Les Fincher

*Home of the Brave*, 1986, 35mm film, 90 min; performing “Talk Normal.”



Frank Micelota

Songs and Stories from Moby Dick, 1999; BAM, Brooklyn, NY

Born in Glen Ellyn, Illinois, on June 5, 1947, Laurie Anderson began playing violin as a child, performing violin concertos with the Chicago Youth Symphony Orchestra. In the mid-1960s she moved to New York, first studying art history at Barnard College and then sculpture at Columbia University. Her first performance piece—a symphony played on car horns—was performed in 1969. In the 1970s she began establishing herself as a performance artist, creating media installations and developing her own style of performative storytelling.

In 1977 she made the first recordings of her works and achieved sudden fame in 1981/82 with *O Superman*, which reached number two on the UK singles chart, and the LP *Big Science*.

From the analog electronics of her early interfaces and instruments to the first digital synthesizers and samplers, she was never satisfied with the possibilities of existing devices, instead building

her own personal instruments with which she became a pioneer of electronic music. Essential components of her performances from the very beginning were the violin and, above all, her voice, which were simultaneously her instruments as well as the subjects of her constant experimentation and exploration.

A legendary Laurie Anderson creation was the “tape-bow violin,” a violin she made into a tape recorder by using recording tape in the bow and a magnetic tape head in the bridge, thus developing the practice of utilizing recorded loops and collages of early electro-acoustic music into an instrument for her live performances.

Her use of the vocoder, with which she transported her voice into the world of electronic sound and generated her absolutely distinctive signature sound as her artistic trademark, had a lasting influence on style.



Photo by Les Fincher

Home of the Brave, 1986, 35mm film, 90 min; performing “Talk Normal.”

Laurie Anderson has created numerous performances and elaborate multimedia stage works, such as the eight-hour solo opera *United States I–IV* (1983) and *Songs and Stories for Moby Dick* (1999).

The tour to promote the release of the 2001 album *Life on a String* made a stop at New York’s Town Hall only a few days after the attacks on the World Trade Center. Despite the dramatic events, Laurie Anderson decided to go ahead with the performance, including several of her older works as well. “I have often written about loss, betrayal, death, technology, anger and angels. I felt as if I had written the songs only yesterday... and now suddenly I am singing about the absolute present.” In 2002, she became NASA’s first artist-in-residence, which culminated in her tour performance *The End of the Moon*. She presented her performance project *Homeland* on a two-year worldwide tour in 2008/09, and it was released as an album in 2010.

Laurie Anderson has a particular fondness for dogs. In 2010 she gave her first concert exclusively for dogs outside the Sydney Opera House. In 2015 she released both an album called *Heart of a Dog* and a film with the same title, which was selected for the Venice and Toronto Film Festivals. Her 2018 chamber music piece *Landfall* was inspired by her experiences with Hurricane Sandy, which ripped through Central and North America in 2012 and destroyed much of her archive of work and memorabilia.

In addition to her career as a musician and singer, Laurie Anderson has made numerous films and published several books, and her visual works have been presented in major museums around the world. In recent years, she has designed VR installations and composed music for symphony orchestra. In 2021 she was appointed as Charles Eliot Norton Professor for Poetry at Harvard University.



Viophonograph, 1977/2010



Tape Bow Violin, 1977/2010



Neon Violin, 1982



Digital Violin (designed by Max Matthews), 1985



Dummy, 1992



The Sweetness of Music, 2010

# Laurie Anderson: Visionary Pioneer of Media Art

by Charles Amirkharian

Laurie Anderson has pursued her evolving artistic practice with a determination borne aloft by joyful, insatiable curiosity. At 75, she continues to mine her observations of the real world equally with imagery summoned from her dreams and imagination to communicate stories rich with symbolism, and replete with irony, bemusement, satire, gentle outrage, plus her very personal brand of speculative futurism. Ars Electronica celebrates her career accomplishments with this year's Golden Nica award for lifetime achievement as a Visionary Pioneer of Media Art.

As a practitioner of electronic and media arts, she is a leader in adopting emerging technical innovations. Her creation of a special violin with magnetic recording tape replacing the horsehair of the bow enabled her to play a vocal sound "say" on a down-bow and "yes" on the upbow. Another invented violin enabled her to play a spinning disc with her bow.



Viophonograph, playing disc containing "For Instants" (1975)

She was an early adopter of the vocoder, and later, the Eventide Harmonizer, which enabled her to speak live onstage in the lowered voice of a male airline pilot or to speak at specific musical pitches or in chords. That real-time transformation, little-known at the time, was striking both theatrically and musically.

But no matter the tools, her work is always distinguished by a personalized, down-to-earth, hands-on approach that communicates vividly to countless fans and followers.

Laurie Anderson's dynamic ascent from 1973 to the present situated her in the center of the emerging form of performance art—an intermedium that embraces any and all artistic media. And Anderson has essayed them all: music performance and composition; prose, poetry and song-writing; painting, drawing, photography, sculpture, motion pictures, artists' books, and installations; choreography and movement; theatrical spectacle; and digital media, from video and interactive DVDs, forward to Virtual Reality environments.

VR has now become a major focus of her work, and there's a good reason why.

Writing in 2019 about her installation *To the Moon*, made with story-telling VR artist Hsin-Chien Huang for the Manchester International Festival, she explained,

“As an artist and performer, I've become increasingly frustrated with stages and screens and more and more interested in immersive works—music you can walk into and images that completely surround you. I also love long extended drone work that fills the physical space and the imagination, and art that is composed and completed by the listener/viewer, who walks into it and experiences it viscerally, emotionally and intellectually.”

This new medium, however, has forced her to re-orient certain assumptions about the creative process.

“In working with VR, I've had to relearn many of the things I know about narrative and stories. In VR, the beginning, middle and end are shifting states, not sequential ones. I find this way of being in time increasingly interesting and actually true to life.”



Michael Pollard

Laurie Anderson and Hsin-Chien Huang, *To The Moon*, 2019, Manchester International Festival (installation views, Royal Exchange Theatre, Manchester).

Not only is that disorientation true to life, it points to another reason Anderson's story-telling is so compelling—even hypnotic. In her writing, the focus will change abruptly from one subject to another, replicating our own thought patterns and offering references that challenge us to connect the dots. This is the very essence of Surrealism—seemingly illogical sequences of images, resolving dream and reality into an absolute, or super-reality.

You know when the Egyptians built  
their steam trains  
They didn't have any fuel to burn—  
no wood, no trees anywhere.  
But they did have a lot of old mummy  
rags lying around  
So they gathered up all the rags and  
burned them in their trains  
Yeah, they burned their ancestors  
for fuel.

Ooo, I'm a crocodile floating down  
the river  
I'm a tree catching my own oranges as  
they fall from my head

I'm a little teapot short and stout  
Tip me over and pour me out

from “One Beautiful Evening,”  
Live at Town Hall album

In 1984, describing her writing process, Anderson stated,

“I try to be in a receptive mood. I suppose I mesmerize myself to write the songs. But the most important thing to me is the words. That's what I consider my main work: The way the words fit together.”

*Musician*, April 1984,  
interview with Joshua Baer

So, opening her mind to the reception of disparate thoughts—a kind of concentrated meditation—is essential to her process. Composing these memories into resonant sequences is the artistic process. I was privileged to discover Laurie Anderson's work just before her emergence as a national and international figure. In 1977, while producing an LP anthology of electronic music by American women composers. I had nearly completed the compilation when I ran into Philip Glass in the cafeteria of the Walker Art Center in Minneapolis. I told him the names of the composers I had selected, including Pauline Oliveros, Annea Lockwood, and Laurie Spiegel, and asked him if he could think of anyone interesting I'd omitted. “No, that sounds great, Charles.” But as I walked out the door I felt a hand on my shoulder. “Wait,” he said. “There's this girl . . .” He proceeded to urge me to write to Laurie Anderson in New York, which I did.

A five-inch reel of tape soon arrived in my mailbox from the composer containing five short songs, two of which I selected for the anthology—“New York Social Life” and “Time to Go.” A letter accompanying the tape thanked me and referenced a previous LP I'd produced with American sound poets. It concluded, “I really liked the other anthology you did. I thought it was very straight through listening—not chopped up.” (Letter to C.A. March 3, 1977)

Hearing Laurie's music for the first time made a profound and immediate impression. Her “songs” were carefully constructed with just the right formal balance and inventiveness to rivet the attention. This, I learned later, was a by-product of a perfectionism evident to me when I witnessed her dress rehearsals, working for hours right up until curtain time so that nothing was left to chance. While the sound and lighting staff were learning their cues, Laurie would rehearse her lines from memory, drilling herself to replicate every nuance of verbal expression and emphasis that she intended.





Mills College, 1978  
L to R, Artist Jim Petrillo, Composer Charles Amirkhanian, Laurie Anderson, Composer Stephen Ruppenthal, Artist Suzanne Morrone, Artist Carol Law, Poet Betsy Davids.

In those early days, she would arrive with her 35mm slides to be projected, pre-recorded elements on tape, her tape-bow violin, and then have to rehearse with whatever technical crew could be mustered by the host producer. At Mills College in 1978, she performed in the cafeteria building, emptied of tables, with a small audience of perhaps 35 witnesses, and it was apparent that the student stage assistants were not quite able to keep up with her requirements. But the glory of the performance was its irrepressibly inventive content. Amusement and admiration was our response, and after the concert some of us gathered around her for a photo to document our having witnessed what we understood to have been a pivotal event.

Subsequently I invited Anderson to perform at the summer 1979 Cabrillo Music Festival in Aptos, California, where Dennis Russell Davies served as Music Director. This sparked a long and fruitful collaboration between two of the most brilliant minds of their generation. A memorable moment found Laurie, 32, as the youngest member of a distinguished panel of composers including Virgil Thomson and Lou Harrison.



Cabrillo Music Festival  
Laurie Anderson, Garret List, Laurie Spiegel, Virgil Thomson, Charles Amirkhanian, Eric Stokes, Lou Harrison, 1979.

Photo courtesy Charles Amirkhanian



O Superman 7-inch 33rpm disc, 110 Records, 1981; O Superman record cover



ah ah ah" voice loop. Anderson then fashioned some lyrics, obliquely based on her recollection of the Massenet song, to match that rhythm. The resulting song, "O Superman," was performed solo as a segment of her new orchestral work at the grand, fully-restored art deco Paramount Theater in Oakland, California, on May 17, 1980.

When the music was released shortly thereafter as a solo song on a single disc, it rocketed to number two on the British pop charts. Thus, she was swept to fame and a lucrative record contract with Warner Brothers that afforded her the construction of a recording studio inside her New York loft. From that point forward, she would have the luxury of the unlimited studio time she needed to hone and perfect her next musical efforts.

Laurie Anderson's art generally has favored short, song-form compositions gathered into ambitious theatrical suites. Her métier is aphorisms, short stories, and songs, not novels or symphonies. Her visual subjects reference the whole of art history from cave paintings to the present, but her lyrics are as likely to quote overheard street conversations as Ludwig Wittgenstein.

Over the years, Anderson has built an impressive catalogue of plain-spoken but sophisticated tales that bring out the child in each of us. She shares her wonder at how bizarre ordinary life can be; she can simply walk out onto a city street with wide open eyes to engage creatively.



Speaking of Music, Exploratorium onstage interview with Charles Amirkhanian, December 6, 1984

Hers is a communicative art—deeply personal, yet grounded in common experience and amplified through her extraordinary imagination. Contrast that with much of our digital and computer art with its sterile, laboratory patina, to understand her popularity across widely different audience groups.

In 1984 I had the pleasure of interviewing her onstage in San Francisco at the Exploratorium's Speaking of Music series in the 1000-seat Palace of Fine Arts Theater.

Laurie arrived fully prepared as usual, with a series of musical illustrations ready to play back for the audience. She discussed her new album *Mister Heartbreak*, her influence from Word Jazz radio storyteller and fellow Chicagoan Ken Nordine, and her attraction to the complex displaced accents in Cuban popular music. Laurie's entertaining presentation was documented on a nationally-syndicated radio broadcast preserved by Other Minds:

[https://archive.org/details/CMF\\_1979\\_08\\_23](https://archive.org/details/CMF_1979_08_23)

When I co-produced the Composer-to-Composer Festival in July 1990 in the rarified high mountain air of Telluride, Colorado, American artists had been roiled by the emergence of right-wing censorship in the awarding of grants from their country's National Endowment for the Arts. The conservative senator from North Carolina, Jesse Helms, had led a movement to prevent controversial artists from obtaining governmental support, citing Laurie's friend photographer Robert Mapplethorpe as one of the chief offenders. The prominent guest composers in Telluride that year included Henry Brant, Pauline Oliveros, Roger Reynolds, James Tenney, and others. But our American grievance over withdrawn governmental support to individual artists unexpectedly paled in significance when we heard brutal stories from Chinese composer Ge Gan-ru and Balinese composer I Wayan Sadra. Both of them had experienced life-threatening governmental interference in response to their work.



Telluride Composer-to-Composer Festival, July 1990. Participants conferring on manifesto against censorship. L to R, I Wayan Sadra, James Tenney (head in hands), Larry Polansky, Laurie Anderson, Roger Reynolds, Pauline Oliveros.

Following long discussions about artistic freedom, it was left to our eldest composer, Henry Brant, to refine the language of a proclamation that all the guest composers enthusiastically signed, asserting the right of artists to express themselves without fear of repression.

But it was Laurie who phoned United Press International and convinced a reporter to announce our statement. A syndicated story went out the next day, reprinted in papers across the country, with the headline, "Telluride Composers Denounce Jesse Helms." Laurie had leveraged her celebrity effectively in an act of generosity that was widely appreciated. Her appearance on a panel discussing censorship is documented here:

[https://archive.org/details/CTC\\_1990\\_07\\_14\\_2](https://archive.org/details/CTC_1990_07_14_2)



Telluride manifesto read onstage by Laurie Anderson. L to R, I Wayan Sadra, Pauline Oliveros, Jody Diamond (behind LA's right arm), Geri Allen, Ge Gan-ru, Gerhard Stäbler, Robert Morris.



Hirschhorn Museum, Portrait of Laurie Anderson in *Chalkroom*, 2021

Laurie Anderson has made it clear on many occasions that she avoids prescriptions for fixing the world. As a Buddhist practitioner, she knows better than to try. But she generously lends her support to social, environmental, and political causes that move her. And, like most true artists, she is not content to be told what she can and can't do in her work. That determination was on display during her participation in creating the Telluride manifesto affirming artistic freedom. It also came into play when she was asked to present a retrospective in 2021 of her visual work at the Hirschhorn Museum at the Smithsonian in Washington, D.C.

Defying expectations of the curators, she produced instead an ambitious multi-room exhibit of new work, integrating earlier inventions and images, which has garnered enthusiastic international attention. Especially notable is a reprise of her striking all-black room covered with new white drawings and inscriptions hand-painted by Anderson—part of a virtual reality project that is dazzling in its intensity and scope.



Hirschhorn Museum, *To Carry the Heart's Tide*, VR Installation with sculpture



*Heart of a Dog*, Lolabelle playing keyboard

Over the years, I've been thrilled to watch Anderson's career blossom, with an impressive series of brilliant recordings, theatrical performances, artists books, and a stunning feature film *Heart of a Dog*, centered on her pet rat terrier Lolabelle. Laurie's partnership and marriage to the late rock guitarist Lou Reed was energizing and a great source of comfort and inspiration, and recently she has worked successfully to preserve his legacy in conjunction with the New York Public Library and by curating some of his unpublished recordings for release in 2022 on the label Light in the Attic. When called upon during the pandemic in 2021 to present the prestigious series of six Norton Lectures at Harvard, she responded to the challenge by turning them into fanciful Zoom performances replete with beautiful visual backdrops and inventive musical manipulations.

Laurie Anderson's life and work serves as an inspiration now to four generations of art lovers and especially to many younger artists, revealing a way forward that embraces the tools of evolving technology and employing them toward humanistic ends. Her creations consistently reawaken our sense of wonder. She is, without question, a most deserving recipient of the 2022 lifetime achievement award from Ars Electronica as a Visionary Pioneer of Media Art.



Laurie Anderson with her rat terrier Lolabelle.

Sophie Calle



Carol Law

**Charles Amirkhania** (US). Composer, sound poet, and producer for radio, concerts, and recordings, was responsible for the first commercial LP release of then-emerging composer Laurie Anderson in 1977. As Music Director of KPFA-FM Radio in Berkeley (1969–1992) and, since 1993, as Artistic Director of Other Minds, a new music organization in San Francisco, he's played a central role in the encouragement and dissemination of the work of experimental composers and performers. He is widely known for his live and fixed media works utilizing speech elements in rhythmic patterns resembling percussion music. His later music incorporates ambient sounds modified with digital sampling, for which he was commissioned by WDR Köln to create such hörspiel works as *Im Frühling* and *Metropolis San Francisco*. His music is available on Starkland, New World, and Other Minds Records (otherminds.org). *Hypothetical Moments*, an 81-minute DVD of his sound poetry collaborations with visual artist Carol Law, just has been released by Other Minds on the occasion of Ars Electronica 2022.

# Ars Electronica Award for Digital Humanity

by the Austrian Federal Ministry for European and International Affairs

 **ARS ELECTRONICA**  
Award for Digital Humanity 2022

In addition to the four Golden Nicas of Prix Ars Electronica 2022, the Ars Electronica Award for Digital Humanity, initiated by the Austrian Federal Ministry for European and International Affairs, has been awarded for the second 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 accor-

dance 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 jury paid particular attention to projects that demonstrate the power of cultural exchange and collaboration for the development of a human-centered digital world, transcend the mere reflection on the effects of emerging technologies to evoke sources of inspiration, open up new pathways towards a new digital humanism, and create empowering role models.

The ethical dimension of AI for decision-making processes begins not with its application but much earlier: with the data that the preparatory processes are based on. The frequently occurring problem in the utilization of gathered data is that this depicts only certain segments of society. This can result in marginalized groups becoming even more marginalized and basic rights such as equality or a prohibition of discrimination being insufficiently observed. The prize-winning project of the Ars Electronica Award for Digital Humanity is devoted to this issue and develops tools that address both the gathering of a valid dataset—meaning one that includes as many social groups as possible—and the full disclosure of the data material. Openness and a commitment to human rights are crucial elements in pursuing the goals of Austria's international cultural policy activities. I am therefore very happy that this year's Ars Electronica Award for Digital Humanity, which is presented jointly by the Federal Ministry for European and International Affairs and Ars Electronica, goes to the *The Data Nutrition Project*.

Ambassador Dr. Teresa Indjein  
Head of the Cultural Policy Department  
Federal Ministry for European and International Affairs

## Ars Electronica Award for Digital Humanity Statement of the jury

**Martin Honzik; Teresa Indjein, Ambassador, Head of Cultural Policy Department at BMEIA;  
Gerfried Stocker, and Sonja Reiser-Weinzettl**

This is the second year that Ars Electronica and the Federal Ministry for European and International Affairs jointly present the Ars Electronica Award for Digital Humanity. Already last year, the many submissions for this prize that came to us from all over the world, and particularly the winning entries, clearly demonstrated just how closely this prize aligns with the needs of our present-day global community and critically reflects these needs in terms of their challenges, opportunities, and risks. And in the meantime, it has become even more urgent to make the use of digital technologies in culture more humane, because the situation is escalating dramatically.

It was ultimately twenty-six projects that the jury had the task of evaluating, and there was not a single project among them that did not have the potential to win. The diversity of the projects and the issues they addressed alone made it clear to us how many global challenges—all of which should have the utmost priority—we have to work on at the same time and what kind of contradictory reality we find ourselves in. The projects also show very well to what extent our lives are already per-

meated by digital technology and where an unreflecting, unbalanced utilization of digital technology has led us or could still lead us. At the same time, we also see that these very technologies—if we use them properly—can help us solve problems or even avoid them. In view of this very intense discussion, the term “digital humanity” has further evolved and taken on sharper contours since the prize was first established. It encompasses a broad area: from political activism to civil subversion, from the question of the public sphere and democracy in the digital space and from the debate—which has already entered the mainstream—surrounding the bias phenomenon (that is, the problem of distortion in data material) to the problems related to digital transformation that have become evident during the past two years of the pandemic, and from economics and new currencies and values to ecology and artificial intelligence. Ultimately, the crucial task for the jury was to sift through this great diversity of submissions and identify those projects that attempted to work out specific solutions for a specific problem.

## Ars Electronica Award for Digital Humanity

### **The Data Nutrition Project**

**Kasia Chmielinski, Sarah Newman,  
Matthew Taylor**

The Ars Electronica Award for Digital Humanity went to the *The Data Nutrition Project* by Kasia Chmielinski, Sarah Newman, and Matthew Taylor. It is a collaborative network of experts in a wide variety of fields who are devoting themselves to the bias discussion that is now being widely discussed, and who have set their sights on offering products aimed at solving this problem. The project intends to offer data scientists and technologists, the general public, but also political decision-makers concrete tools to help them correct and optimize AI results derived from complex but incomplete datasets. The point of departure for *The Data Nutrition Project* is the fact that AI systems lead to results that can be racist, exclusive, and discriminating, but that in most cases, comprehensive, fundamental corrections to incomplete datasets represent an extremely complex and expensive undertaking and for this very reason are usually given short shrift. The project aims at taking existing datasets and showing where the respective problems of the data lie. Similar to grocery shopping, where one can read the ingredients

list on the package before making the purchase, the *The Data Nutrition Project* develops a graphic, global language that—similar to pictography—could evolve into a global standard. This simple, plausible, serious, and concrete solution won over the jury. Equally remarkable and a decisive factor for the jury’s decision was the project’s goal: it is oriented toward a broad need and global scaling, which increases its potential impact in terms of a positive effect.

## Honorary Mention

### **Digital Research Travelogues through European Archives**

**Marina Gržinić, Jovita Pristovšek, Sophie Uitz**  
*Digital Research Travelogues through European Archives*, by Marina Gržinić, Jovita Pristovšek, and Sophie Uitz, creates an interdisciplinary art and science platform for researching the current policy of oblivion with regard to three traumatic pasts of the twentieth century in European countries: Belgium (colonialism in Congo), Austria (anti-semitism in World War II and the post-war period), and the former Yugoslavia (turbo-nationalism, genocide in Srebrenica). For the jury, this project is of importance because its enlightening, critical, historical look into the past also raises awareness of the present dismal situation in and around Ukraine.

# The Data Nutrition Project

Kasia Chmielinski, Sarah Newman, Matthew Taylor

Artificial intelligence models and algorithms are increasingly used to make decisions about people, often leading to unintended consequences, particularly for communities that are already marginalized, underserved, and underrepresented. One cause of harm is the data that is used to train the models that make these decisions. Problematic, incomplete, or otherwise biased datasets used to train these models will replicate the very issues found in the training datasets.

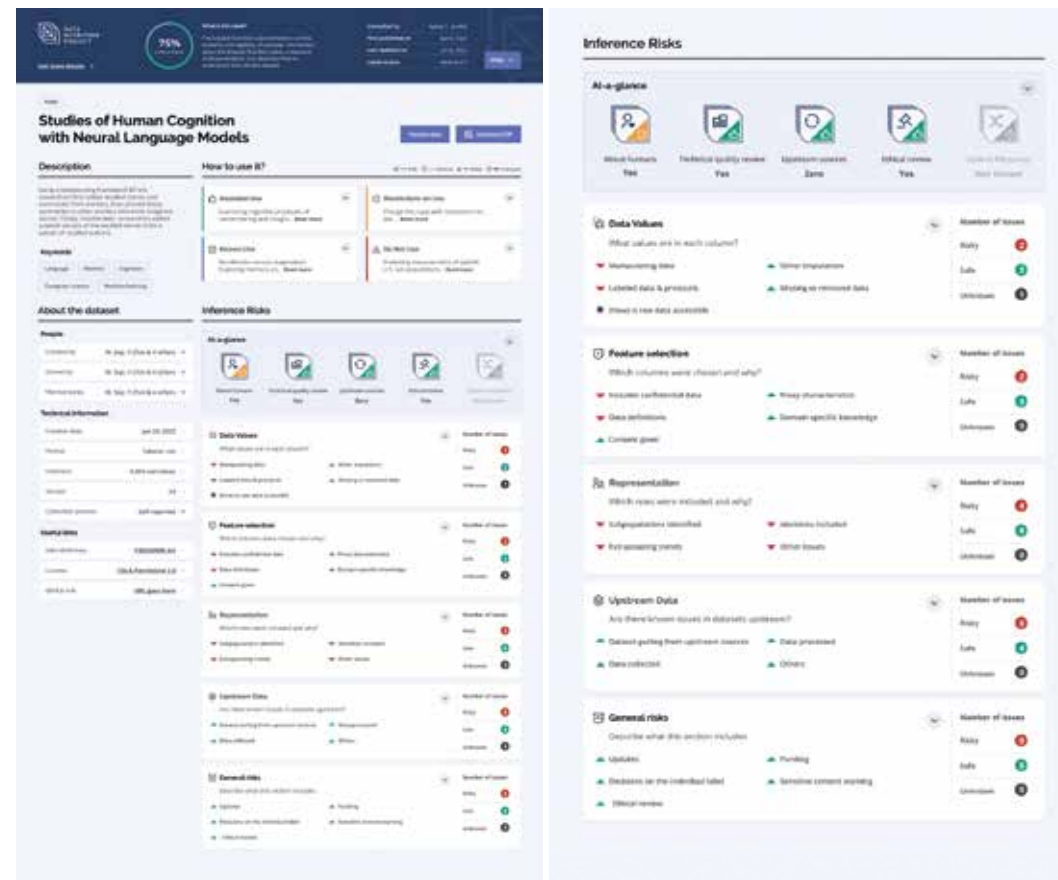
*The Data Nutrition Project* is an initiative run by technologists, artists, scholars, and practitioners to enable the quick evaluation and interrogation of datasets through educational practices and a tool: the *Dataset Nutrition Label*. Like a nutrition label for food, but including important information about the dataset, the *Dataset Nutrition Label* can help

mitigate harm caused by using poorly chosen data for a particular use case. In addition to building labels and a forthcoming label-maker ingestion engine, the team also works on educational initiatives, and has a children's book and a podcast that are in the works. These initiatives are intended to drive cultural awareness about algorithmic risks, as well as current interventions to improve the AI ecosystem.

The Labels created by the *Data Nutrition Project* team, which are visual, interactive, and easy to digest, are intended for practitioners and researchers to have easy access to dataset contents. Too often "found data" is shared and reused with insufficient documentation: it either has no documentation at all, the documentation is incomplete, or the documentation is provided within the context

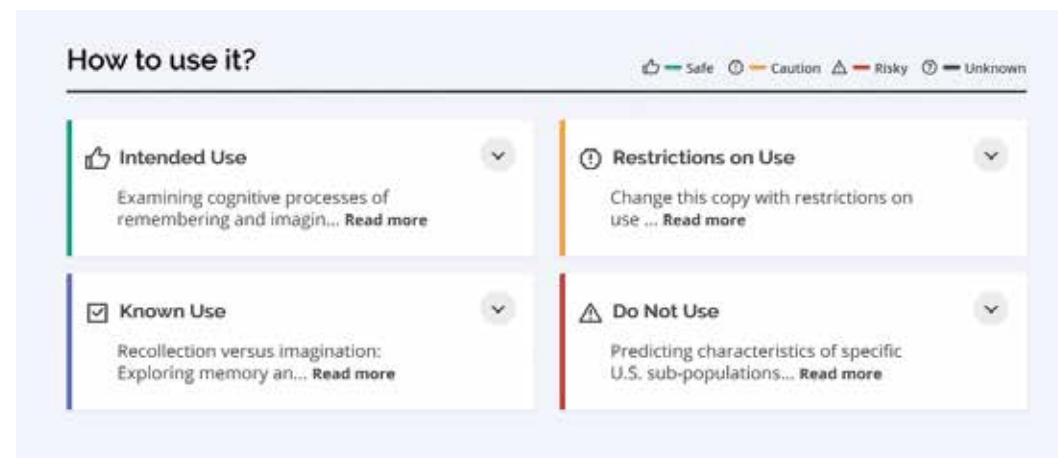


The Dataset Nutrition Label, over time



Draft of the Dataset Nutrition Label (version 3) to be released in late 2022

Detail of left



Detail of above

of a domain's epistemic norms, which may be unfamiliar to data practitioners. There is no agreement on standards when it comes to dataset quality or documentation, and this is exacerbated by the "move fast" culture endemic in the tech industry, that often prioritizes rapid deployment above all else. The *Data Nutrition Project* seeks to address these challenges through a user-friendly tool (the Label) and through our creative and educational work.

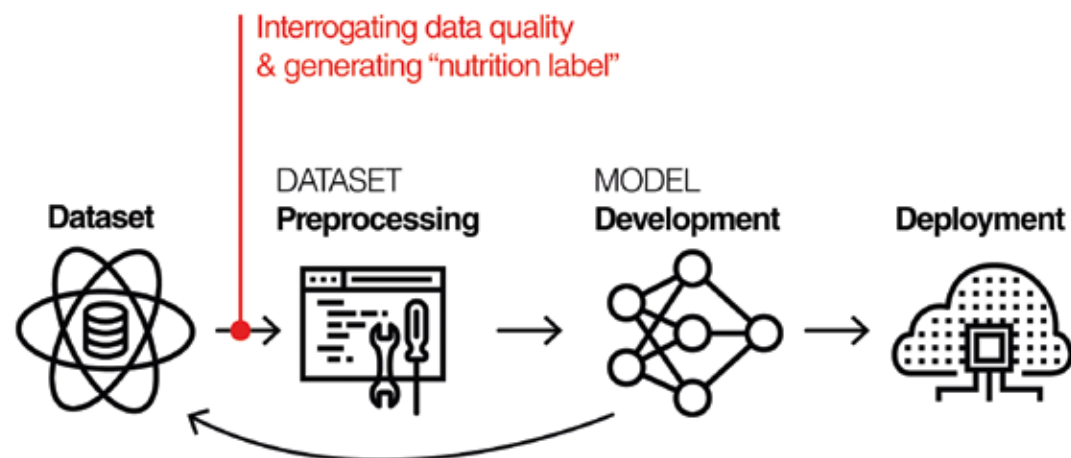
### Software

Our project uses two software components: (1) an Ingestion Engine, which is a logic-conditional questionnaire, currently in development, that will receive information necessary for *Data Nutrition Labels* from dataset owners and (2) the *Dataset Nutrition Label*, a user experience in which data practitioners can easily view important information about a dataset and the implications of using it, based on the information submitted by dataset

owners. All our software is custom built and currently all our code is open source. Our ingestion engine and newest version of the *Dataset Nutrition Label* (V3) will be publicly released in late 2022.

*Data Nutrition Project* team:  
 Project lead: Kasia Chmielinski  
 Research lead: Sarah Newman  
 Tech lead: Matt Taylor  
 Engineer: Kemi Thomas, HG King  
 Data science advisor: Chris Kranzinger  
 Designer: Carine Teyrouz  
 Children's book illustrator: Michael Sherman  
 Board of directors: Jessica Fjeld, Mary Gray, Josh Joseph, and James Mickens  
 With previous support from: The Harvard Data Science Initiative at Harvard University, Digital Lab at Consumer Reports, The Assembly Fellowship at the Berkman Klein Center for Internet & Society at Harvard University, and The Miami Foundation

<https://u.aec.at/8D528D3E>



The model development pipeline

**Kasia Chmielinski** (US) is Co-Founder of the *Data Nutrition Project* and a technologist focused on building responsible data systems across industry, academia, government, and non-profit domains. When not thinking about data, Kasia is usually cycling or birdwatching around the Northeastern US. **Sarah Newman** (US) is Co-Founder of the *Data Nutrition Project* and the Director of Art & Education at metaLAB at Harvard. Working at the intersection of research and art, Newman's work explores technology's role in human experience. Newman is an avid napper and seashell collector. **Matthew Taylor** (US) is a learning experience designer with a background in AI. Previously worked at the MIT Media Lab, and in Boston Public Schools. Currently creating curricula to demystify AI, building mutual aid networks, and organizing tech workers for social justice. Seasoned pun specialist.

Ars Electronica Award  
for Digital Humanity

# Digital Research Travelogues through European Archives

Marina Gržinić, Jovita Pristovšek, Sophie Uitz

*Digital Research Travelogues through European Archives* creates an interdisciplinary platform for art and science to explore the current politics of forgetting in relation to three traumatic events of the 20th century: Belgium (colonialism in the Congo), Austria (antisemitism in World War II and the post-war period), and the former Yugoslavia (turbo-nationalism, Srebrenica genocide). The platform departs from the research conducted as part of the FWF-PEEK project *Genealogy of Amnesia: Rethinking the Past for a New Future of Conviviality* (AR 439). It was presented as a digital format to promote emancipatory politics in the humanities through the 2020-2021 exhibition at the Weltmuseum Wien, Austria. It consisted of 42 interviews presented as 42 posters with QR codes. This part of the exhibition was a unique artistic-scientific and collaborative research work, presented

as an interactive digital installation. The 42 QR codes were divided into three sections, each with a description and content, and accessible to the viewer via mobile phone. Each user could listen to the interviews in English. As a second level of interaction, an interactive table was presented in the exhibition space, allowing the viewer to spend hours exploring the connections between the three sections presented in parallel through images and texts, as a kind of double index, footnotes and hypertexts through European trauma histories.

Marina Gržinić, Jovita Pristovšek, Sophie Uitz, and contributors © FWF-PEEK AR 439, WMW, 2021/22

<https://u.aec.at/86DD0FB7>



**Marina Gržinić, Jovita Pristovšek, Sophie Uitz** (INT) As a research team with backgrounds in conceptual art, philosophy, political theory, and contemporary aesthetics, we have been working together on arts- and theory-based research since 2018. The topics of our work include memory and historical politics, trauma and amnesia, and the future of convivial ways of living. For *Digital Research Travelogues through European Archives*, we collaborated with researchers and grassroots organizations in Belgium, Austria, and the territories of the former Yugoslavia to reach audiences beyond academia. We have presented our project-related work at Weltmuseum Wien, mumok, Vienna and in several publications (Hatje Cantz Verlag, Cambridge Scholars Publishing, Centre for Cultural Decontamination CZKD).

From left to right: Marina Gržinić, Photo: Virginia Villaplana; Jovita Pristovšek and Sophie Uitz, Photos: Bonelli Potokar

Ars Electronica Award  
for Digital Humanity  
Honorary Mention

u19—  
create your  
world



# The Kids Are Not Alright

Sirikit Amann, Reni Hofmüller, Martin Hollinetz,  
Conny Lee, Martin Retschitzegger

The past several years have placed great demands on all of us. As if the life-threatening environmental catastrophe that we as a society have been knowingly heading for, and the pandemic that has been determining our day-to-day life for nearly three years were not enough: there is now a war taking place in Austria's immediate vicinity as well. While all of this unnerves and stresses us all, it nonetheless affects some of the population more than others, particularly the generation of young people. In the course of the pandemic, they were required to put their own needs on the back burner, behind those of other demographic groups as well as those of business and tourism. Their need for contact with their peers was denied, as was their right to a friction-free school education. Their right to protest climate crimes that have a direct effect on their future was simply put on hold. Particularly in childhood and adolescence, when every year represents its own era, many children and young people bravely carried on, despite being denied many crucial experiences in their life. Consequently, in the past two years, the pandemic was naturally also a prominent topic in the projects that were submitted for the Prix Ars Electronica in the u19—create your world category. However, until last year, the focus was still on devising solutions and developing ideas to avoid becoming lonely and desperate. But this year, the tone changed drastically: The dominant theme of this year's entries was the alarming mental state of the young generation. They are not simply sad or angry; their health and their very existence are at stake.

Mental health issues that developed, or that were brought on by experiences made during the past years, the feeling of falling apart as a person, and drug and alcohol addiction was a sad common thread running through this year's entries. It was therefore important to us, the jury, to also reflect this thematic focus in our selection of the winning projects and particularly of the Golden Nica.

The situation is dramatic, and this year's u19 projects should both serve as an outcry as well as elicit one—on the part of the viewers, the public, but also and in particular policy-makers, who must urgently take measures to help the future generation. For what we in the jury have seen is only the tip of the iceberg. After all, those young people who submitted projects at least still have creative means and methods for giving expression to their emotional state and for coping with it. But how many others do not have these possibilities?

Normally, the u19 category leaves us with a feeling of confidence that in the future, young people and their ideas, dynamism, and fresh energy will fix everything. This year, this feeling must give way to the worry that these young people are simply at the end of their tether. They are exhausted by always having to be understanding and sensible, by tilting at metaphorical windmills and being ignored by the public. Many kids are not, in fact, alright, and if we want to again look to the future with confidence, we must become active right now in order to provide help. We as a society cannot give young people the feeling that it will be up to them alone to sort out this mess when it is finally their turn to run things. We all must work together in solidarity to ensure a brighter future.

This year's projects for the u19 category thus demonstrate particularly impressively how important art and creative expression of all kinds are for us humans. It is evident with many works that they were not created in the context of a specific task but rather that they virtually exploded out of the young people like steam from a whistling overpressure valve. Art, in addition to social contacts, is presented in many of the projects as a solitary ray of hope. This year as well, there was a preponderance of film submissions, which on the one hand is certainly due to the fact that a good smartphone is now sufficient to produce high-quality videos, but on the other also because the gaze of young

people has been shaped by various image-heavy online platforms. At the same time, another trend has become evident as well, namely an increased longing for analog media. After the many hours spent in front of a computer screen because of the pandemic, there appears to be a great urge to again create something tangible and to pursue more classical art forms.

Something that was scarcely represented among the entries, on the other hand, was video games. This is very regrettable, as there are creative developers out there whose games address social and political issues or are simply fun to play. We hope that they will submit their games again next year. We in the jury would be very interested in them. The research work behind a project is also something we would like to see a lot more of. The finished project would often be much easier to assess if the participants included the project process in their submission.

This year's u19 projects, above all the Golden Nica, should demonstrate how art and creativity can serve to give expression to something for which we have no words. And they should initiate a dialogue between the viewers and their children, between audience and artists, and above all between those affected and those responsible.

## Awards Young Professionals Golden Nica – Young Professionals

### Die schwarze Decke Mary Mayrhofer

A black blanket on the floor, recognizable contours of a person apparently lying under it, and on the blanket, in white letters, a text about the blanket as a metaphor for depression: In its unambiguous and uncompromising character, this sculpture is a direct kick in the gut. It initially renders one speechless, but then it triggers a discussion and

reflection about mental health, the many taboos surrounding the topic, the current situation for youth, and the lack of psychological support for them. It requires courage and strength to confront depression with such openness. And doing this in a way that really gets under the viewer's skin also requires artistic talent. But *Die schwarze Decke* (The Black Blanket) is not merely an oppressive work; it also gives hope, because it shows how one can use art to give expression to thoughts and feelings in a manner that makes them comprehensible even to strangers. And it shows that art is a crucial means for processing and also for educating. These are the kinds of works that the young artists have to get out of their system because they have no other choice; works that on the one hand make this category an important platform for young creative types and on the other make it possible for the general public to see the current thoughts and feelings of the coming generation as if through a magnifying glass. *Die schwarze Decke* has much to say about what it is like being young in these times. But it also tells us a great deal about the strong artist behind this work.

### Awards of Distinction Young Professionals 171

Fabian Wenzelhuber

The work *171* touches one not only because of its subject matter but also due to its well thought-out and unusual execution through the use of mezzotint. The strong connection between visual art, animation, and sound conveys the dreadful dynamics of a nuclear accident. The music, composed and played by the artist, sets a beat that unifies dance and catastrophe rhythm, one that is at once familiar and unsettling. It forms a clear thread through the animation that gives rise to additional emotional and interpretive interpretations.

## **/\_holofear**

Jolanda Abasolo, Julian Köppl, Xaver Haiden, Leonhard Schönstein

This year's entries included a large number of works dealing with a wide variety of fears and the emotional pressure put on young people. At first glance, the "fear of missing out" may seem relatively innocuous, but it is, in fact, a very important issue that should not be underestimated in terms of the tangible burden placed on youth in a society dominated by social media and digital communication. */\_holofear* conveys this very abstract emotional state in an installation that can be experienced emotionally and interactively. On a holographic projection screen, one sees a stereotypical lively party that one definitely would not want to miss, but as the viewer draws closer, it is transformed into a real situation that is distinctly more boring. The installation is controlled by a 3D camera that constantly measures the distance between viewer and screen. This solution is an extremely smart trick both technically and with regard to content in order to enable the viewer to experience this gap between imagination and reality—which in everyday life is never immediately tangible—in a very direct manner.

## **Honorary Mentions Young Professionals**

### **BONGOS**

Sabrina Koller, Martina Janjic, Barbara Mendez Mendez, Johanna Stefanic  
*BONGOS* shows a father-son relationship. The son is curious, agile, and adventuresome, while the father is apathetic, mourning his supposedly best years. The "real" day-to-day life of these two is animated in gloomy colors in 3D. The absolute opposite is represented by the part into which the son flees in his 2D fantasy world, one that is colorful, diverse, vibrant, loud, and rhythmical—a world full of shapes and colors. It is this very contrast between 3D and 2D that makes this animation so very appealing.

## **Cyberfish**

Mika Weinmayr, Felix Mrak

A minigame with many features that emphasize this game's retro pixel world, and even the keyboard has been adapted correspondingly. The generative design of the cyberfish and the idea of a fishing cat with a wireless fishing pole only add to the appeal. The entertaining gameplay, typical for an arcade game, in combination with the very inventive reward system and the trophy cabinet, fascinate and sharpen the players' instinct for collecting and hunting for cans of fish.

## **Humanity = Nature**

Frida Tabi Tataw, Frederik Lorenzoni, Harald Müller, Lino Müller

From the very beginning, this film captivates the viewers with its bold and refreshing mix of styles. The integration of current, controversial images, such as of international sporting events, shows very clearly how strongly content and design were interwoven in this work. Quick cuts, distorted images, and a skillfully made soundtrack make this film unfailingly interesting.

## **Lost**

Workshop participants of the Medien Kultur Haus Wels

This film project is fascinating both for its lucid and coherent script and for its acting efforts. *Lost* touches viewers with a question that was also present in many other projects this year as well: Is it possible to really help? Can a society that often offers no assistance or simply ignores calls for help effectively intervene? "Oida—wie lost!" ("Dude, how lost!") This short statement expresses something that was present in many submissions: a demand and an appeal for help!

## **not in public**

Emil Klostermann

This work is a courageous and profound exploration of the question of identity and identity formation. Gender is not a constant, and the idea of a rigid assignment to a predefined gender group has long been refuted. In the performative depictions, the artist achieves a connection between self-expression and staging that simultaneously expresses a vulnerability and susceptibility that can characterize a life that does not correspond to norms.

## **Radikalisierung im Netz – Wie Extremisten das Internet für ihre Zwecke missbrauchen**

Johanna Westreicher, Magdalena Juen, Sophie Juen, Anna Zangerl, Leonie Jäger

Algorithms that result in the perpetuation of only one's own opinion, deficient regulation of online communication, hate speech, and the possibility of spreading fake news as if it were real facts have increasingly shaped and divided society in recent years. This project examines the question of how it can happen that someone is increasingly radicalized through his or her online behavior. An experimental design is used to test how quickly one can slip into dubious filter bubbles and be increasingly isolated there. This experimental approach vividly illustrates how these mechanisms work.

## **Reinigung**

Barbara Nina Rettig

This performance has an incredibly mesmerizing effect on the viewer. Although from beginning to end nothing "bad" happens, the gestures and actions have an enormously menacing effect. Through a precise eye for detail and thanks to perfect props, a stringent color mood emerges that further underscores the intense atmosphere of the

setting: on the one side only white and beige, the wash basin, the clothing, and the cleaning utensils. Everything feels distant and anonymous. On the other side dark-blue light and black. It is dusty and dirty and reminiscent of a dark club. *Reinigung* (Cleaning) allows a great deal of space for interpretation. The strict hygiene measures of the pandemic come to mind, and in contrast to this the longing to be able to simply be dirty. But the stringent cleaning can also be read in the context of the compulsion to be perfect that is propagated by distorted images of beauty on social platforms. The constant pressure to perform that weighs on young people is another way to interpret this short film. The film's impact is additionally reinforced by the sophisticated sound.

## **Saudade**

Jasmin Pemmer

This film narrative strikes a successful balance between the depiction of the distress and desperation of the main character and the gloominess of his situation on the one hand and the search for an escape on the other. This escape lies in his creativity—that is, in art. The sound design and the filmmaker's feel for silence, music, and noise levels are impressive.

## **Unity**

Michael Zamminer

In *Unity*, one of the central questions of our time is brought into a lovely and fascinating interplay: the image and the self-image of the human being, realized with modern-day tools—namely with software and hardware and the ability to make something new from them. The viewer is moved on an aesthetic as well as a metaphoric level: What would a world be like in which everyone acted with the welfare of all of society in mind?

## Waste-Bin-GO

Maximilian Zaglmayr, Manuel Obermayr

The steadily increasing amount of trash in the world and the challenge not only of avoiding producing trash but also of ensuring its proper disposal and recycling is a problem facing many municipalities. *Waste-Bin-GO* is a trash-collection app based on gamification and current AR technologies. Here, trash seekers are encouraged to design a challenge for others, and people are motivated to actively search for trash and dispose of it in a proper manner.

## Awards Young Creatives

### u14 Prize Young Creatives

#### Orpheus und Eurydike

Elena Schöppl, Carla Schöppl,  
Rosina Umgeher

Transporting the story of the fateful love of Orpheus and Eurydice to the here and now is a clever device that produces humorous moments, such as when Eurydice posts her relationship status online. And simply turning the ancient music star Orpheus into a central female character is a wonderful contemporary staging device. Cinematically, the film has much to offer: a precise feel for shots and cuts, great locations like the underworld, and lovingly designed costumes. In *Orpheus und Eurydike* an ancient fable is recounted with an imaginative twist, a high degree of professionalism, and subtle wit.

## u14 Awards of Distinction Young Creatives

### Chaos in Wien

Students at RGORG 23 antonkriegergasse

In the stop-motion film *Chaos in Wien* (Chaos in Vienna), different sequences as well as seemingly unconnected sequences are interwoven. The individual teams have created a logical and coherent sequence for the video. The music is inspiring and gives the stop-motion film additional depth.

### Driving into the Future

Students at MS Frohnleiten

This film succeeds in creating tension—beginning in the classroom with a lesson on self-driving cars to the idea of trying to build one themselves. All the way to the rousing finish, the story is well structured and is able to maintain the tension. A clever script has been turned into a very cool, funny video.

### u12 Prize Young Creatives

#### Druzeiplo

Benjamin Hölzl

This project surprises with an abundance of construction ideas and LEGO prototypes. The programs for controlling the printer, plotter, and drafting machine were self-written, and the LEGO Technic components are utilized in a manner that is both creative and functional: the printer with three-axis controller plus output, the drafting robot, the circular saw, the punch, and the jury's favorite—the plotter, which can be used to draw creative geometric figures. The stamping machine rounds off the LEGO creative workshop.

## u12 Award of Distinction Young Creatives

### SNELL—Die Wahrheit kommt heraus

Gloria Riedmann, Viktor Flatz, and  
Matteo Di Cesare

The music, the sound design, the splendid collages, and the ingenious story about resource waste make watching this great fun, and the convincing interview with Peppa Pig is very effective in holding the film together. Please, more adventures of Peppa Pig, Spiderman, and the Astronaut!

### u12 Honorary Mention Young Creatives

#### ISS MIR RIM SSI

Dominik Pichler, Immanuel Fröhlich,  
Lennard Fellner

There is a war going on. The idea of continuing to beguile the president with flattery and status symbols until he narcissistically takes off into space has something Dadaistic and very bizarre about it. This is realized with collages that are cheeky, associative, and “rough and dirty.”

### u10 Prize Young Creatives

#### Leuchtende Zukunft

Emilio Deutsch

In this project, several important research areas are covered: the reduction of light pollution, climate protection, and the use of alternative forms of energy. The idea is to replace lamps and lanterns with low-light glow sticks that draw their energy from *Armillaria mellea*, or honey fungus.

## u10 Award of Distinction Young Creatives

### Save the monkeys, save the rainforest

Sarah Hölzl

This is a film that explores the destruction of animal habitats. One sees real forestry workers who fell trees, and a family of small animated monkeys that credibly interact with each other. The stop-motion camera accompanies father and son on their search for a new home. A well-structured story with regard to its subject matter, skillfully told, and with a hopeful ending.

### u10 Honorary Mentions Young Creatives

#### Bärlauch

Levi Pittermann, Arthur Fortin, Thabo

Juric-Grubner, Jakob Daburon, Kaan Colak

These landscape images reflect the awakening of nature and the seasonal harvest of wild garlic. The shimmering lightness of the images and the harmonious color balance, which gives these pictures a very special radiance, are impressive.

#### Ferngesteuerter Roboter aus LEGO Technic

Leopold Kastler

In this refreshing explanatory video, one recognizes immediately that Leopold Kastler has given a great deal of thought to robots. He explains their functions and that there were setbacks because not everything worked immediately. His motto: keep trying!

#### Support and counselling for children and youth

147 by phone, online, or chat

<https://www.rataufdraht.at/#>

[www.fuer-dich-da.at](http://www.fuer-dich-da.at)

<https://www.kinderjugendgesundheit.at/themenschwerpunkte/corona/helplines-fur-familien/>

<https://bittelebe.at/>

[www.kriesenhilfeooe.at](http://www.kriesenhilfeooe.at)

[www.suizidpraevention.gv.at](http://www.suizidpraevention.gv.at)

# Die schwarze Decke

Mary Mayrhofer



With this stiffened textile object, I focused on symbolizing and depicting characteristics of a depression. My work relocated this mental disorder in the world of objects, thus making it comprehensible and tangible even for viewers who have no personal contact with this subject matter. *Die schwarze Decke* (The Black Blanket) is a symbiosis of the creative media I chose deliberately because I regarded them as suitable for turning this project as a whole into an allegory. My work is built on factors such as script and color and shows depression as a deep black, stiffened shell that shuts one off from the enjoyment of life.

If I succeed in expressing and creating something from my pain, then I feel it was not all in vain. It also helps me to lay bare my innermost feelings and make comprehensible to others what words cannot express.

I wrote this poem at an emotional low point, on April 10, 2021, at about three o'clock in the morning—long before the beginning of the creative process, which commenced about half a year later. If things had taken a different course, this poem would have accompanied a suicide note and never would have become part of a project. Today, I am not only happy but also extremely proud that I am still here to transform my pain into something morbidly beautiful and ideally to create a kind of art that reaches and touches people.

Through this project, I want not only to confront my own inner feelings but to reveal them to others as well. I also want to commemorate all the tremendous artists, parents, siblings, friends, strangers, and other people who suffer from this illness or have already succumbed to it.

## Die schwarze Decke (The Black Blanket)

The Black Blanket encases a person,  
But the person is no longer there.  
The fabric became rigid;  
It hardened and stiffened  
As life dissolved in fog.  
The person is already gone,  
Perhaps escaping from their thoughts,  
Or exploring the bottom of the Danube.

The Black Blanket has absorbed tears  
And eavesdropped on prayers.  
It has muffled screams  
And adorned itself with bloodstains.  
The Black Blanket,  
Like the last resting place of a mummy,  
Like a coffin for those still alive.  
As a final memory to all  
Who were too tired  
At the end of the day  
To simply lie down again.

<https://u.aec.at/965FBB32>



**Mary Mayrhofer** (\*2002) still lives in Linz but would really like to travel all around the world. She graduated from the HBLA für künstlerische Gestaltung and would now like to become an art therapist in order to combine her two great interests: people and art. In all areas of her life, expression has priority, which is also why she addresses with her own inner thoughts in her work. Although she constantly utilizes new materials and techniques, she feels most at home in the medium of collage and in the Dadaist style. What she most appreciates about this is the freedom to take everything apart and put it back together in a different way, and to destroy all norms and conventions.

# /\_holofear

Jolanda Abasolo, Julian Köppl, Xaver Haiden, Leonhard Schönstein

Everyone knows it: FOMO—the fear of missing out. You’re invited somewhere but you don’t really feel like going. You think about it for a while and decide to go anyway, because after all, you don’t want to miss anything. Looking back on it though, you realize that you really wouldn’t have missed much. /\_holofear allows us to experience this spectacle in a visual manner through an installation that shows a very hyped party that becomes more boring and desolate the closer you get to it. Step by step, the supposedly great party turns out to be rather unspectacular after all. As soon as the viewer moves away, the hologram party heats up again, and with it, the desire to become part of the action—the FOMO—increases. This interaction with the hologram allows us to palpably feel the FOMO.

General project supervision: Bernhard Compoj, Manuel Steinböck  
Programing support: Philipp Mold  
Setup assistance: Christoph Wais  
Actor and construction assistance: Anna Zahel  
Construction assistance: Jürgen Haiden  
Equipment for film shooting: Karl Vancura, Alexander Hörl, Benno Hanke  
Background actors: Frederik Lorenzoni, Lino Müller, Harald Müller, Max Fleischmann, Leila Sharifpour Langroudi, Lena Lindtner, Hannah Wallner, Julia Stangl, Sophie Tanzer, Veronika Aster, Julian Hager, Felix Hagmair, Philomena Löff, Sarah Haidl, Ava Mitas, Marit Krickl, Milan Konrad, Rosa Müller, Johanna Bräunig

<https://u.aec.at/1F86BE98>



Jolanda Abasolo (\*2004), Julian Köppl (\*2003), Xaver Haiden (\*2003), and Leonhard Schönstein (\*2003) have one thing in common: creativity. Whether it’s 3D, generative art, animation, conception, construction, filmmaking, or photography. Completely in the multimedia spirit of their vocational school, the “Graphische,” together they make up an awesome team that enthusiastically throws itself into its projects and eagerly pursued the ideally of visualizing the FOMO.

# 171

Fabian Wenzelhumer



171 is a stop-motion film that celebrates the partnership between image and sound with a total of 746 graphics, 621 of them have been engraved in a ink coated surface, while the other 125 were drawn with pencil, ink, and gouache. The film’s objective is to illustrate the process of interpreting what is perceived auditorily and to stimulate the viewer’s own imagination. Observations show that the classification of perceived sounds varies from person to person. This work aims to facilitate the recognition of the connection between sound and image and to gain a better understanding of it. The film is also a criticism of human hubris and aims at drawing attention to modern-day problems such as pollution, the exploitation of raw materials, and the unsolved question of supplying sufficient

energy in the future. A nuclear reactor accident caused by recklessness is shown. The story turns out to be the visual interpretation of a young man who is listening to a rhythm. The title refers on the one hand to this rhythm’s number of beats per minute in 5/4 time—171—and on the other to Section 171 of the Austrian Criminal Code, which states that deliberately causing danger to life or health through the release of nuclear energy or other ionizing radiation is a criminal offense.

Advisor: Helmut Kolar  
Sound design: Dominik Kostolnik  
Percussion: Fabian Wenzelhumer

<https://u.aec.at/EF712003>



Fabian Wenzelhumer (\*2003) attends the HBLA für künstlerische Gestaltung in Linz (2017–2022). His goal is to make artistic creation his career. To this end, he would like to study art. His primary artistic focus is on graphics, painting, and sculpture. Occasionally he also realizes his ideas through films and music. His great passions are hiking, mountain climbing, and record collecting. But he also has a weakness for lame jokes and puns as well as for bell-bottoms and other “funky” fashion.

# BONGOS

Sabrina Koller, Martina Janjic, Barbara Mendez Mendez, Johanna Stefanic



Our short film explores family, creativity, the psyche, and transgenerational traumas. It deals with a father who pays little attention to his son. The boy is the complete opposite of his father, as he is still bursting with energy and creativity. The father was a bongo player, and now the only thing that the boy wants is to play this instrument as well. The father will not allow this, however, because the bongos are of great sentimental value to him. The son responds by fleeing into his world of creativity; he withdraws to his play corner with his paper and pencil. In this world, which is shown from his perspective, he meets his father, in the form of a bongo-playing monkey. A chase scene follows, as

the boy wants to play this instrument himself. Just as he is about to succeed, he is pulled back to the real world, where he gazes at two drawn monkeys, symbolizing him and his father. The father sneaks up behind him and admires his son's work. The credits show the successive life of the two protagonists.

Music: Harold Taylor, Alex Machado  
Voice-over father: Mario Wessely  
Assistants: Florian Binder, Matthias Eisenheld, Michaela Rentsch, David Jakubowicz

<https://u.aec.at/8C6EFA47>



**Sabrina Koller** (\*2003), **Martina Janjic** (\*2003), **Barbara Mendez Mendez** (\*2000), **Johanna Stefanic** (\*2003) all attend the HTBLVA Spengergasse in Vienna. They have been in the same class since 2017 and joined forces there to make the short film *BONGOS*. Over the years, all four have developed various interests in animation, design, and film, and thus complement each other well as a team.

u19—create your world  
Honorary Mention

Young Professionals

# Cyberfish

Mika Weinmayr, Felix Mrak



**Outer space.**  
**Countless fish.**

*Cyberfish* is a mobile game in retro Pixelart style that centers on the adventures of Drago the Cat. He lives many light years from Earth in order to find cyberfish, to fish for them, and to find out everything about them. In the process, Drago catches new species of fish that no cat has ever seen before. The lonely astronaut Drago the Cat sits on a space dock and fishes with his space fishing rod for fish cans with spectacular contents. Every fish consists of three parts: head, belly, and tail, which are put together randomly.

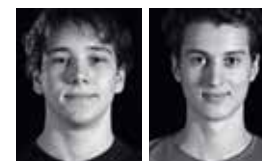
Through playing an arcade mini-game, in which one must avoid octopus arms, one receives cans of fish. When one opens these cans, one can get rare fish species like "Common," "Rare," "Epic," and

"Legendary." The players have the opportunity to enter them in their species book. This species book acts as a sort of trophy case where later the fish can be observed as well. The object of the game is to catch the most unusual fish and enlarge one's own collection.

It's the perfect game for playing in spare moments.

Music: Konstantin Tratter

<https://u.aec.at/811ED79E>



**Mika Weinmayr** (\*2003) lives in Graz. During his final school year, he discovered his great interest in coding. He wants to pursue this path in the near future as well. **Felix Mrak** (\*2004) is in his fifth year at HTBLVA Graz Ortweinschule (Film & MultimediaArt). His great passion for Pixelart and games led him to create the mobile game *Cyberfish* together with Mika Weinmayr as part of his diploma project.

u19—create your world  
Honorary Mention

Young Professionals

# Humanity = Nature

Frida Tabi Tataw, Frederik Lorenzoni, Harald Müller, Lino Müller



The intention behind our project is to show that the destructive behavior of humanity with regard to nature will spell our own downfall. Various animation techniques such as 2D, collage animation, and rotoscope were combined with mixed media and found footage. A high degree of variety in the digital as well as in the analog area is a hallmark of this project. The film's sound represents a defining level in terms of creativity and is reminiscent of a computer game. The original vision of the project was to equate a felled tree with a human being who through his actions brings about his own downfall. On the basis of this metaphor, additional visual juxtapositions emerged that address various aspects of the climate crisis and its impacts. These escalate until a crucial point is arrived at that leads to "game over."



<https://u.aec.at/FD694A0D>



Frida Tabi Tataw (\*2003), Frederik Lorenzoni (\*2002), Harald Müller (\*2003), and Lino Müller (\*2003) attend Höhere Graphische Bundes-Lehr- und Versuchsanstalt in Vienna. This group's interests vary widely and range from animation (stop motion) and audio to politics, environment, and nature. But it was precisely this diversity that made the project so successful.

u19—create your world  
Honorary Mention

Young Professionals

# Lost

Workshop participants at Medien Kultur Haus Wels



In the summer of 2021, young filmmakers worked intensively on a short-film project as part of a workshop at the Medien Kultur Haus in Wels. Following a scriptwriting workshop, the participants worked for two weeks on realizing the script: six days of shooting, six days of music and sound production, and then editing in two groups. The film was subsequently completed by Oliver Parsch over a period of several weeks.

The film tells the story of Nina and Ben, siblings who share an apartment on the 21st floor of the 26-story Maria Theresia high-rise building in Wels. Their parents do not live with them. The situation appears to be problematic. Although Ben is an adult, he is currently out of work, and since his girl-

friend, Tamara, left him, he spends his days in his room and doesn't even let his sister get close to him. One day when Nina returns from shopping, Ben has disappeared. She sets off in search of him. The film reflects the multilayered emotions and circumstances that the term "lost" can represent, be it through its characters, the camera angles, or the music.

Mentors for:  
Film direction: Paul Porenta  
Camera and image design: Laura Ettel  
Music: Niklas Pichler  
Editing: Lea Föger  
Production: Boris Schuld

<https://u.aec.at/F32597CE>



As part of a summer workshop at the Medien Kultur Haus Wels, a group was formed consisting of "experienced" young filmmakers as well as novices. The participants (Oliver Parsch, Andreas Angleitner, Barbara Nina Rettig, Lena Eckerl, Ruben Ritzinger, Emely Traunmüller, Lena Stieger, Jana Zauner, Marcel Pürstinger, Leon Fasthuber, Magdalena Jahn, Jonas Wiesinger, Nina Derflinger, Jakob Nieß, Annika Schwarzwald, Moritz Stacherl, Julian Straßer, Leon Pohn, Rainer Brunnhaller, and Johanna Weiß) were between 12 and 30 years old. The group quickly coalesced, with the participants providing each other with motivation and support. The Medien Kultur Haus

Wels provides young people with a setting in which they can work independently but with professional support to realize their own ideas regarding a certain topic, learning the necessary media techniques in the process.

u19—create your world  
Honorary Mention

Young Professionals

# not in public

Emil Klostermann



My objective with this photo series was to draw attention to the discrimination faced by queer people. For a long time, members of the LGBTQ+ community were disadvantaged or persecuted—and they still are. Because I am a member of this community myself, I feel a responsibility to enlighten others about this subject. Every day, queer people have to prove themselves, especially if they do not correspond to stereotypical gender images.

Generally, femininity is viewed as something negative, as a weakness. Men aren't permitted to show femininity in public, or else they are viewed as being inferior. These prejudices still persist today, and many queer people suffer as a result. In my

photo series, I want to expose stereotypes and confront the viewer with his or her own ignorance. How do we react to depictions of a person who displays multiple sexual characteristics? And why? I want to explore these questions in my works and thus stimulate debate. Through exaggeration and a certain parodying, I try to ridicule these gender-related societal expectations in order to show how unrealistic they can be.

<https://u.aec.at/1B0F3806>



**Emil Klostermann** (\*2003) graduated in 2022 from the ORG Dachsberg. In his art, he attempts to draw attention to social problems and to stimulate and even provoke emotions. He works with a broad range of materials, presently focusing primarily on photography and image editing. He has been the recipient of a number of awards at youth competitions and has participated in several exhibitions. The goal of his artistic work is to bring about social change and to encourage others to rethink their attitudes.

u19—create your world  
Honorary Mention

Young Professionals

# Radikalisierung im Netz

Wie Extremisten das Internet für ihre Zwecke missbrauchen

Johanna Westreicher, Magdalena Juen, Sophie Juen,  
Anna Zangerl, Leonie Jäger



The work *Radikalisierung im Netz – Wie Extremisten das Internet für ihre Zwecke missbrauchen* (Radicalization on the Internet: How Extremists Misuse the Internet for Their Purposes) was part of a diploma project at Handelsakademie Landeck and is made up of several elements: conducting a self-experiment; planning, designing, and publishing an information brochure; organizing and carrying out a workshop; and producing and publishing a 30-minute report.

In this work, the foundations and processes of radicalization on the internet as well as possible preventative measures and potential psychological aspects affecting victims and perpetrators are extensively analyzed and illuminated using real-life examples and cases. In addition, technical and legal issues are examined in order to depict the

prevailing situation concerning extremism on the internet in a manner that is as realistic as possible. The project's primary objective is to enlighten people about this issue and raise society's awareness about this disruptive transformation occurring on the internet, which due to increasing digitalization is having a growing impact on people's daily lives.

Support teacher: Peter Weigand (Handelsakademie Landeck)

Interview partners: Dr. Nahlah Saimeh, Max Privorozki  
Additional support by: Beratungsstelle Extremismus Boja, Jüdische Gemeinde zu Halle (Saale), K.d.ö.R.

Picture and video sources: oesterreich.gv.at, stoplevel.at

<https://u.aec.at/61E6A4FA>



**Johanna Westreicher** (\*2003), **Magdalena Juen** (\*2002), **Sophie Juen** (\*2002), **Anna Zangerl** (\*2002), and **Leonie Jäger** (\*2003) all attend the MEDIA.HAK branch at Handelsakademie Landeck. The group came together as part of their final diploma project and worked for nearly two years under the direction of project head Johanna Westreicher and with the assistance of support teacher Peter Weigand in realizing the project *Radikalisierung im Netz*.

u19—create your world  
Honorary Mention

Young Professionals



# Reinigung

Barbara Nina Rettig



A young woman with neurotic traits enters a room in order to clean herself, does this, in the process works herself up to the point of ecstasy, is dirtier afterwards than before, but nonetheless satisfied. From the ritualistic cleansing to cathartic ecstasy to pleasurable obsession, this experimental film offers room for many aesthetic images. A broad space for interpretation is created that also welcomes every form of social criticism. What exactly the viewers put into this film should be left up to them and should reflect their personal experiences and perceptions.

This project is an attempt to produce a transgression of boundaries through performance art and offer criticism of prevailing structures and

patterns. This film aims at triggering deep emotions among the audience. The creation of the film itself was characterized by an exploratory and experimental approach, and during the filming I encountered my own boundaries through the performance, transcended them, and thus also extended them.

Performance: Barbara Nina Rettig  
Sound: Jakob Schauer  
Camera: Jasmin Pemmer, Vanessa Petrusic, Anna-Sophie Kapshammer, Jonas Hörbst, Sophia Speigner, Leonie Sattlegger

<https://u.aec.at/0C904B52>



**Barbara Nina Rettig** (\*2003) has been an enthusiastic dancer since she was four. From 2017 to 2022 she attended HBLA für künstlerische Gestaltung in Linz. In these five years, an enormous passion emerged for every kind of visual and performing art. She practices everything from painting, photography, and cinematography to poetry slams, acting, and dance theater. In order to give expression to her many emotions, she wishes she could do everything at once.

u19–create your world  
Honorary Mention

Young Professionals

# Saudade

Jasmin Pemmer



Fear, loneliness, suffering, frustration, pain, desperation.

The short film *Saudade* addresses many of the feelings that push us to our emotional limits. The protagonist is no longer able to cope with the affairs of daily life. Trapped in his thoughts, he pushes his way through life, but lurking everywhere are “triggers,” impulses that again and again set off a wave of emotions in him. His only goal then becomes getting back to the protective environment of his apartment as quickly as possible. But when he reaches it, his tension does not fall away, but his mask does. The secure environment allows him to express his innermost thoughts unfiltered. Then, however, he loses control for a brief

moment, a moment in which he forgets to keep a lid on his feelings, a moment that breaks down his walls. A flood of pent-up emotions breaks free. Knowing that he has now lost control for good, he stops fighting it. Instead of trying to suppress a wave of feelings, he gives it space and allows it to sweep over the vastness of artistic expression. With one insight: It is how it is; and how it once was, it will never be again.

With support from: Robert Hinterleitner, HBLA für künstlerische Gestaltung Linz  
Actors: Adrian Turkic, Barbara Rettig

<https://u.aec.at/BF9F1354>



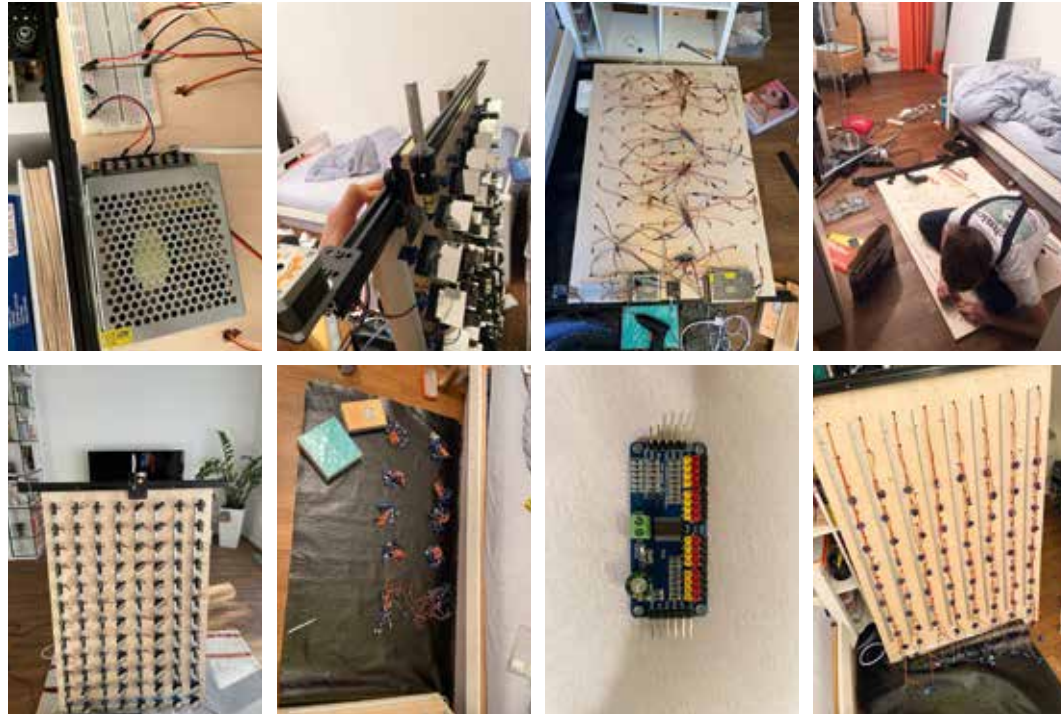
**Jasmin Pemmer** (\*2003) graduated from HBLA für künstlerische Gestaltung in Linz in 2022 with this short film as part of her diploma project, *Die Grenzen der menschlichen Psyche* (The Limits of the Human Psyche). Her interest in film has accompanied her throughout her entire school years, which she was able to apply in practice in several school projects, in her work on the 2021 Crossing Europe Video Project 2021, and finally in the more extensive work *Saudade*.

u19–create your world  
Honorary Mention

Young Professionals

# Unity

Michael Zaminer



*Unity* is an artistic and technical project that I developed for this year's Prix Ars Electronica. *Unity* is a wall, equipped with 96 mirrors, that using only reflected light and a webcam can act as a mechanical mirror. When I stand in front of this wall and the motors rumble, the mirrors turn, and my contour becomes visible in the forest of mirrors, I clearly see how the angles of the motors are calculated from my picture. Even today I could spend hours watching how the mirrors turn—the perfect interplay between hardware and software for portraying the viewer.

*Unity* is designed to amaze people, to show them how beautiful it can be when everything is in perfect harmony. *Unity* also shows how it could be if people act in an integrated manner, “as a unit.” I’ve been asking myself since primary school how the world would look if there were never any wars, if politicians always made the best decisions, or if the human race tackled problems in a unified manner. Certainly different to the way it does today. Technology is terrific at solving problems, but ultimately it is up to us to apply this technology properly.

<https://u.aec.at/9CC109D3>



**Michael Zaminer** (\*2006) started in the mechatronics branch of HTL Rennweg in Vienna's third district in 2021. He lives with his parents and younger sister in Döbling. This is his third time participating in Prix Ars Electronica. He is very interested in technology and science. In his free time, he enjoys programming and working on technical projects. He is also on a soccer team and likes to ski. When he grows up, he would someday like to work for SpaceX.

# Waste-Bin-GO

Maximilian Zaglmayr, Manuel Obermayr



Whether it's the plastic bag on the side of the road or the aluminum can in the field: in our environment today, there is trash everywhere we look. Only very few people take the trouble to pick up the trash. The *Waste-Bin-GO* app is aimed at this problem and is wholly devoted to people working together to create a more sustainable future. The goal of our project is to convince as many people as possible to go out and pick up trash in order to make a mutual contribution to solving the trash problem.

Users of *Waste-Bin-GO* can mark on a map where they find trash. These markers are stored on a server and can thus be seen by everyone. Everyone

can have the route to marked trash displayed for them with the help of augmented reality. This playful kind of visualization ensures a certain “fun factor” in the search for trash. You receive one point for every piece of trash you pick up. In this way, avid collectors can compare their diligence and motivate each other. The innovative idea of making trash collection so accessible to people and using the latest technology to make it as simple and fun as possible is what makes our app so unique.

With the support of Matthias Grimmer

<https://u.aec.at/51263001>



**Manuel Obermayr** (\*2003) and **Maximilian Zaglmayr** (\*2003) attend the vocational school HTL Braunau. They are both enthusiastic about technology and programming and because of the school's focus on bionics are also fascinated by the areas of science and ecology. Both are inquisitive and interested in new things. With their diploma project, they have combined all their interests to come up with a new and creative way to approach the problem of pollution.

# Orpheus und Eurydike

Elena Schöppl, Carla Schöppl, Rosina Umgeher



Drawing on the Greek myth, my sister Carla (Orpheus), my cousin Rosina (Eurydice, the dead, Cerberus), and I (the ferryman Charon, the voyeur Aristaeus, the god Hades) reinterpreted the love story of Orpheus (who is female in our version) and Eurydice.

When Eurydice flees from the voyeur Aristaeus, she is killed not by a snake but by electrocution—at the very moment when she is distracted by her mobile phone, where she is posting about her new love on Instagram. Orpheus's attempt to rescue her love from the underworld with beguiling music nearly succeeds. But after meeting the ferryman (Charon) and the monstrous watchdog (Cerberus, who is also calmed by the playing of the flute) and

following the crossing of the River Styx and the encounter with the land of death and Hades (king of the underworld), Orpheus—just before reaching the land of the living—unfortunately turns back to look at Eurydice, who must then remain in the underworld forever. The Greek myth ends with the heart-broken Orpheus subsequently abstaining from any contact with women, but we left this part out, because in our video, of course, Orpheus is a woman.

Set runner, technical advice:  
Robert Hinterleitner

<https://u.aec.at/FAD25B85>



**Elena Schöppl** (\*2008) currently attends Körnergymnasium in Linz and in the fall will transfer to the visual arts program at Stifterschule Linz. She loves horses and is interested in drawing and filmmaking but prefers to stand behind the camera. Her sister **Carla Schöppl** (\*2011) is also a student at Körnergymnasium. In the films they make together, she is not only in charge of the clapboard but also usually plays a role. Their nine-year-old cousin **Rosina Umgeher** (\*2013) is a born actor and can assume nearly any role. She lives in Vienna and always visits her cousins in the summer.

u19—create your world  
u14 Prize

Young Creatives

# Chaos in Wien

Students at RGORG 23 antonkriegergasse



In June 2021, fourteen students from classes 2A and 2B at the RGORG antonkriegergasse in Vienna's 23rd district processed in manifold ways the experiences, feelings, and fantasies that were elicited in them by the worldwide pandemic. Their own home, with its limited opportunities for play and other things due to the lockdowns, is at the center of their reflections, as is the real urban environment and its playful distortion. As a number of the students had already worked on an animated film project in their first year at the RGORG 23, and loved it, it seemed only natural that as soon as the opportunity presented itself again, students would in the following year be given the chance to work on another project with MUKATO.

Comments by the participating students:  
With the support of our coaches Caro and Peter, in this film we explored the diversity of Vienna. Whether it is the Giant Ferris wheel or a concert, there are obstacles to be overcome everywhere. *Chaos in Wien* (Chaos in Vienna) is the end result of a lot of fun and creativity. It fortunately was successful, and we are all very satisfied with the results of this collaboration!



<https://u.aec.at/2C82264B>



**Alaa Tamer, Alfer Antal, Ali Kaan Kaya, Amira Abubakar, Anna Sommer, Elias Erker, Hannah Fischer, Juno Pabst, Laura Camison, Lena Steinbichler, Matilda Wieselthaler, Nando Mairitsch, Nils Haberfelner, and Niklas Kuri** currently attend classes 3A and 3B of RGORG 23 antonkriegergasse in Vienna. They have long been interested in the various possibilities for depicting the world they live in through creative processes and thus making it visible to others.

u19—create your world  
u14 Award of Distinction

Young Creatives

# Driving into the Future

Students at MS Frohnleiten



During their math and physics classes, the students of the third upper grades at MS Frohnleiten and their teachers talked about promising technologies and were particularly fascinated by the subject of artificial intelligence. This led to animated discussions, and the students contributed their ideas regarding the use of artificial intelligence in the future. The group with video editing as their elective subject adopted one of these ideas and produced a video based on it.

We are all more than satisfied with the results and would like to present the work to you now. The filming was done with the kids' mobile phones. Various video editing programs (Shotcut, iPad

apps, Premiere Pro) were used to process the raw material and add sound. A few noises and tones were recorded with the phones and added later. Additionally, various apps for producing a background picture for mobile phones were tested and applied, and a remote-control car was borrowed from a teacher. Another teacher allowed us to use his personal vehicle for the final scenes, and the remaining material (tools, computers, etc.) is the school's own property.

With support from Markus Lippe

<https://u.aec.at/B642D4F0>



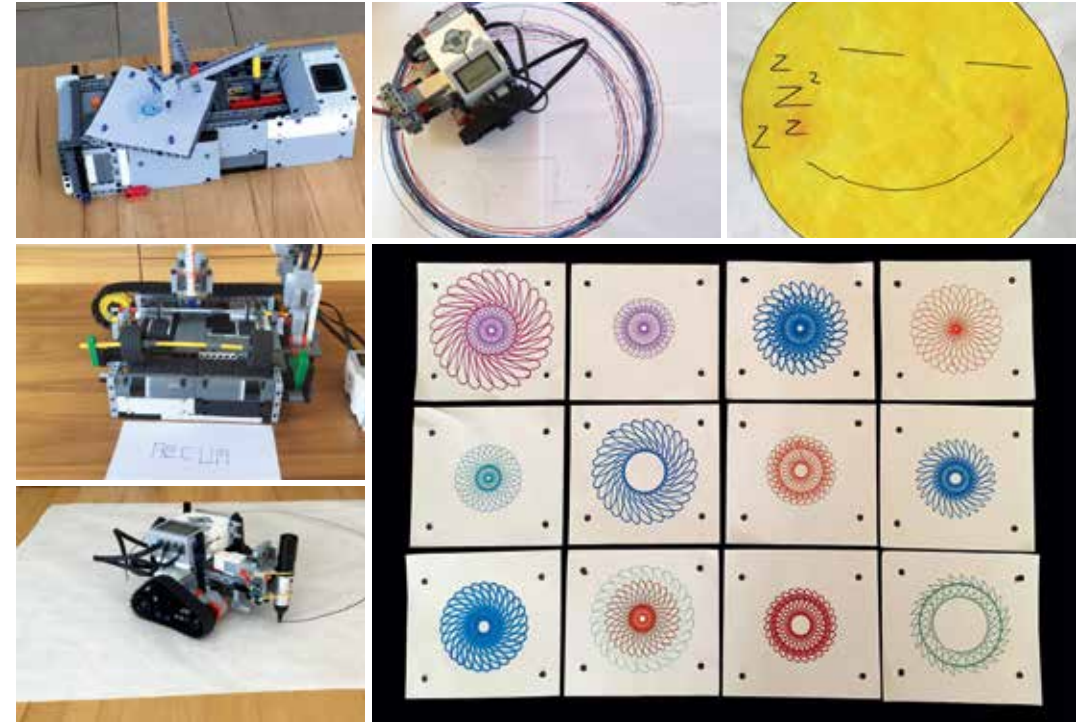
Annalena Wieser, Sarah Crnkic, Robin-Welat Kurt, Thomas Karl Sorger, Franz Jaritz, Christoph Wallner, Victoria Wiedner, Luis Strassegger, Maximilian Rauchegger, Dominik Wieser, Vanessa Ferstl, Georg Auer, and Aisha Lang are all students at MS Frohnleiten and are interested in filmmaking and video editing. In the third grade they have the opportunity to take video editing as an elective subject. This year's group was extremely motivated. While one student found his passion in acting, another demonstrated her skill in video editing or filming individual scenes. The group worked very well together and were always willing to give up their own free time to work on the project.

u19—create your world  
u14 Award of Distinction

Young Creatives

# Druzeiplo

Benjamin Hölzl



I had the idea of combining art and technology in a LEGO print shop. In my print shop, we plot, print, draw, paint, cut, and holepunch. For the smiley, I used the robot from LEGO Mindstorms and wrote a program that draws a smiley. I had to firmly glue the paper and try many times until I could produce a smiley that was satisfactory. For the plotter, I used LEGO Mindstorms as well and wrote a program that writes AEC U19 and LEGO. Three motors were used for this.

For the drafting machine, I installed components from LEGO Technic that, depending on how the three rods are connected, draw constantly varying flower patterns. There are endless possibilities! The saw cuts the A4 sheets to the correct size so that they fit into the drafting machine. The holepunch makes the holes in precisely the right place so they can be fastened in the drafting machine. The stamping machine was built with LEGO Technic.

<https://u.aec.at/5B0DFE67>



Benjamin Hölzl (\*2010) is from Kaltenberg/Freistadt. He is currently in the sixth grade at the secondary school in Unterweißenbach. Benjamin enjoys sports and plays drums. He especially likes playing soccer, skiing, biking, and volleyball. He spends the rest of his free time nearly exclusively with his LEGO components in order to realize his ideas. The 12-year-old would like to become an engineer and develop a lot of machines and tools.

u19—create your world  
u12 Prize

Young Creatives

# SNELL – Die Wahrheit kommt heraus

Gloria Riedmann, Viktor Flatz, and Matteo Di Cesare



In the short and keen-witted mockumentary *SNELL – Die Wahrheit kommt heraus* (SNELL—The truth comes out), Gloria, Viktor, and Matteo show the consequences of the uncontrolled and short-sighted exploitation of natural resources. The three main characters—Peppa Pig, Spiderman, and the Astronaut—are roommates and passionate skiers. But they unfortunately discover that recreational opportunities and our natural surroundings should not be taken for granted. When they lose their favorite ski area to the SNELL oil company, they embark on a search for alternatives. Some places, however, have no alternatives. Together with the commentaries of Professor Pig, the recordings of

the events convey strategies and approaches for dealing with the challenges of the 21st century. The three artists and producers worked on the story and the realization. For the production of the stop-motion stills, classic printing methods were used, but also simple drawings and live actors. The project reflects the current thoughts and concerns of the artists.

Workshop leaders: Alexander Kaiser, Rachel Katstaller – Bildung Druckwerkstatt

<https://u.aec.at/34479B5E>



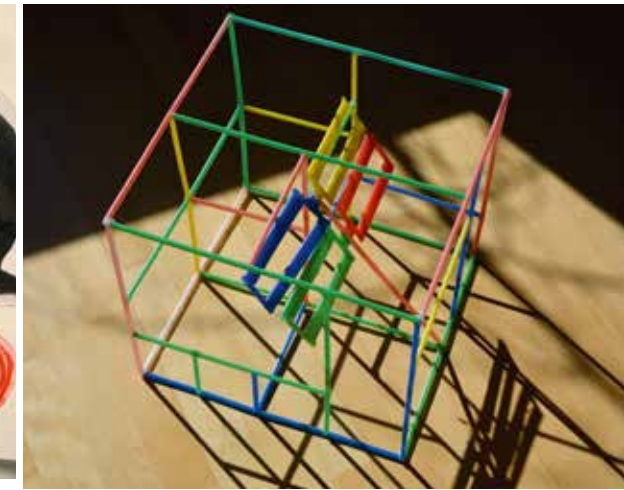
Gloria Riedmann (\*2011), Viktor Flatz (\*2010), and Matteo Di Cesare (\*2006) attend the vocational school Kunst- und Architekturschule Bildung in Innsbruck. They have worked together in the printing workshop since 2021. Carrying out the project in the group involved many fresh ideas, new approaches, strong interests combined with a great deal of fun. Through an interesting mixture of characters, familiar basic ideas are frequently rethought and realized in a completely different way.

u19–create your world  
u12 Award of Distinction

Young Creatives

# ISS MIR RIM SSI

Dominik Pichler, Immanuel Fröhlich, Lennard Fellner



The current war between Russia and Ukraine, and the helplessness of the EU, NATO and, indeed, of all citizens of the world in the face of this act of aggression have prompted these three boys to make this situation the focal point of their entry for this year's u19 competition. As the subject of outer space is also of great interest for the group, they came up with an idea: Putin should be stuffed into a rocket and shipped off into space, never to be seen again. But the moral principle of adults that violence should not be met with violence is very difficult for the kids to understand. Simple solutions would be just that: simple, but what would the consequences of these simple solutions be? In any case, we are not allowed to blast Putin out into space—this would have to be left up to people in his own country. Putin's compatriots would have to confuse him to the point that he—like in the tale of the emperor with no clothes—is blinded by jubilation and praise from his own people and would board the rocket in order

to travel out into outer space, which in his mind belongs to him. And just as the Pied Piper of Hamelin led the rats astray, the Russian people lure Putin to embark on this space journey by incessantly praising him and showering him with flattery. With fanfares and timpani, Putin is ushered across a white carpet into the Mir space station. The military staff from the Kremlin is his escort; bells ring and volume of the timpani is ramped up to 650 decibels. Putin is satisfied. Like the Pied Piper, he marches into the Mir space station, accompanied by tanks, rockets, and sirens, and like in the story of the emperor's new clothes, he only has eyes for his escort and the splendor of the Mir. Putin is inside! 9, 8, 7, 6, 5, 4, 3, 2, 1, and take-off! The war is over!

<https://u.aec.at/B526CFEF>



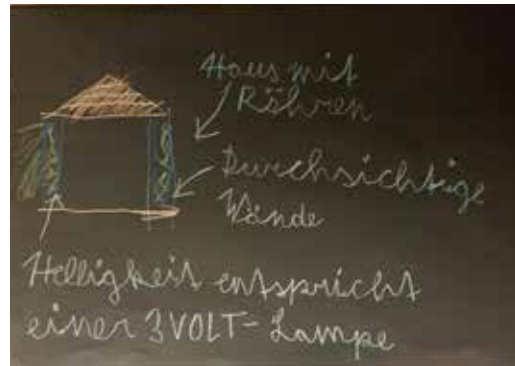
Dominik Pichler (\*2009) is interested in cars and the International Space Station (ISS). He spends a lot of time jumping on the trampoline and enjoys setting indoor records. Lennard Fellner (\*2010) enjoys exercising in his free time, is an avid guitar player, and loves cats. Immanuel Fröhlich (\*2010) spends every free minute reading Disney comics and enjoys reading about historical events and science. All three boys attend the first grade of the Integrative Lernwerkstatt Brigittenau.

u19–create your world  
u12 Honorary Mention

Young Creatives

# Leuchtende Zukunft

Emilio Deutsch



I developed the project *Leuchtende Zukunft* (Bright Future) primarily because I wanted to help reduce energy consumption. This protects the environment. The houses themselves emit light, so a great deal of energy for lamps and heating can be saved. High energy-consuming lamps become redundant and lamps and lanterns that give off dim light can be replaced by huge glow sticks. These sticks, which contain mycelium, are placed in the transparent walls of houses in order to make them luminous. This is how it works: There are 71 kinds of fungi that give off a dim light, among them the *Armillaria mellea*, or honey mushroom. The mycelium of this European fungus glows at night. Placed in a tube, this could replace lamps—at least dim ones.



<https://u.aec.at/3DCB737B>



**Emilio Deutsch** (\*2012) is in the fourth grade at LIBO Montessori Schule in Brunn am Gebirge. He is interested in motorcycle racing and Formula 1 and enjoys watching and playing *Quizmaster* on the app. He loves animals, nature, and likes jumping on his trampoline. In his free time, he conducts experiments with various materials and absorbs knowledge about all sorts of subjects related to nature and science. He is very concerned with the environment and is constantly inventing new things to protect it and keep it clean for the future.

u19—create your world  
u10 Prize

Young Creatives

# Save the monkeys, save the rainforest

Sarah Hölzl



One constantly hears about the deforestation of the rain forest. But no one thinks about the suffering of animals that this causes. With this stop-motion film, I want to make clear to others that through the deforestation of the rain forest, many animals suffer or die because they lose their habitat. Since the animals cannot help themselves, we humans have to do it. Monkeys, gorillas, cheetahs, and lemurs are particularly threatened by the loss of their habitat. They are depicted in the film by bits of adhesive film on handmade paper. The main film portrays a family of monkeys that has lost its mother. After the deforestation of the

woods, the father and his child search for a new habitat, which is not easy because the entire forest has been cleared.

This three-minute stop-motion film consists of 952 pictures and was made on my iPad with iMovie. Using handmade paper made of leaves and paper scraps, pressed plants, and flowers I painted myself using elderberry juice, I designed the jungle for the animal species threatened with extinction. I created the animals from adhesive film, a waste product from a sign company.



<https://u.aec.at/2EC00E12>



**Sarah Hölzl** (\*2011) is very athletic, creative, musical, and loves animals. She likes dancing, plays clarinet and guitar, and enjoys floor gymnastics and skiing. In addition to chemistry, Sarah is interested in plants and animals in the wild. In September she will enter the first grade in the secondary school in Unterweißenbach. The ten-year-old would like to become a doctor.

u19—create your world  
u10 Award of Distinction

Young Creatives

# Bärlauch

Levi Pittermann, Arthur Fortin, Thabo Juric-Grubner, Jakob Daburon, Kaan Colak



The *Bärlauch* (wild garlic) project is a lightbox “teaching film” on the subject of landscape pictures.

In keeping with the theme of this year’s Sprachspiel. Biennale West’s Festival für Literatur und Sprache—“landschaften:proëme,” experimental films in which image and sound (speech) were treated equally were viewed together, and in the woods, audio recordings were made and material was collected to make pictures. In the following days, we worked in an associative manner to the audio recordings (making stamps, painting, and animating the collected material on the lightbox).

## Lightbox animation

This film group had a good knowledge of the area and began very purposefully gathering wild garlic. In the meantime, the children discussed very animatedly among themselves the various uses of wild garlic in the kitchen. Favorite recipes were disclosed, but the dangers of confusing plants with each other were also pointed out in a very memorable fashion. A turtle that in real life “ran away” from a filmmaker during the winter was able to find its place again in the film.

Karoline Riha (MuKaTo) MuKaTo project with students of the multi-age integration class at the VS Zennerstraße (age: 6 to 10) in cooperation with Sprachspiel. Biennale West (theme: landschaften: proëme).

<https://u.aec.at/A6D29992>



Thabo Juric-Grubner (\*2014), Levi Pittermann (\*2012), Arthur Fortin (\*2012), Jakob Daburon (\*2012), and Kaan Colak (\*2011) are all in the iMSK C-Klasse at the OVS Zennerstraße 1, Vienna 14. These five share an astounding wealth of creativity and talent for storytelling. The result is a film about wild garlic that is delectable in every sense of the word, one that is spiced with very personal commentary—simply mashalla!

u19—create your world  
u10 Honorary Mention

Young Creatives

# Ferngesteuerter Roboter

Leopold Kastler



The remote-controlled robot was assembled with LEGO Technic bricks. To power its legs, it has two motors that can be controlled independently of each other by remote control. This enables it to walk not only forward and backward but also in curves to the left and right. Its four legs are attached to each other in pairs to make it more stable. In addition, with every step it takes, the robot briefly comes to rest on its stomach. Through

this special form of movement, the robot is stable in every position and cannot fall over. A loading flap, which can be moved up and down manually by means of a linear drive, is located on the back of the robot. In this way, it is possible to drop down a small motorcycle with which the robot’s driver can ride across terrain that the robot cannot navigate (for example in a forest).

<https://u.aec.at/6FDF58EB>



Leopold Kastler (\*2014) is eight years old and attends elementary school in Walding. He is interested in technology and likes building his inventions out of LEGO bricks.

u19—create your world  
u10 Honorary Mention

Young Creatives

# KLASSE! LERNEN. Wir sind digital.

The education prize of BMBWF,  
OeAD, and Ars Electronica



<https://u.aec.at/B6112E95>

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 BMBWF (Austrian Federal Ministry of Education, Science and Research), OeAD (Austria's Agency for Education and Internationalization), 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. A total of 101 best-practice projects from all over Austria were submitted between November 17, 2021 and March 14, 2022 as part of the first open call. A jury 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.

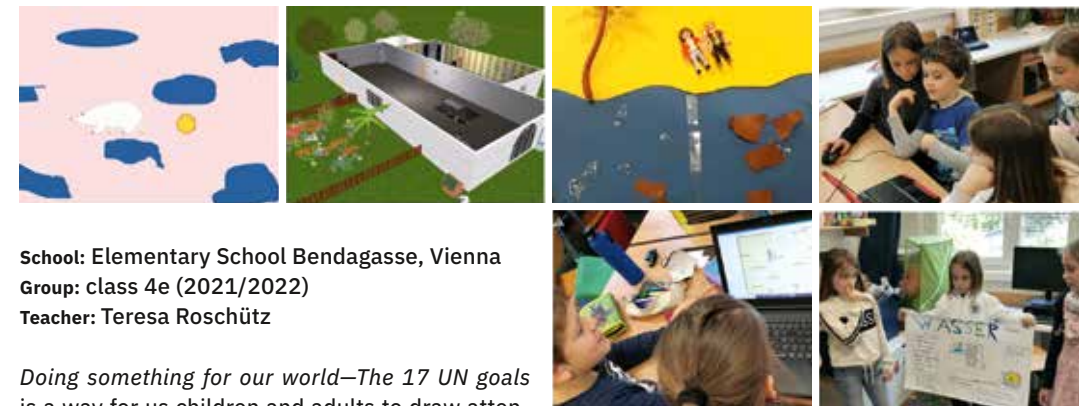
Digital education is an ongoing process that empowers young people to actively shape their lives and learning in a digitized world and prepares them in the best possible way for their future working life. Advancing digitization creates more and more opportunities for instructional design.

Smartphones, tablets, and laptops facilitate shared collaborative learning for individual students that is very flexible regarding *when* and *where* it takes place. Learners are optimally networked through flexible and structured communication, through the sharing of knowledge, opinions and questions, or through options for quick feedback. It is also easier to offer individualization and differentiation, which help students to consolidate the skills they have acquired. By using digital tools, lessons can become more creative and adapt more easily to the needs of young people today. The digital school thus promotes new ways of teaching.

The Education Award is aimed at teachers and pupils who see the shift towards digitized teaching and learning as a challenge for the development of new ideas and projects. The aim is to promote the creative, innovative, and sustainable use of digital tools in the classroom. School education in the future poses many new challenges for both teachers and students, but there is also enormous potential for development. One of the key competition criteria is the sustainable anchoring and multi-layered use of new technologies on a daily basis in school. The competition is also intended to encourage critical questioning: Which structures can and should be usefully developed with digital tools? Which kinds of teaching and learning require direct (analog) social interaction? Digital learning not only means mastering digital tools, but also finding and implementing as many synergies and complements as possible between analog and digital teaching.

## Main Prize

### Doing something for our world—The 17 UN goals



School: Elementary School Bendagasse, Vienna  
Group: class 4e (2021/2022)  
Teacher: Teresa Roschütz

*Doing something for our world—The 17 UN goals* is a way for us children and adults to draw attention to the problems in our world. Although many kids know that they enjoy a good life, things that are always readily available (mobile phones, toys, food, housing...) are still taken for granted. Through our work with the 17 UN goals, we became aware of the degree to which children in other countries are negatively impacted by our consumer culture and throwaway society and by the climate change that results from this, and that many children have a poor quality of life due to violence, poverty, and gender inequality. At least in some small ways, we

have already succeeded in bringing about changes: we were able to take this knowledge home with us and convince our parents to do more with regard to separating trash, saving electricity, and using rainwater for irrigation.

But it shouldn't stop at that. With our projects, we want to also raise the awareness of other children about the problems in the world and about the UN goals, because: "WE ARE MAKING A CONTRIBUTION TO OUR WORLD!"



# AWARDS OF DISTINCTION

## Schnittstelle:Werken

**School:** Secondary School Schwechat  
**Group:** Class 3AR (2021/22)  
**Students:** Timna K., Laura L., Lisa Marie P., Carola P., Sophie P., Lisa P., Nicolai R., Hannah R., Linda R., Katarina T., Barbara T., Mila T., Marie W., Julia W., Zoe W.  
**Teacher:** Matthias Schoiswohl-Szwajor  
**Subject:** Handicrafts, interdisciplinary  
**Thanks to:** Nicole Maurovich, Christian Dobrovits, Jessica Rauscher, Manfred Lohr



The *Schnittstelle:Werken* (Intersection:Handicrafts) is aimed at making connections and contexts clear to students and promoting the transformation from knowledge to know-how through practical work. Interdisciplinary and action-oriented instruction should thus provide students with the foundation for being able to recognize content- and method-related connections.

Handicrafts as a school subject is situated at the intersection of science, technology, humanities, and art. Thus, abstract content matter can be handled in a variety of ways, areas of experimentation can be explored, and the foundation can be laid for the future careers of young inventors. In this regard, the long-term implementation of digital manufacturing technologies in handicrafts instruction and the creation of digital and analog interfaces are crucial.

## Yes, We Can!

**School:** School for students with special educational needs, Waidhofen an der Ybbs  
**Group:** Class ASO1 (2021/22)  
**Teachers:** Gregor Herber, Sarah Lehner, and Pascal Gruber



In an initial experiment, we wanted to test how well the world is interconnected. The goal was to reach people who due to their celebrity status seemed to be beyond reach. We collected names of famous people, contact information was gathered from the internet, and we then began sending emails. We asked them to respond to us—ideally in the form of a video message—so we could include

them in our project video. In the next step of our project, statements were distributed in a publicity-minded manner. In this regard, we initially considered what statements could help us meet our goal, and furthermore, how we could present them in a way that they would be noticed by the public. The pictures were projected via a beamer onto walls in the downtown area.

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

# HONORARY MENTIONS



**“Code together” – from the virtual world into practice**  
**School:** Music and Information Technology Middle School (MIM) Wendstattgasse, Vienna  
**Group:** Coding Team MIM  
**Teachers:** Hans-Jürgen Gazos, Maximilian Wöß, and Heigl Markus  
**Subject:** Computer Science/Programming



**Cookie-Cutter**  
**School:** Elementary School Mönchhof  
**Group:** 4th grade (2021/22)  
**Students:** Therese, Finn, Laura, Lukas, Anna, Barbara, Leonie, Lennon Klara, Lena, Lisa, Marvin Tobias, Fabienne, Luna, Lilly, Mark  
**Teachers:** Eva Horvath and Claudia Veigl  
**Subject:** Computer Science (cross-curricular with German, Math, and Arts and Crafts).



**Digiday**  
**School:** Middle School Grundäckergasse 14, Vienna  
**Group:** Classes 1a, 1b, 1c, 2a, 2b, and 2c (2021/22)  
**Teacher:** Anja Freiler  
**Subject:** IT basics



**Media Education Lab – eTutors**  
**School:** Secondary School Franziskaner Hall  
**Group:** Students of the 1st, 2nd, and 5th classes, elective subject (2021/22)  
**Teacher:** Clemens Danzl



**Digital Learning – when homeschooling goes wrong**  
**School:** Secondary School Kollegium Aloisianum, Linz  
**Group:** Class 3a (2021/22)  
**Students:** Nelly A., Philipp B., Aletta D., Maria G., Mahmud H., Marie H., Eszter L., Franziska L., Adrian L., Marie M., Marcus M., Clara M., Lara N., Nikolas O., Fabian O., Danijel P., Moritz R., Oscar S., Arthur S., Charlotte T., Maximilian W., Martin W.  
**Teacher:** Katrin Eckerstorfer  
**Subject:** English



**Operate your own game console**  
**School:** Middle School Schwechat-Frauenfeld  
**Group:** Students of the 3rd and 4th classes, elective subject (2021/22)  
**Students:** Fabio N., Leonardo P., Lucas Z., Daniel L., Kenan C., Thomas K. Sara S., Saphira K., Alessandro W., Simona S., Christoph P.  
**Teacher:** Stefan Brunner  
**Subject:** Physics and Informatics



**Forest in Change – International ESA-Action Group Climate Detectives**  
**School:** Secondary School Waidhofen an der Thaya  
**Group:** Class 4a (2020/21)  
**Students:** Tobias A., Lara A., Lisa B., Laura D., Lorena D., Flora D., Mona D., Yvonne E., Omama E., Mirjam E., Leonie H., Eduard K., Emilia K., Diana L., Sophie L., Nico N., Sara P., Carina P., Valentina P., Rico Mario R., Marie-Louise S., Leonhard W., Julia W., Ines Sophie W., Achillea Z.  
**Teacher:** Anita Pöckl  
**Subject:** Geography and Economics, subject-integrated digital basic education

# Prix Ars Electronica 2022—Jury



## Computer Animation

Isabelle Arvers, Peter Burr, Daito Manabe, Rebecca Merlic, Helen Starr, and Ars Electronica Team

## Digital Communities

Rashmi Dhanwani, Thomas Gegenhuber, Sarah Kriesche, Farah Salka, Simon Weckert, and Ars Electronica Team

## Interactive Art +

Jussi Ängeslevä, DooEun Choi, Rashin Fahandej, José-Carlos Mariátegui, Irini Papadimitriou, and Ars Electronica Team

## u19—create your world

Sirikit Amann, Reni Hofmüller, Martin Hollinetz, Conny Lee, Martin Retschitzegger, and Ars Electronica Team

## Computer Animation



**Isabelle Arvers (FR)** is a French artist and curator whose research focuses on the interaction between art and video games. For the past twenty years, she has been investigating the artistic, ethical,

and critical implications of digital gaming. Her work explores the creative potential of hacking games through machinima and games as a new medium for artists. In 2019, she embarked on an Art and Games World Tour in the Global South to engage with a decolonial geography of art and games.



**Peter Burr (US)** is an artist from Brooklyn, NY. His practice often engages with tools of the video game industry in the form of immersive cinematic artworks.

These pieces have been presented internationally by various institutions including Documenta 14, Athens; MoMA PS1, New York; and The Barbican Centre, London. Previously Burr worked under the alias Hooliganship and founded the video label Cartune Xprez through which he produced hundreds of live multimedia exhibitions and touring programs showcasing a multi-generational group of artists at the forefront of experimental animation. His practice has been recognized through grants and awards including a Guggenheim Fellowship, a Creative Capital Grant, and a Sundance New Frontier Fellowship.



**Daito Manabe (JP)** is a Tokyo-based artist, interaction designer, programmer, and DJ who launched Rhizomatiks in 2006. Since 2015, he has served alongside Motoi Ishibashi as co-director of

Rhizomatiks Research, the firm's division dedicated to exploring new possibilities in the realms of technical and artistic expression with a focus on R&D-intensive projects. Manabe is a specially-appointed professor at Keio University SFC. His work in design, art, and entertainment takes a new approach to everyday materials and phenomenon. However, his end goal is not simply rich, high-definition realism by recognizing and recombining these familiar elemental building blocks. Rather, his practice is informed by careful observation to discover and elucidate the essential potentialities inherent to the human body, data, programming, computers, and other phenomena, thus probing the interrelationships and boundaries delineating the analog and the digital, the real and the virtual.



**Rebecca Merlic (HR/AT)** 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 artistic 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 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.



**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. Helen sits on the board of QUAD, Derby and was on the 2021 Computer Animation Jury for Ars Electronica in Linz. She was on the team that was awarded the Wolfson Economic Prize 2021 for answering the question: "How would you design new hospitals to radically improve patient experiences, clinical outcomes, staff wellbeing, and integration with wider health and social care?"

## u19 – create your world



**Sirikit Amann (AT)** has been a juror of the u19—create your world category for youngsters under 19 years of age in Austria since its very inception. She was director of cultural education at KulturKontakt

Austria. Since 2020 she is the head of the Education and Society sector with a focus on digital education at the OeAD—the Austrian Agency for Education and Internationalization. She previously served as an expert advisor on artistic affairs at the Austrian Federal Ministry of Education, Art and Culture and in the Office of the former Federal Chancellery Minister.



**Reni Hofmüller (AT)** is an artist, musician, composer, performer, organizer, and an activist in the fields of (new) media, free software, open hardware, technology, and politics in general,

engaged in the development of contemporary art. She is a founding member of esc media art laboratory in 1993, an experimental art venue in Graz that focuses on art in technological context, a founding member of Radio Helsinki, a noncommercial community radio station since 1996, a founding member of murat, a strategic platform for internet experimentation and usage in 1998, the last president of Eva & Co, a feminist artists group, and a member of the Institute for Media Archeology. She is interested in art as a possibility to create space for exchange, that can form the basis for reflection about society. Art can create a space in which to encounter the other, and this can lead to a deeper and better understanding of our environment.



**Martin Hollinetz (AT)** is an innovation expert and a pioneer of regional development in Austria. Well-connected as a visionary of a new way of working and creator of a new network culture and

participatory corporate structures. He is both idea bearer and developer of the location concept Otelo, Open Technology Laboratory (37 locations nationally and internationally) and the Otelo e-Gen cooperative and a specialist in the mediation of new business concepts and digital education formats (future space, ket, etc.).



**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.



**Martin Retschitzegger (AT)** is Creative Director and Creative Technologist at the Berlin studio m box for spatial media staging and interactive installations. He was and is involved in numerous national and international projects

as a creative and technical lead, such as the Saudi Arabian Pavilion at Expo 2010 in Shanghai or the Zwinger Experience in Dresden 2021. With over 25 years of experience in design and production of digital media in the film and installation sector, his main focus is on immersive productions in connection with innovative technical solutions.

## Interactive Art +



Professor **Jussi Ängeslevä** (FI) is a designer, an artist, and an educator. Based at the Berlin University of the Arts but lecturing around the planet, he is actively involved in the ever-expanding field of new

media, working with digital materiality and interaction design. In parallel to the academic work, he is the creative director of ART+COM Studios, where his work in public art commissions, exhibitions, and installations are consistently yielding international recognition. His independent works have been awarded by institutions such as Royal Society of Arts, NESTA, BAFTA, Art Directors Club of Europe, D&AD, Ars Electronica, and ZKM. Over the years he has served in numerous international art and design juries, academic chairs and boards. Throughout his career his focus has always been intentionally in between fields: combining understanding of visual, physical, and interaction design with algorithmic, electronic, and mechatronic knowledge to create innovative and elegant experiences. His design ethos is leveraging hardware, software, physical and visual design in the search for elegance in spatial communication, where the meaning is inseparable from the medium communicating it.



**DooEun Choi** (KR) is currently serving as art director of Hyundai Motor. Choi has recently worked as co-curator of the 5th International Digital Art Biennial in Montreal and curator for the Pioneer Tower Iconic Public Art Project in Fort

Worth. Since 2000, she has curated numerous international exhibitions of art and technology in many cities in Asia, Europe, America, and virtual spaces. Choi treats the space as a laboratory for experimenting with the types of experience and aesthetics that can emerge from combining scientific knowledge, artistic practices, and historical narratives. Choi's projects include Aurora 2018 in Dallas; Da Vinci Creative 2015 & 2017 at Seoul Art Space Geumcheon of Seoul Foundation for Arts and Culture; Quayola: Asymmetric Archaeology, at Paradise Art Space, HOW Art Museum; Han Youngsoo: Photographs of Seoul 1956–63, at ICP MANA; Why Future Still Needs Us: AI and Humanity, at Art Center Nabi, QUT Art Museum; Mediacity Seoul 2012 Biennale, at Seoul Museum of Art; and ZERO1 Biennial 2012, at Zero1 Garage.



**Rashin Fahandej** (US) is an immersive storyteller and cultural activist. Her projects center on marginalized voices and the role of media, technology, and public collaboration in generating

systemic change. Fahandej is the recipient of Prix Ars Electronica Award of Distinction and Foster Prize at the Institute of Contemporary Art, Boston. She has served as a Boston Mayor's Office Artist-In-Residence and lead artist at American Arts Incubator Austria at ZERO1 and the U.S. Department of State's Bureau of Educational and Cultural Affairs. Fahandej is the founder of *A Father's Lullaby*. A proponent of "Art as Ecosystem," she defines her projects as "Poetic Cyber Movement for Social Justice," where art mobilizes a plethora of voices by creating connections between public places and virtual spaces. Fahandej is currently a research fellow at MIT Open Documentary Lab and an assistant professor of emerging and interactive media at Emerson College.



**José-Carlos Mariátegui** (PE/UK) is a writer, curator, scholar, and entrepreneur on culture and technology. He studied Biology and Applied Mathematics and holds both Masters and Doctoral degrees

in Information Systems and Innovation from the London School of Economics and Political Science—LSE (London). Dr. Mariátegui is the founder of Alta Tecnología Andina—ATA (Lima, Peru), an organization working at the intersection of art, science, technology, and society in Latin America. He is a lecturer at LUISS (Rome), a Board Member of Future Everything (UK) and has published in journals such as *AI & Society*, *Third Text*, *The Information Society*, *Telos* and *Leonardo*. His multidisciplinary research embraces media archeology, digitization, archives, and the impact of technology in memory institutions. He has curated internationally for more than two decades. One of his latest exhibitions, *Quántica / Broken Symmetries* (co-curated with Monica Bello), explores transdisciplinary artistic practice in interaction with scientists at CERN. He recently co-edited a special issue for *AI & Society* on Cybernetics in Latin America.



**Irimi Papadimitriou** (GR/UK) is a curator and cultural manager, whose practice draws on interdisciplinary and critical discourse to explore the impact of technology in society and culture, and the role of

art in helping us engage with contemporary issues. Currently Creative Director at FutureEverything, an innovation lab and arts organization in Manchester, she was previously Digital Programmes Manager at the V&A, and Head of New Media Arts Development at Watermans. Her most recent exhibition, *YOU and AI: Through the Algorithmic Lens*, was commissioned by Onassi Stegi and displayed outdoors in a public park in Athens in summer 2021. Irimi is a co-founder of Maker Assembly, a critical gathering about maker culture, an Industry Advisory Group member for School of Digital Arts at Manchester Metropolitan University, and an Advisory Board member for ONX Studio, a collaboration between Onassis USA and New Museum's cultural incubator NEW INC. She has been a recipient of curatorial research programs including MOBIUS (Finnish Institute), Art Fund, Mondriaan Fonds, and British Council.

## Digital Communities



**Rashmi Dhanwani** (ID) leads the Art X Company, a strategic consultancy for the cultural sector focused on strategy, audience development, and sector research. Prior to founding Art X, Rashmi has worked with NCPA Mumbai, Breakthrough in Delhi, the newspaper *Daily News and Analysis* (DNA); Kalaghoda Arts Festival, and The Goa Project. She holds a Masters in Cultural and Creative Industries from King's College London. She has also been a recipient of the ARThink South Asia Fellowship (2011-12), a participant fellow at The Academy—a program of Carnegie Hall, The Juilliard School, and the Weill Music Institute, a scholarship grantee of the JN Tata Trust and Charles Wallace India Trust, and a 2017 Global Fellow of the International Society for Performing Arts (ISPA), New York. Rashmi also founded Arts Culture Resources India, a network and platform for cultural professionals in India and South Asia. In 2021, the Art X Company was awarded a grant by the British Council to design and develop festivalsfromindia.com, a portal showcasing all arts and culture festivals in India and a platform for festival professionals to learn, network, and upskill themselves. Rashmi is the cofounder of this portal.



**Professor Thomas Gegenhuber** (AT) is the head of the Sustainable Transformation Lab at the Linz Institute of Technology, Johannes Kepler University Linz and Visiting Professor for Digital Transformation at Leuphana University Lüneburg. When we think about the various grand challenges our societies face, communities and crowds are social structures worthy of our attention. Consequently, Thomas investigates in his research the interplay of these social structures with digital technologies and new organizational forms such as platforms.



**Sarah Kriesche** (AT) works as a journalist for the Austrian public radio station “Ö1,” covering the progress of IT in industry, economy, research, and politics. Some stations of her professional career include the ORF radio program “Nachbar in Not” (Neighbour in Need), which reported in six languages (on short and medium wave) current events in Southeastern Europe in 1999. For her radio series “Vielfalt in Wien” (Diversity in Vienna) she received

the recognition award “Prälat Leopold Ungar Anerkennungspreis.” Her feature “Zeitreise Überwachung” about the history of surveillance in Austria won the 2017 Hamburg Surveillance Studies Prize. Nowadays, working in the science department of Ö1, her focus is on technical innovations and their impact on society.



**Farah Salka** (LB) is a Beirut-based Lebanese-Syrian feminist organizer. She graduated from the American University of Beirut in 2006 with an undergrad in Public Administration and Political Science. She then received her Masters in Human Rights Law from the University of Malta in 2007. Farah is the founder and Executive Director of the Anti-Racism Movement (ARM) and the Migrant Community Center(s). She works on organizing with migrant communities, asylum seekers, and particularly migrant women and migrant domestic workers. Her heart and mind is in organizing around issues of racism, xenophobia, the kafala system, migrant justice, and labor justice. The MCC(s) which ARM runs provide space, support, and resources to sustain MDW-community networks and support migrant workers, MDW activists; MDW-led initiatives; mobilizing collaboration and solidarity between local activists and migrant domestic workers against rampant racist abuse and exploitation in Lebanon. Farah sits on the Advisory Board of The A-Project, a Lebanon-based feminist group working on gender and sexuality via an affirmative and sex-positive approach. The A project runs a sexuality hotline providing information on sexual and reproductive health, abortion, HIV, contraceptive choices, sexual orientations, gender identities, violence, safety and pleasure, amongst other topics.



**Simon Weckert** (DE) likes to share knowledge on a wide range of fields from generative design to physical computing. His focus is the digital world—including everything related to code and electronics under the reflection on current social aspects, ranging from technology oriented examinations to the discussion of current social issues. The outcomes are technological systems, installations, and hybrid objects that strive to make complicated issues accessible.

Jury  
Prix Ars Electronica 2022

## Digital Communities Advisory Board 2022

**Irene Agrivina** (ID) is an open systems advocate, technologist, artist and the founder of HONF a center of arts, science and technology based in Indonesia.

**Harmeet Chagger-Khan** (UK) is Creative Director of Surfing Light Beams, producing immersive experiences and playable adventures that create positive behavior change.

**Rashin Fahandej** (US)'s artistic initiatives are experimental laboratories for collective radical imaginations of our social systems, centering on counter-narratives of care and co-creation.

**Cesar Jung-Harada** (FR-JP) is a designer, director of MakerBay, Scoutbots, and senior lecturer at the University of Hong Kong. He was awarded the 2009 Ars Electronica Golden Nica Award [NEXT IDEA].

**Jennifer Katanyoutanant** (TH/US) works with interactive mediums like VR and works on installations that co-create systems of sharing and exchange.

**Gabriele Kepplinger** (AT) is a cultural worker and media activist based in Linz, Austria. From 1994–2004 she was a leading member of the Arts and Media collective Stadtwerkstatt and is co-founder and managing director of the community TV “DORFTV” in Linz.

**Adriana Knouf, PhD** (NL/US) works as an artist, writer, and xenologist.

**Bess Lee** (TW) is a writer and a civic hacker. Chief of Staff of g0v jothon (task force for g0v bi-monthly hackathon, infrathon, and Sch001) and Co-Chair of g0v Summit 2020.

**Lauren Lee McCarthy** (US) is an LA-based artist examining social relationships in the midst of surveillance, automation, and algorithmic living.

**Manuela Naveau** (AT) is an artist, researcher, former curator at Ars Electronica, and, since October 2020, university professor at the University of Art and Design Linz / Interface Cultures.

**Maren Richter** (AT) is an independent curator and researcher (territorial thinking, migration, climate activism and politics of memory), and founder of the Grammar of Urgencies collective.

**Robertina Šebjanič** (SI) is an internationally exhibited and awarded artist. Her art research focus is cultural, (bio)political, ecological realities of aquatic environments at the intersection of art, technology and science.

**Regina Sipos** (HU) is a PhD candidate, manages the Critical Making research project at the Technical University of Berlin, and is the director of Social-Digital Innovation.

**Eric Siu** (HK/JP) is a new media artist and creative director interested in device art, interactive art, kinetics, installation, video, and animation. In recent years, he has been putting his creative efforts on the pro-democracy movement in Hong Kong.

**Liselott Stenfeldt** (DK) is Director at Gehl. She develops innovative concepts and prototypes that incorporate citizen-centricity in order to make our cities more open, inclusive, and democratic.

**Lubi Thomas** (AU) is an experienced Australian based digital/media arts curator, with an extensive practice across exhibitions, projects, festivals, and events.

**Erandy Vergara** (MX) is a Montreal-based curator and scholar. Her main research interests include climate responsibility, decolonization, equity, internet cultures, and widespread bias in algorithms.

**Filip Visnjic** (UK) is an architect, curator, and an educator exploring disciplinary interstices and critical creative practice at the intersection of art, media, and technology. He is the founder of CreativeApplications. Net, editorial director at HOLO, and a lecturer and researcher at the University of Westminster.

**Junya Yamamine** (JP) is a curator and entrepreneur between culture and business. He has worked at several museums in Japan. His current project is *The World Began without the Human Race and It Will End without It* (National Taiwan Museum of Fine Arts).

**Dayang Yraola** (PH) is an Associate Professor and Curator of Fine Arts Gallery at the University of the Philippines. She is founder and lead curator of the art project series *Project Glocal* and *Composite Noises*.

**Mushon Zer-Aviv** (IL) sustains a love/hate relationship with data that informs his design work, art pieces, activism, research, lectures, workshops, and life in the city.

**Andreas Zingerle** (AT) is a media artist from Austria and director of mur.at and Kairus Art+Research with Linda Kronman.

**Fiona Zisch** (UK/AT) is an architect and cognitive scientist. Her research explores cognitive ecologies, intuition, and embodiment, and how neuroarchitecture can develop more radical and critical thinking. She lectures at the Bartlett School of Architecture and at the University of Innsbruck.

Prix Ars Electronica 2022  
Digital Communities Advisory Board

# STAR TS Prize '22

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

**S+T+ARTS**   
PRIZE '22

“Walter Gropius’ Bauhaus vision was of a ‘new unity between art and technology.’ S+T+ARTS brings this vision to the digital age: The arts drive human-compatible and ecologically-conscious digital technologies in the spirit of the new European Bauhaus.”

Roberto Viola  
Director General of DG CNECT (Directorate General of Communication, Networks, Content and Technology) at the European Commission



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 956603. This publication (communication) reflects the views only of the author, and the European Commission cannot be held responsible for any use which may be made of the information contained therein.

# 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.

## STARTS Prize ’22

**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 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, nine 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 (Computer Animation, Digital Communities, and Interactive Arts+).

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’22. Following extensive deliberations, the unanimous decision was taken to award *Antarctic Resolution* by Giulia Foscarelli / UNLESS with the STARTS Prize for Innovative Collaboration and *Holly+* by Holly Herndon / Herndon Dryhurst Studio with the STARTS Prize for Artistic Exploration.

*Antarctic Resolution* brings together more than 150 multidisciplinary Antarctic experts to build a broader understanding and awareness for establishing a marine sanctuary to safeguard biodiversity and ecosystem health and to provide resilience to climate change.

*Holly+* challenges notions about intellectual property and identity in the context of digitally created artistic content and thereby creates a decentralized economic model reacting to automated forms of creativity.

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 *CyberArts 2022* catalogue.

STARTS Prize ’22, a joint project by Ars Electronica, Bozar, Frankfurter Buchmesse, INOVA+, La French Tech Grande Provence, T6 Ecosystems, and Waag.



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 Without Meaning is Meaningless

Statement of the STARTS Prize'22 Jury  
(Francesca Bria, Andrés Colmenares, Lucía García,  
Alexander Mankowsky, Asako Tomura)

For this year's STARTS Prize, 1,499 submissions came from 96 countries, 860 of these were directly submitted to the STARTS Prize portal; in view of the rather difficult-to-describe relationship between "science, technology and the arts" as a stimulus for the industry, this alone is a tremendous success. The extent of the collaboration between the European Union and Ars Electronica is astounding. What is STARTS? What purpose does it serve? This is easiest to explain through a comparison with start-ups. Start-ups process technologies in a utilitarian manner: by creating business cases. In STARTS, on the other hand, technologies are utilized as media for meaning and sense: the result is poetic statements with a technological element. Both approaches to innovation have their validity, but at different points in the process. Innovation processes in the automotive industry, for example, work with a funnel model: all the ideas that come from somewhere are screened based on previously determined criteria; at the end of the funnel, they are translated into concrete product innovations that are actually to be developed. For this "somewhere" that spawns the ideas, so-called jam sessions with start-ups are held. Pitches are made that begin with making the world a better place (unsurpassable in this regard is the series *Silicon Valley*, HBO 2014), and then become lost in the weeds of technological details. If it is clear from the outset for what area solutions are to be found, this process is fairly likely to lead to success. The sense-or-nonsense question is not addressed.

It is a different matter if the search area cannot be so clearly defined. As soon as it becomes about designing desirable and viable futures, the cultural message becomes the focal point. It must be truly groundbreaking in order to be able to serve as a framework for the later introduction of specific steps in industrial research and development. And this is where the relevance of STARTS lies: in the connection of science and technology with cultural longings and fears, using the artwork as a medium. In this year's jury conference, we narrowed down

the 1,499 entries to 110 art projects. In keeping with the philosophy of STARTS, they were divided into two large categories: in one, the focus was on the artistic personality, in the other the transferability of the art project to other content in the sense of "best practice."

If one looks at the entries from 2016 to today, a shift to collaborative work is evident. This may be due to the fact that the civilization-driven warming of the planet is becoming an increasingly dominant topic. The inherent complexity of climate change simply demands the teamwork of artists with scientific and academic institutions, which is clearly evidenced by *Antarctic Resolution*, curated by Giulia Foscari/UNLESS.

An impressive proportion of the artistic community is active in this context: the open-source project *The Exploded View Beyond Building*, for example, shows how entire houses can be built from biologically based and industrially produced basic materials that are already available today. At the other end of the spectrum are the DIY projects inspired by the spirit of the prepper movement, such as *UITSLOOT*, by Gijs Schalkx. "Don't outsource your ethics," he writes. KompleX Kapharnaüm's *A Sun Architecture—The Party is in Full Swing* powers music concerts with solar energy. Ethical considerations motivate artist-designers to take action. They no longer want to wait for large-scale societal solutions.

The view of the biosphere, on the other hand, has an almost melancholic feeling. With *Inanimate Species*, Jonathan Ledgard and Alex Ritcher-Boix contrast the obliteration of all life with the creation of death. Civilization's increasing orientation toward "necrophilia"—as Erich Fromm called the opposite of "biophilia," the orientation toward life—is becoming oppressively apparent. In her *Plant Intelligence Plan*, Zhang Tianyi creates chemical-mechanical prostheses for plants in order to make visible their (necrophilous) degradation to purely crop plants.



In April 2022, an additional acceleration of greenhouse-gas emissions was recorded. It is no wonder, then, that some artists seek an avenue of escape in the romanticism of scientific magic. In *AdS/CFT 001*, Mikromedas translates the depictions of cosmic black holes into suggestively internalized image and sound forms.

The second noticeable cluster was digital-robotic. While at the beginning of STARTS in 2016, there were largely vague promises of “artificial intelligence,” today—six years later—the view of everything digital, including artificial intelligence, has become more pragmatic. Robots are introduced as avatars for real people, who can now participate in life despite their disabilities. The technology-related lack of communication skills that robotic constructions have are compensated for by humans. In 2013, the job of bartender was still regarded as a highly automatable. In a playful manner, Ory Yoshifuji, Ory Lab, OYAMATSU, and TASUKI turn the much-hailed use of robots as bartenders into an emancipatory human-machine symbiosis with *Avatar Robot Cafe DAWN ver.β*.

The reason why robots, whether physical or purely digital, become so bogged down in terms of communication when they are left to their own devices, is given by Elisa Giardina Papa in her project *Cleaning Emotional Data*. Click workers are compelled to classify pictures they are shown to a category of emotion, one every second. The mechanized results are correspondingly one-dimensional.

More promising, on the other hand, are digital creations in which the human element is not conserved as an ingredient but remains an animated point of departure. Holly Herndon succeeds in this in an especially playful manner. With her digital twin, *Holly+*, she has created a wonderful, confidence-bolstering example for a digital tool that expands human abilities. The prerequisite for this is free access to the necessary technologies and ample time—which Herndon had due to the pandemic.

The flip side of Big Data and AI with regard to a utilization of digital technologies as a weapon against people was illustrated most drastically by *Digital Violence: How the NSO Group Enables State Terror* by Forensic Architecture.

The discussions in the jury were very intense. Every submission was discussed extensively, as at some point a majority decision had to be made.

This was made quite difficult by the tremendous submissions.

In the spirit of STARTS as outlined at the beginning, the artists convey strong messages:

- The “cultural longing” to finally DO SOMETHING about the climate crisis is expressed in manifold ways. Industrial innovation should thus be geared toward the production of tools that are helpful to this end.
- Ethics are brought down to earth from the nebulous heights of declarations of intent. Applied ethics means offering products that are useable in the here and now.
- This applies not only to physical products but is equally a basis for digital innovations, whose downsides are now well known.

The playful approach to technology is a basic characteristic of humanity. It is crucial to understand this talent and take it into consideration in the development of products and services.

## STARTS Prize '22 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.

### Antarctic Resolution Giulia Foscari / UNLESS

Although the images from Antarctica have become somehow iconic for the looming planetary change, besides a few experts, most of us don't have any understanding of the very fragile ecosystem of Antarctica and its importance to the whole planet. How can we not just see the symptoms but understand the causations and consequences? This is the major challenge that the fascinating project *Antarctic Resolution*, initiated, curated and enabled by Giulia Foscari / UNLESS, is set to take on, and with this in mind it is no longer surprising that it is probably the largest and most diverse collaboration ever to win this award for innovative collaborations. Giulia Foscari herself is an excellent example for multi- and cross-disciplinary expertise: architect researcher, activist, founder, educator, working in and at the hotspots of globalization and col-

### STARTS Prize '22 Jury Statement

laborating with local communities as well as with many big shots in architecture and urban planning, she built not only a comprehensive knowledge and overview of the ongoing climate change but also wove an immense network of experts and gained broad reputation with her presentations in many high profile art exhibitions and events. One of the many characteristics and features often attributed to art is its ability to make the obvious also seeable, the understandable also comprehensible and this is one of the high qualities of *Antarctic Resolution*. It opens up new perspectives and insights by leveraging the means and powers of art as a research practice as well as a way to enable awareness and concern, participation and involvement. It is not only a remarkable evidence of the growing number of art projects that go beyond addressing the topic of climate change but engage in the activism that is necessary to tackle it. *Antarctic Resolution* is also an amazing collaborative achievement with over 150 experts collaboration and contributing. And last but not least it is an exciting, almost breathtaking art installation.

## STARTS Prize '22 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.

### Holly+ Holly Herndon, Mathew Dryhurst, Herndon Dryhurst Studio

One of the most important roles artists can play in 21st-century societies is to anticipate the risks, challenges, and opportunities for the many innovations that are emerging from the adoption and evolution of complex sociotechnical systems based on perplexing fields of study such as cryptography or artificial intelligence. Through extensive creative research, critical open experimentation, and innovative collaborations, Holly Herndon, Mathew Dryhurst, and the network of collaborators they weaved between Berlin, New York, and Barcelona, have been able to develop a unique hybrid project with *Holly+*, merging a new custom voice

instrument with a creative platform and a test of a decentralized and cooperative economic model that can have deep implications in changing the power dynamics of copyright and IP in the music industry, while raising questions of the interdependencies of a digital economy, digital sovereignty, and digital identity. By asking (and performing) a difficult, poetic, and potentially metaphorical question—“What does it mean to own a voice?”—this project gives us a brilliant example of how artists, governments, and citizens can use and play with methods such as machine learning to rethink our interrelationships with digital technologies, the societal potential and perils of automation, and the augmented value of communal ownership and distributed governance systems.

## STARTS Prize '22 Honorary Mentions

### A Sun Architecture— The Party is in Full Swing

Stéphane Bonnard, KompleX Kapharnaüm

The ongoing energy crisis is presenting a huge challenge to governments across Europe and opening the floor for important debates on our relationship with energy and the politics of energy sources, both as a society and as individual citizens. With *A Sun Architecture—The Party is in Full Swing*, the interdisciplinary team of KompleX Kapharnaüm presents an artistic proposition, built on an architectural kit that uses printed photovoltaic surfaces and flexible batteries to tap into a critical question in an experiential and immersive way: “If energy is limited, who will decide how to use it?” Bringing this high-level topic to a personal decision context, this project allows citizens to reduce the abstraction of this socioeconomic challenge and reflect on the tensions between individual and communal priorities. Through this solar-powered live performance supported by an eclectic mix of engineering, political, and architectural mindsets, they are not only advocating for energy autonomy but also moving one step away from technological solutionism, and also dealing in a playful way with the compounded politics of energy use, asking creatively what happens when a resource that is often perceived as endless and is taken for granted in many parts of the world is rationed.

### Technology Without Meaning is Meaningless

### **Ambient Weaving**

**Hosoo Co., Ltd., Yasuaki Kakehi Lab,  
The University of Tokyo, ZOZO NEXT, Inc.**

What does it mean to be a long-established master in the field of traditional crafts? It is a bold attitude to remain on the cutting edge over time and have a willingness to undergo drastic changes. It is whether a master can also be a “meister” in value creation, incorporating the advanced technology of the times, reinventing the value it provides, and showing the future. The overwhelming beauty that is created as a result of these efforts will be a source of its timeless popularity. Nishijin brocade has a history of 1,200 years and represents the pinnacle of Japanese silk weaving. Hosoo is a long-established Nishijin textile workshop in Kyoto, founded in 1688. Hosoo has teamed up with Yasuaki Kakehi’s laboratory at the University of Tokyo and ZOZO NEXT, a startup that applies cutting-edge technology to the fashion industry. The three parties have their own strengths: Hosoo was responsible for weaving technology, the pursuit of beauty, and historical examination of cloth, while Professor Kakehi’s team was responsible for interaction design and information technology, and ZOZO NEXT was in charge of material science and business feasibility studies. The result is fabrics that change in real time as if they were breathing, interwoven with their surroundings. The fabric changes gently in response to light, temperature, humidity, carbon dioxide, and other factors in the space, enabling people to wear a natural environment. There is no technological functionality to be seen; what there is, are magnificent fabrics that emanate a solemn aura. The collaboration of all three parties was essential and led to a level of perfection that no one had ever seen before. The future of traditional crafts, which will survive the next 100 years, was beautifully demonstrated.

### **Avatar Robot Cafe DAWN ver.β**

**Ory Yoshifuji, Ory Lab**

To have one’s own role in society and to be appreciated and relied upon by others, with or without a

disability: these are the reasons for one’s existence and the meaning of life that everyone desires. And everyone wishes to control their own life as much as possible until the very end. Ory Yoshifuji developed the avatar robot *OriHime* with the theme of “the end of loneliness” as the theme of his own life, and carefully repeated prototyping to meet the user’s motives. *OriHime* has brought a social body to people with disabilities and a place to operate a café that was not an algorithm-generated healing space, but a space that connected living people with each other. The café also employs 60 physically challenged people and is a social home for the avatar pilots, who are also co-developers of the avatar robot, where there is no distinction at all between healthy and physically challenged people. It is a place full of warmth where guests come to enjoy conversation with avatar and delicious food. The café is a place where people are constantly laughing, where *OriHime* pilots and visitors exchange more human-like banter than human beings, and where the joy of people is shared. The café was highly rated for its inclusive approach to solving social issues by creating a secure space and a community. We also have great expectations for its future aim toward a world where people can care for themselves in an era of accelerating super-aging society.

### **Cleaning Emotional Data**

**Elisa Giardina Papa**

Elisa Giardina Papa worked remotely for several North American “human-in-the-loop” companies that provide “clean” data sets to train AI algorithms to detect emotions. Among the tasks she performed was the taxonomization of emotions, the annotation of facial expressions, and the recording of her own image to animate three-dimensional characters. *Cleaning Emotional Data* documents these microtasks while simultaneously tracing a history of emotions that questions the methods and psychological theories underpinning facial expression mapping. The tech industry rarely opens up about their philosophical foundation of

“What is Human?” Their modeling of emotion and behavior stays opaque. Through three documentary film clips, Elisa gives us insight into the model from the bottom up. The AI model treats single nouns as sufficient to describe complex emotions such as joy or disgust. The process of applying nouns to emotional states is tellingly called “labeling.” The nouns are directly translated into cultures as different as Arab, Spanish, or Malaysian.

As labels, these nouns are then attached to pixelated portraits in a working process called “click work,” where somebody sitting in front of a screen has to decide as fast as humanly possible to click on a label, in this way attaching it to a never-ending flow of portraits. Time for introspection is scarce, since the pay is low. With such training, algorithmic bias is systematically built into any AI application. To reduce algorithmic bias, work has to start with the creation of meaningful models which should then be trained with quality data. For STARTS, Elisa’s work serves as a beacon to direct the development of a European AI, grounded in our naturally given diversity of cultures and languages.

### **Digital Violence: How the NSO Group Enables State Terror Forensic Architecture**

When most people think of weapons used in human rights violations and the conflict zones where they happen, the images that often come to mind are of tanks, bombs, missiles, or guns in locations far away from home. But as the research agency and investigative art collective Forensic Architecture has shown with this platform, contemporary societies are now threatened by an invisible, complex, and borderless kind of violence deeply tied to the massive scale of real-time surveillance, enabled by spyware that can spread across billions of so-called “smart” devices: digital violence. In order to address this rapidly growing threat, it is key for everyone interested in addressing human rights violations, from journalists to lawyers, to have tools to better understand how these digitally-driven forms of violence operate and to

collectively observe, analyze, and discuss the hidden connections between events, victims, their stories, geopolitical shifts, and power circles across time and territories. Through their evolving architectural analysis and digital modelling techniques, as well as their interdisciplinary collaborations with artists, whistleblowers, activists, journalists, and academic researchers, Forensic Architecture has been able to create an inspiring large-scale, open, and sophisticated artistic-legal resource on top of a robust yet accessible set of evidence, achieving what great art does best: making visible the invisible and translating complexity into clarity while challenging power structures and holding them accountable.

### **Inanimate Species**

**Joana Moll**

Scientists warned as early as 2019 that one million species, out of an estimated eight million, are in danger of extinction, many of which could become extinct within decades, according to a UN report. Some researchers even consider that we are in the midst of the sixth mass extinction process in the history of the planet. These previously known mass extinctions wiped out between 60 and 95 percent of all species, and ecosystems take millions of years to recover. The project presented by the artist and researcher Joana Moll establishes a link between the exponential growth of microprocessors and the decrease in both the number and diversity of species, particularly insects, which form an essential part of our ecological infrastructure. *Inanimate Species* seeks to highlight the subtle but continuous replacement of the natural order by technological advance, and reflects not only on the cannibalization of ecologies but also on the problem of visually representing climate change. *Inanimate Species* aligns with European values and commitments, such as taking urgent action to combat climate change and its impacts, preserving and promoting the sustainable use of terrestrial ecosystems, and ensuring responsible, inclusive, and sustainable innovation and industrialization.

### **Mikromedas AdS/CFT 001**

**Valery Vermeulen**

A black hole is a place in space where gravity pulls so much that even light cannot get out. The gravity is so strong because matter has been squeezed into a tiny space. This can happen when a star is dying. Because no light can get out, people can't see black holes. They are invisible. Space telescopes with special tools can help find black holes, but what if music could also provide us with a way of sensing what black holes are all about? Valery Vermeulen highlights the inspirational role that art can play in a cross-disciplinary collaboration between art, science, and technology by deliberately positioning his work at the boundary where technological and scientific knowledge ends. Mikromedas brings in a highly inspiring speculative vision that could undoubtedly evolve the current state of the field of theoretical physics. Researchers working in quantum gravity offer an ever-increasing number of mind-bending models of reality that may never be tested by human endeavor. Thus, with this collaboration, a fictitious reality is being created in which scientific and artistic creativity are interchangeable.

*Mikromedas AdS/CFT 001* is a 45-minute musical piece that focuses on the fascinating world of astrophysical black holes. In 2005, the mathematician, musician and artist Valery Vermeulen began an intense research and production work together with other scientists, artists, and academic institutions focusing on the ultimate quest in the field of theoretical physics today, namely the search for a theory that unites the two worlds of quantum physics and Einstein's general theory of relativity. All the music of *Mikromedas AdS/CFT 001* is composed with data from numerical simulation models of astrophysical black holes and regions of extreme gravitational fields. Customized programs and systems were designed to translate large amounts of

data into sound and graphics, resulting in new techniques that uncovered uncharted territory about gravitational waves or white dwarfs.

### **The Exploded View Beyond Building Biobased Creations**

*The Exploded View Beyond Building* is the outcome of a strong collaborative initiative of—in their own words—“producers, designers, builders, farmers, policy makers, artists, and knowledge institutes.” It is a show case, a demonstrator and educational exhibition, but foremost it is also proof of the concept that sustainable manufacturing and construction is a real possibility, that bio-based materials are ready for application in real life projects. Even more than this, it is a great source of inspiration and encouragement for a new attitude that shows how the joint efforts of creativity, engineering and environmental consciousness can lead to a new way out of the stranglehold of resource- and energy wasting of old style construction industry.

### **The Plant Intelligence Plan**

**Tianyi Zhang**

“If intelligence is defined as the ability to solve problems, plants have a lot to teach us,” says Stefano Mancuso. This work brings us closer to an awareness of the plant kingdom and how all beings need each other in order to exist and co-exist. None of the organisms that exist in nature are autonomous or independent; rather, all organisms (including humans) are part of complex interconnected ecosystems. In this same line of thought, many scientists like Mancuso agree that plants are living beings that communicate with each other and with other species, since they are social beings. *The Plant Intelligence Plan* posits a return to the non-anthropocentrism of egalitarian

ecological relations and advocates rebuilding the order of human civilization instead of the values enhanced in the old regime by simply calling for ecological protection, thereby inspiring people to reflect on the relationship between humans and ecosystems. In this project, Tianyi Zhang starts from ecological relationships as a departure point and bases her work on research on the intelligence of plants, thus restoring the lost ecological connectivity between commercial crops and animals through biotechnology and biomaterials.

### **UITSLOOT**

**Gijs Schalkx**

Combining speculation, an a priori ridiculous idea, and low-tech DIY practical experimentation, *UITSLOOT* manages to balance concepts such as desire, effort, reward, and environmental impact, and at the same time invites us to imagine a different future and present. Gijs Schalkx, an artist, designer, and indie engineer (by his own definition), proposes with *UITSLOOT* an ingenious, cheap, and simple alternative for obtaining energy to power his means of transport, a 50 cc Honda Cub motorbike. His motorbike runs on methane energy generated from the sediment at the bottom of the many waterways in his town. To fill the container with methane gas, the artist has developed a gas collecting station that he activates himself—in a truly performative action—by wading into the water with waders and a long pole with which he releases the methane bubbles from the bottom of the ponds. His exemplary DIY action demonstrates that the naturally generated methane that would reach the atmosphere has a greater effect on the climate than the CO<sub>2</sub> produced by the *UITSLOOT* engine. Gijs' proposal is not only ingenious but also very successful.

## **STARTS Prize '22 Nominations**

### **Alone Together**

Anna Anderegg, Swan Park, Marco Barotti, Sara Kim

### **Digital SUPERPOWER!**

Ling Tan

### **Ent-**

Libby Heaney

### **Entanglement**

ANNEX

### **Gran Turismo Sophy™**

Pete Wurman and the teams at Sony AI, Polyphony Digital and Sony Interactive Entertainment

### **Key Workers. Migrants' contribution to the COVID-19 response**

Federica Fragapane, Alex Piacentini, Marta Foresti/ODI

### **LIFE SUPPORT SYSTEM (Ecosystem Services Estimation Experiment)**

DISNOVATION.ORG

### **Neo Stone Age**

Erco Lai

### **Political Atmospheric**

Manifest Data Lab

### **Project PLATEAU**

MLIT: Ministry of Land, Infrastructure, Transport and Tourism

### **Quorum Sensing: Skin Flora Signal System**

Helena Nikonole, Lucy Ojomoko

### **SolarSoundSystem**

Cédric Carles

### **SpreeBerlin—The Voice of a River**

JKUKULA

### **Susceptible**

Anna Dumitriu, Alex May

### **Symbiosis**

Polymorf

### **The Glass Room: Misinformation Community Edition**

Tactical Tech

### **Vertical Walking**

Rombout Frieling

### **WITHER – A Slice of Rainforest**

**Disappearing at the Rate of Deforestation**  
Thijs Biersteker

# Holly+

Holly Herndon, Mathew Dryhurst, Herndon Dryhurst Studio

*Holly+* is Holly Herndon's digital twin. She is using machine learning to create freely available online instruments and tools that encourage anyone to create art with her AI voice and image, as part of an expansive art and research project experimenting with the economy around her digital likeness. The first *Holly+* instrument allowed anyone to upload polyphonic audio to <http://holly.plus> and receive a version sung back in Holly's voice. There have since been more instruments made, allowing for people to upload scores for her voice to sing, and for people to perform in her voice in real time (premiered at Sonar 2021). These instruments so far have been created in a joint collaboration between Herndon Dryhurst Studio, Never Before Heard Sounds (NYC), and Voctro Labs (Barcelona). This new model for the stewardship of digital identities challenges common pessimistic narratives around "deepfakes" while addressing relevant concerns. Hundreds of people now hold partial governance of Holly's digital twin as part of Holly+DAO, which provides an incentive to vote on appropriate usage. Once approved, any art made with her voice can be verified by tracing its provenance back to the public Holly+DAO identity. This means

that if a piece of media is created that is offensive or uncharacteristic, it can easily be dismissed unless approved by voting stewards.

Any profits made from the sale of approved works using her digital voice are shared between the creator (50%), the DAO (40%), and Holly herself (10%). Money ingested into the DAO treasury is then used to create more instruments for people to create work as Holly+, creating a virtuous cycle and economy around her IP. To date, 70 works have been sold from artists releasing work with *Holly+*, with much more planned in the coming year.

Holly sees this as the first example of a permissive approach to IP in the AI era which she refers to as "Identity Play." Rather than prohibiting people from using her digital voice, she instead proposes a positive vision in which anyone may be invited to experiment with someone else's identity in a fair and transparent manner. She refers to this new method of using AI to create media in somebody else's likeness as "Spawning," a 21st century corollary to sampling that she believes will have significant implications for music, art, and media in the years to come.



Holly+memes

Herndon Dryhurst Studio created with OpenAI DALL-E 2

Andrés Mañón

STARTS Prize '22  
Grand Prize—Artistic Exploration



Andrés Mañón



Andrés Mañón



A building that looks like Holly Herndon, oil painting



Herndon Dryhurst Studio created with OpenAI DALL-E 2

Holly+clones

We learned from the sampling era that it is a losing battle to attempt to limit the ability for artists to experiment where they find inspiration, however, it is crucial to establish precedent for accreditation and remuneration to ensure that profit is shared with the artists from whom new works are spawned. The growing sophistication of machine learning tools in art and music is both an opportunity to establish new, fair, and interdependent habits, and a warning. We cannot permit our bad habits of the past to be automated in perpetuity. Holly believes that our problems are best addressed by encouraging excitement and imagination over new possibilities. When an artist embraces the potential of permissive Identity Play, new and alien collaborative formations are unlocked. What would it mean to encourage thousands of songs a year to be released in your voice, or to be in a band with a thousand people under the shared Holly+ umbrella? She believes that as it

becomes more common to use machine learning to spawn visual artworks, this same ethical and economic logic can apply to AI models such as the distinctive style of visual artists or designers, or facial information in entertainment and commercial media. In experimenting with her own IP, she hopes to set a precedent to help others to navigate the dawning AI art era.

Holly Herndon, Mathew Dryhurst, Herndon Dryhurst Studio  
 The first *Holly+* performance was presented in collaboration with Sonar AI and Music Festival, supported by STARTS. This was the first performance of live machine learning “identity play” in history.

<https://u.aec.at/662F0E8D>



**Holly Herndon** (US) is an American multi-disciplinary artist based in Berlin. Her work involves building new technologies to experiment with her voice and image, facilitated by critical research in Artificial Intelligence and decentralized infrastructure. In recent work she has produced an instrument for anyone to sing with her voice, distributed governance of her digital voice to the Holly+DAO, and released the *Classified* portrait series generated from what public available AI datasets know about her likeness. She has toured her influential musical albums *PROTO* (4AD) and *Platform* (4AD) globally, most recently with a choir composed of human and AI voices. She completed her doctorate in Composition at Stanford University, working with the Center for Computer Research in Music and Acoustics (CCRMA). She makes her research process public through the Interdependence podcast.

# Antarctic Resolution

Giulia Foscari, UNLESS

What happens in Antarctica does not stay in Antarctica.

Accounting for 10% of the landmass, 70% of the freshwater, and 90% of the ice of Planet Earth, Antarctica is the largest repository of scientific data on our climate history—essential to inform crucial environmental policies—and the greatest menace to global coastal settlements threatened by the rise in sea levels induced by anthropogenic global warming.

The threat that Antarctic ice thinning poses to our own lives and those of future generations is real. The kilometers-thick ice sheet is currently melting at the alarming pace of 200 Olympian swimming pools per minute, and the total meltdown of Antarctic ice would increase global sea levels by 60 meters, launching the largest migration ever witnessed by humanity.

While the future of our planet depends, to a great extent, on the fate of the Antarctic, our seventh continent is collectively neglected. Mostly thought of as our last wilderness, a far-away pristine landscape, Antarctica is a contested territory that conceals also resources that might prove irresistible in a world with an ever-increasing population and potential resource shortages triggered by geopolitical unrest.

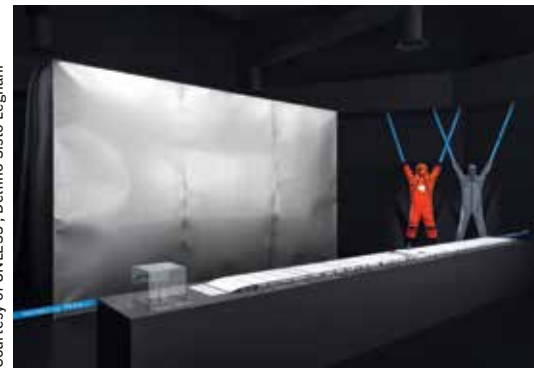
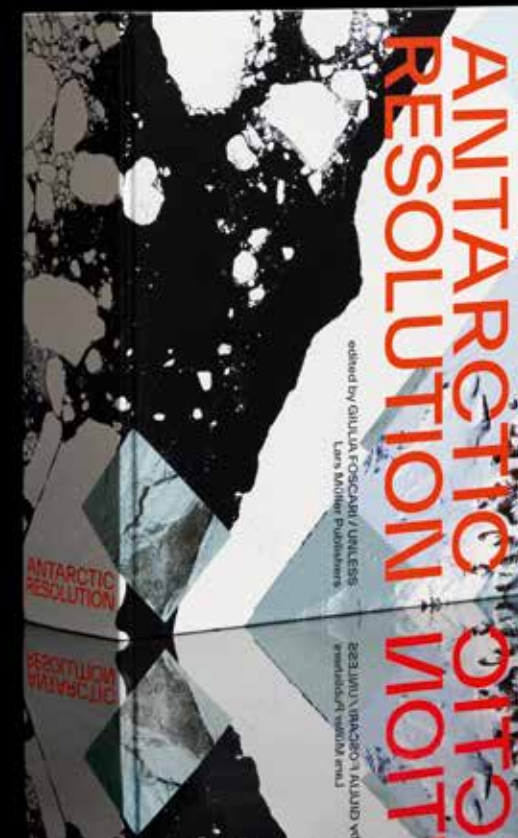
*Antarctic Resolution* was conceived by Giulia Foscari / UNLESS to catalyse global attention to one of our few Global Commons and create a constituency for our only continent without an indigenous population, with the ambition of contributing to the protection of the Antarctic, and in turn, of our own species.

Developed as a transnational and multidisciplinary collective effort, *Antarctic Resolution* was launched on occasion of the bicentenary of the first recorded human landing on the continent in the format of a 1000-page volume published by Lars Müller Publishers and authored by the 150 leading world Antarctic experts. The encyclopedic publication focuses on the continent's unparalleled scientific potential, contemporary geopolitical significance, and extreme inhabitation model. Alongside rigorous academic research, the volume presents an unprecedented visual portfolio including photographic essays, data-driven infographics, cartographies, and architectural drawings. Building upon the power of the arts to catalyze global action and accelerate the process of data democratization, the research was presented in homonymous site-specific exhibitions within the Central Pavilion



Antarctic Resolution. Exhibition at the Venice Biennale. Detail

Antarctic Resolution. Publication



Antarctic Resolution. Exhibition at the Venice Biennale



Speak Up For Antarctica Now

STARTS Prize '22  
Grand Prize—Innovative Collaboration

Courtesy of UNLESS, Delfino Sisto Legnani

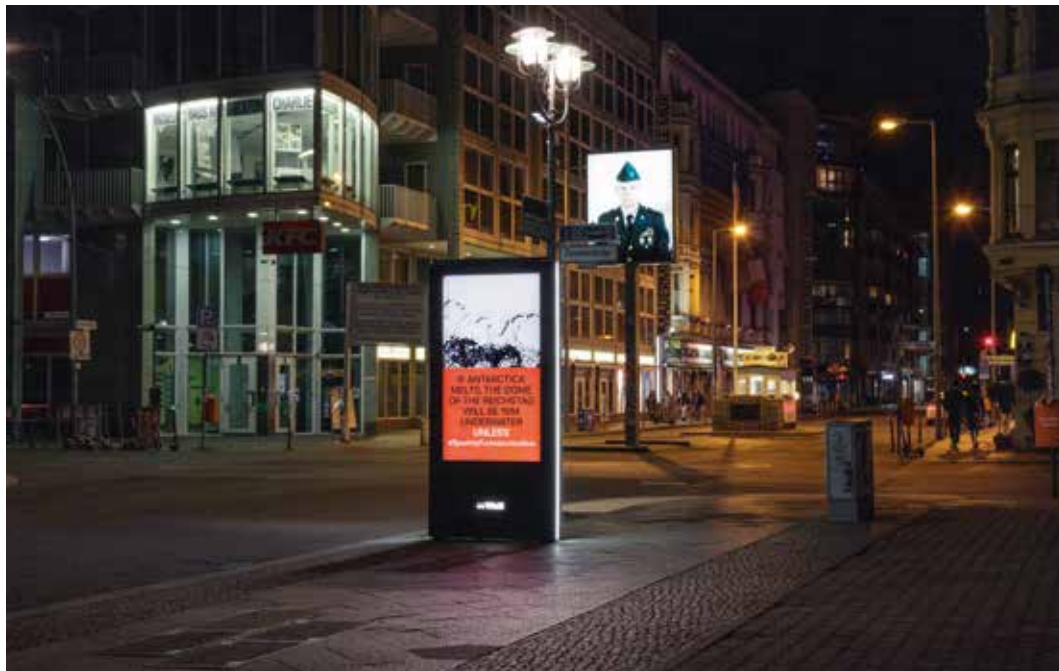
Courtesy of UNLESS, Louis De Belle

Courtesy of UNLESS, Delfino Sisto Legnani



Courtesy of UNLESS, Delfino Sisto Legnani

Antarctic Resolution. Exhibition at the Venice Biennale



Courtesy of UNLESS, Louis De Belle

Speak Up For Antarctica Now

of the 17th International Architecture Biennale (Venice, Italy) and at the Museo Nacional Thyssen-Bornemisza on the occasion of the 30th anniversary of the Protocol on Environmental Protection to the Antarctic Treaty (Madrid, Spain).

In Venice—a city that could be itself intended as a barometer of climate change—the publication, “exploded” for the occasion, was exhibited alongside the snow goggles worn by Captain Scott while man-hauling across the Antarctic and the pioneering Antarctica Suit, conceived with D-Air Lab as a portable environment for extreme Antarctic conditions. The collective call for action was amplified in the exhibition by the alarming soundscape produced by the work of Arcangelo Sassolino, a performative art installation informed by scientific data provided by glaciologist David Vaughan, that powerfully denounces the accelerated thinning of the cryosphere.

True to the twofold ambition implicit in its title to construct a high-resolution image of the continent and advocate for Antarctic resolutions, on occasion of the 44th Antarctic Treaty Consultative Meeting (ATCM) held in Berlin, the project evolved beyond the walls of cultural institutions, taking over the German capital with a campaign “Speak Up for Antarctica Now.” The latter called upon Berliners and passers-by to demand accountability for the future of a continent that is 1.4 times the size of Europe from the ATCM delegates of the 29 decision-making nations that have the right to vote on all matters pertaining Antarctic governance, and invited them to embrace their role as Antarctic citizens and Speak Up for Antarctica Now to defend intergenerational justice.

Giulia Foscari & UNLESS

Antarctic Resolution. Publication  
 Editor: Giulia Foscari / UNLESS  
 Authors: 150 interdisciplinary specialists (full list in project URL)  
 Data/Images: 82 organizations & archives, 27 artists (full list in project URL)  
 Cartography/Infographics: UNLESS, The Polar Lab, Pomo  
 Architectural drawings: UNLESS, The Polar Lab  
 Publisher: Lars Müller Publishers

Antarctic Resolution. Exhibition in Venice, Italy  
 Exhibitor: Giulia Foscari / UNLESS  
 Featured: Arcangelo Sassolino; David Vaughan; D-Air Lab  
 Collaborators: Lars Müller Publishers, Scott Polar Research Institute

#SpeakUpForAntarcticaNow. Campaign in Berlin, Germany  
 Concept: UNLESS with Carlo Barbante, Alan D. Hemmings, James N. Barnes  
 Graphic design: Studio Vedet and HaugHaug.  
 Photographers: Shaun O’Boyle, Sebastian Copeland, Andrea Izzotti, Spencer Lowell, James Morris, Paolo Pellegrin, Emil Shulthess, John Weller, Norbert Wu  
 Partner organizations for the rally: Antarctic Southern Ocean Coalition, Deutsche Umwelthilfe, Fridays for Future, Greenpeace, Pew Bertarelli Ocean Legacy, Scientists for Future  
 Partners: Only One, TBA21 on St\_age

With support from: D-Air Lab; Fondazione Giuseppe e Pericle Lavazza; Furthermore: a program of the J. M. Kaplan Fund; Graham Foundation for Advanced Studies in the Fine Arts; Thyssen Bornemisza Art Contemporary TBA21; Ursula Stein.

<https://u.aec.at/7F3C1DEA>



Pierre Jayet

**Giulia Foscari W. R. (IT)** is an architect, researcher, and activist who has been practicing in Europe, Asia, and the Americas. She is the founder UNLESS, a non-profit agency for change, and of its alter ego UNA, an architecture studio focused on cultural projects. Giulia taught at Hong Kong University and at the Architectural Association. The work of UNA and UNLESS was exhibited extensively internationally. Giulia authored *Elements of Venice* and edited *Antarctic Resolution* (Lars Müller Publishers). She is a member of the International Council of the MoMA, a Board Member of the Fondazione Musei Civici di Venezia and of the Antarctic Southern Ocean Coalition. **UNLESS** is an agency for change. It is a non-profit organization devoted to transnational research on extreme environments threatened by the planetary crisis. Founded by architect Giulia Foscari in 2019, the agency collaborates closely with a vast network of multidisciplinary specialists based on all seven continents. UNLESS operates alongside its alter ego, the architecture studio UNA.

# A Sun Architecture— The party is in full swing

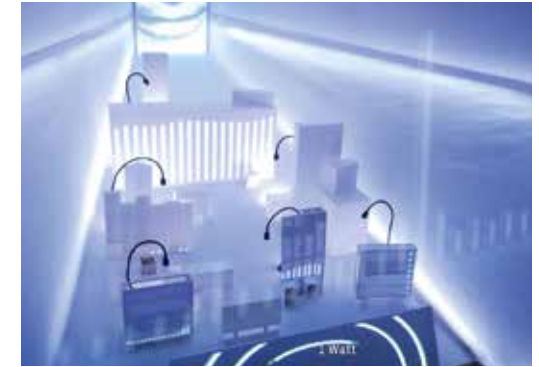
Stéphane Bonnard, KompleX Kapharnaüm



We're going to work in that case on flexible solar panels



For us to be able to use it in our installation



Switching on a device today is an automatic, almost magical gesture.

To rethink this relationship to energy, we sought to make concrete the effort necessary for its production. And to raise a political question: if energy is limited, what do we decide to use it for? The challenge is twofold: to raise awareness of the effort required to produce energy. And to anticipate, despite all technological beliefs, that at some point you will probably have to restrict yourself in your consumption. And therefore choose in which sectors of activity to prioritize energy.

*Digital entresort:* The installation explores the idea of energy autonomy but also questions the apparent easy access to energy by offering choices to the spectator: to supply power to a sound system, light up a ball, or make a coffee, etc.

*Video-fiction/online:* After lockdown we were asked to present the project in an online seminar of ADEME (French Agency for Ecological Transition). We tried to imagine an artistic object between video conference, cinema, interaction, spectacle, which changes our practice, and asks a political question: if the energy is limited, who will decide how to use it?

The artistic proposition takes the form of a video conference, keeps running as a sequence shot from an adventure film, and ends in a hallucinated club where reality seems dissolved. Little by little the spectators become dizzy. Caught in a delirious festive atmosphere, but with the awareness that the battery that powers the experience is draining ... and perhaps robbing other viewers. How far will they go? Who will take responsibility?

To appreciate the effort required to provide energy and keep their screens on, participants must be active. Without this effort, their computer screen turns black, and they can no longer follow the proposal. The video fiction is broadcast through a web page specially developed by our team of engineers. Thanks to this interface, the spectator is taken to task and can take control to stop the party at any time.

Production: KompleX Kapharnaüm  
Co-production: Hexagone, Atelier Art Sciences  
With support from  
Atelier Arts Sciences—Workshop Prestige  
Hexagone—Scène Nationale Arts Sciences  
Experimenta / Arts Sciences 2020

<https://u.aec.at/00D5CB43>



Pierre Jayet

Self-taught, **Stéphane Bonnard** (FR) co-founded KompleX Kapharnaüm in 1996. From a public space he imagines specific stories that connect people to a universal narrative, between documentary and fiction, he creates singular worlds that take the form of shows, performances, installations, and spectacular walks. As a text writer he also works on a cycle on the monologue for theater (*25, L'Immobile, Rudimentaire, Continent*), all published and performed. With the *les Studios Bobert*, he organizes workshops with scientists and artists about "a new way of talking with the non-humans worlds."

**KompleX Kapharnaüm** explores humans and landscapes in search of their unique beauty. We travel through stories, we use places as our canvass, we believe in everyday poetry and aim to transcend it. We collect documentary materials that we put together during spectacular performances. In France or abroad, each project adapts to the context in which it is presented or created. We are a team of video makers, musicians, technicians, writers, performers, visual artists, and makers... all of us bringing valuable skills to the creation of our performances. Our creations are fixed or movable, intimate or monumental, shows or installations.



# Ambient Weaving

Hosoo Co., Ltd., Yasuaki Kakehi Lab, The University of Tokyo, ZOZO NEXT, Inc.



hosoo

In its pursuit of beauty for over 1,200 years, with its distinctive structures and design, HOSOO's Nishijin textiles have a rich history of pushing innovation by incorporating technology. This research project named *Ambient Weaving* aims to complement this by experimenting with the use of Nishijin textile as a medium for representing characteristics taken from the surrounding ambient environment. Thus, *Ambient Weaving* refers to creating new ways in which environments can be expressed and experienced by interweaving information from the surrounding atmosphere into textiles.

The history of textiles is as impressive as that of humankind. Looking back, textiles can be viewed as a creation from dialogues between humankind and the environment. Not only the threads used in textiles, but also plant dyeing uses natural materials such as plants and animal fibers. In Japan, motifs of beautiful Japanese nature have been

extensively used in textiles. In today's world, unspoiled nature is no longer common, and living in artificial environments is the norm. With significant human impact on the planet's geology and ecosystems and the concept of "nature" itself continuing to be a point of discussion and review, what kind of new entity will ambient environments and textiles become? With this perspective as the foundation, this project presents the modern state of human beings and their relationship with the environment.

In this joint project, they have developed a series of prototypes of novel textiles based on Nishijin methods, materials, and aesthetics with artists, designers, engineers, and artisans. Each textile changes its appearance over different time frames, influenced by or interacting with environmental changes. *Wave of Warmth* dynamically changes colors as the temperature changes, *Drifting Colors*

STARTS Prize '22  
Honorary Mention



hosoo

creates rewritable color pattern changes by allowing colored water to seep into each individual woven thread through capillary action like plants, *Memories of Flow* preserves the shapes of fabrics floating in water through the solidification of threads and displays them as art objects, and *Woven Clouds* and *Woven Glow* are electrically augmented textiles, which can be programmed to change transparency and emit light.

Hosoo Co., Ltd., Yasuaki Kakehi Lab, The University of Tokyo, ZOZO NEXT, Inc.

Hosoo Co., Ltd.: Masataka Hosoo, Hiroshi Kanaya, Kotaro Uchibe, Naotoku Yasuta  
Yasuaki Kakehi Lab., The University of Tokyo: Yasuaki Kakehi, Yumi Nishihara, Hitomi Kuboki, Juri Fujii  
ZOZO NEXT, Inc.: Satoshi Nakamaru, Kotaro Tajima  
Curation: Kumiko Idaka, Historical research: Rurihiko Hara, Exhibit composition: Takashi Suo,  
Data visualization: Yugo Minomo



<https://u.aec.at/15878307>

**Hosoo Co., Ltd** (JP) was founded in 1688 in the old city district of Nishijin in Kyoto, Japan. Since then, HOSOO has been in business both as a weaver and kimono curator. Masataka Hosoo (JP) is the President and CEO. Hiroshi Kanaya (JP), Kotaro Uchibe (JP), and Naotoku Yasuta (JP) are in charge of weaving textiles as artisans. **Yasuaki Kakehi Lab.**, **The University of Tokyo** (JP) is an interdisciplinary research group led by the artist and HCI researcher Professor Yasuaki Kakehi. The research group explores the possibilities of physical materials and computing to connect humans and the environment and creates advanced physical interfaces and media art works. **ZOZO NEXT, Inc.** (JP) is a subsidiary of Japan's largest fashion online commerce company, working primarily on projects in the field of research and development with the goal of pioneering the future of fashion. Satoshi Nakamaru (JP) works as a Material Scientist, and Kotaro Tajima (JP) leads the department.

# Avatar Robot Cafe DAWN ver.β

Ory Yoshifuji, Ory Lab



Besides developing *OriHime* and *OriHime-D*, which users regardless of age, gender, or disability can remotely operate, Ory Lab has created the *Dawn Avatar Robot Café*, where users work and visit via robots. Users can seek employment via the company's Avatar Guild staffing agency, thus remaining active in society.

The goal is to show that with the right tools, even people who have difficulty in moving about freely can do physical labor and customer service from the comfort of their homes via an avatar robot. For those who can't go outside due to the physical/psychological challenges of diseases, past accidents, or the likes, *OriHime* creates another means of physical expression and action. *OriHime* is operated remotely by "pilots," who interact with the world outside through the robots' cameras, speakers, and microphone. In this way, the robots offer virtual outings even for paralyzed pilots, who use a line-of-sight input device to speak with others. The creation of *OriHime* was largely motivated by the personal experiences of Ory Yoshifuji, CEO of Ory Lab. Health issues kept him away from elementary school for 3 ½ years, making it so unbearably lonely that life hardly seemed worth living. Even now, just the idea of relapsing into this kind of isolation is harrowing. This despairing notion urged him to prepare, exploring how loneliness can be eased, leading to the development of avatar robots, a way to feel human connection despite the physical or psychological state. Ory Yoshifuji, who

designed a wheelchair while in high school, sees avatar robots as wheelchairs for the user's heart. Rather than conventional robots, Ory Lab designs robots that convey the sense of presence: "We'd like to give users possibilities that can lead to friendships and fulfilling roles in society despite physical barriers. For myself as well, one day when I'm no longer able to move around freely, I'd like to be ready. That's our goal with *OriHime*—our vision of how to abolish people's loneliness."

Ory Lab Inc. <https://orylab.com/en/#about>  
OYAMATSU Design Studio <https://oyamatsu.co.jp/en/index.html>  
TASUKI Inc.

Sponsored by:  
NTT Corporation, <https://group.ntt/en/corporate/overview/>;  
Biogen Japan Ltd., <https://www.biogen.co.jp/>;  
Mitsui Fudosan Co., Ltd., [https://www.mitsui-fudosan.co.jp/english/corporate/about\\_us/outline/](https://www.mitsui-fudosan.co.jp/english/corporate/about_us/outline/);  
Charity by crowdfunding "CAMPFIRE" by 2156 ppl ¥44,587,000, <https://camp-fire.jp/projects/view/405051>

<https://u.aec.at/AE4B1281>



**Ory Yoshifuji (JP).** At the age of 17, after three and a half years of social isolation, he decided to devote his life to the elimination of human loneliness, and in 2010 he revealed *OriHime*, a robot that is an avatar (another body), a tool to abolish loneliness and enable social participation even when it is difficult to go out. Since then he has helped to form roles for people who have lost contact with society and were isolated, and ways of employment at companies that want to hire people with disabilities, resulting in many of them getting jobs at private companies and public offices.

# Cleaning Emotional Data

Elisa Giardina Papa



*Cleaning Emotional Data* is a three channel video installation that addresses new forms of precarious labor emerging within artificial intelligence economies. Specifically, it focuses on the global infrastructure of microworkers who “clean” data to train emotion-recognition algorithms. These workers label, categorize, annotate, and validate large amounts of data, thereby enabling AI to function. In the winter of 2019, while living in Palermo and researching affective computing systems, the artist ended up working remotely for several North American “human-in-the-loop” companies who provide “clean” datasets to train AI algorithms to detect emotions. Among the tasks she performed were the taxonomization of emotions, the annotation of facial expressions, and the recording of her own image to animate three-dimensional figures. *Cleaning of Emotional Data* documents these microtasks while simultaneously tracing a history of emotions that questions the methods and psychological theories underpinning facial expression mapping.

A number of AI systems, which supposedly recognize and simulate human affects, base their algorithms on flawed understandings of emotions as universal, authentic, and transparent. Increasingly,

tech companies and government agencies are leveraging this prescribed transparency to develop software that identifies, on the one hand, consumers’ moods and, on the other hand, potentially dangerous citizens who pose a threat to the state. The implications of this demand for emotional legibility are further explored in the embroideries of the textiles of the installation. The embroidery juxtaposes the abstract lines of facial micro-expressions detected by the algorithms with untranslatable emotional vernacular from the Sicilian dialect. This joint “fabrication” of computational and human language demonstrates how emotional sensibilities exceed reductive categorization.

*Cleaning Emotional Data* is the third installment of a trilogy of works exploring how labor, care, and affection are reframed by digital economies and artificial intelligence; it follows *Technologies of Care* (2016) and *Labor of Sleep* (2017).

Courtesy of the Artist  
Commissioned by: Aksioma, Institute of Contemporary Art, Ljubljana, and Kunsthalle Mulhouse



<https://u.aec.at/9D3A57EE>

**TASK 2:  
ANIMATE THESE  
AVATARS WITH YOUR  
OWN EMOTIONS**

Please animate the zebra by expressing with your face the following emotion for at least 10 seconds:

**SURPRISE**

**PAYMENT: \$0.35  
each video**



Please rate how sad you think this face appears on a scale from 1 (not at all sad) to 7 (very sad)

The word “sad” translates to the Spanish word “triste.”

The word “sad” translates to the Arabic word “نورح”

The word “sad” translates to the Filipino word “malungkot.”



**Elisa Giardina Papa** (IT) is an Italian artist whose work investigates gender, sexuality, and labor in relation to neoliberal capitalism and the borders of the Global South. Her work has been exhibited at the 59th Venice Biennale (*The Milk of Dreams*), MoMa (Modern Mondays), the Whitney Museum (Sunrise/Sunset Commission), Seoul Mediacity Biennale 2018, among others. Giardina Papa received an MFA from RISD, and she is currently pursuing a PhD in film, media, and gender studies at the University of California Berkeley. She lives and works in New York and Sant’Ignazio, Sicily.

# Digital Violence: How the NSO Group Enables State Terror

Forensic Architecture



This project maps the use of the malware Pegasus, developed by the Israeli cyber-weapons company NSO Group, against activists, journalists, and human rights defenders worldwide. To elucidate the extent of its reach and impact, we produced a navigable digital platform, video investigations recounting the stories of individuals targeted with Pegasus, a sonic representation of collected data, and a video investigation presenting new research into the web of corporate affiliations within which NSO Group is nested.

Our project took shape during lockdown, and while reliance on remote communication made us all the more vulnerable to monitoring, a dispersed community of practice also began forming across borders and continents. We joined forces with filmmaker Laura Poitras to speak with targeted activists from Saudi Arabia, the UAE, Morocco, India, Palestine, Rwanda, Mexico, and Togo, and engaged investigators from The Citizen Lab and Amnesty International, along with famed whistleblower Edward Snowden and musician Brian Eno, to map the global landscape of cyber-surveillance.

Based on two years of open source research, the near-two-thousand datapoints within the resulting matrix convey information about export licences, alleged purchases, digital infections, and events in the physical world such as the intimidation, assault, defamation and murder of individuals reportedly targeted. Collectively, this data reveals patterns within the ways that Pegasus is weaponized against its targets and effectively extends the reach of state power to at once digitally target human rights dissenters in exile and physically target their colleagues and families still residing in their home countries. With *Digital Violence*, Forensic Architecture has for the first time mapped NSO-related activities worldwide, demonstrating new correlations between digital and real-world violence, and revealing the manner in which digital infection moves like a contagion within networks of collaboration and personal affiliation.

Forensic Architecture in collaboration with Laura Poitras/Praxis Films. Supported by the Citizen Lab and Amnesty International, along with the Eyebeam Center for the Future of Journalism and CyberPeace Institute.

<https://u.aec.at/B1642338>



**Forensic Architecture (FA)** is a research agency based at Goldsmiths, University of London, investigating human rights violations committed by states, police forces, militaries, and corporations using pioneering spatial and architectural analysis and open source investigation techniques. FA works in partnership with institutions across civil society, from grassroots activists and legal teams to international NGOs and media organisations, to carry out investigations with and on behalf of communities and individuals affected by conflict, police brutality, border regimes, and environmental violence.

# Inanimate Species

Joana Moll



In 1971, a group of international engineers designed the first commercial microprocessor in history, Intel 4004. This event marked a decisive moment in recent history, as for the first time it was possible to translate intelligence to an inanimate object, which opened a new era in technological development and the emergence of a new techno-capitalism imaginary. Interestingly, while humanity began a never-ending process based on perfecting and increasing the power of this new artificial intelligence, the planet's wildlife began to become extinct at an exorbitant rate. According to a study published in 2014 by the WWF, since 1970 humanity has wiped out 50% of the planet's species. It seems that there might be a correlation between the ubiquity of microprocessors, the rise of their computational power, and the acceleration of extinction processes. In order to illustrate this, the project establishes a link between the exponential growth of microprocessor and the decline in both number and diversity of species—in particular insects, who form an essential part of our ecological infrastructure and have been declining at

alarming levels, with reports suggesting that a quarter of insects could be wiped out within just a decade. The *Inanimate Species* display seeks to highlight the subtle but continuous replacement of the natural order by technological advancement and reflects not only on the cannibalization of ecologies, but also on the problematics of visibly representing climate change. Ultimately, *Inanimate Species* sets out to expose the links between the explosion of techno-capitalism, the acceleration of climate change, and resulting decline of essential ecosystems.

Author: Joana Moll  
Supporting texts by: Evgeny Morozov, Selena Savić  
Research assistant: Marta Millet  
Production: Todojunto  
Production assistant: Oznan Güngör  
Documentation: Ona Bros  
Online documentation: Ramin Soleymani  
With support from Fundación BBVA

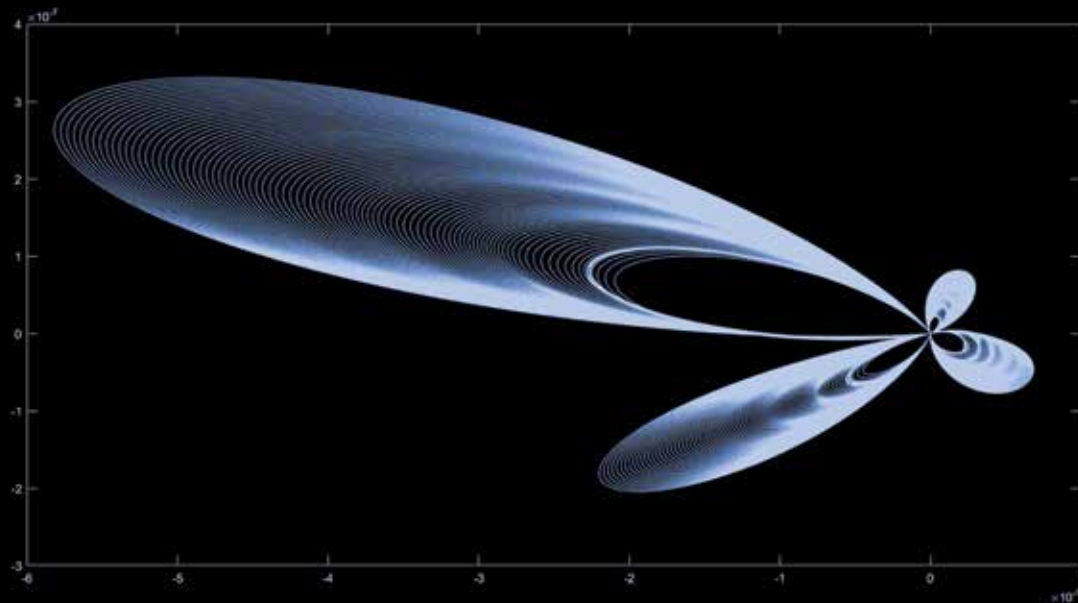
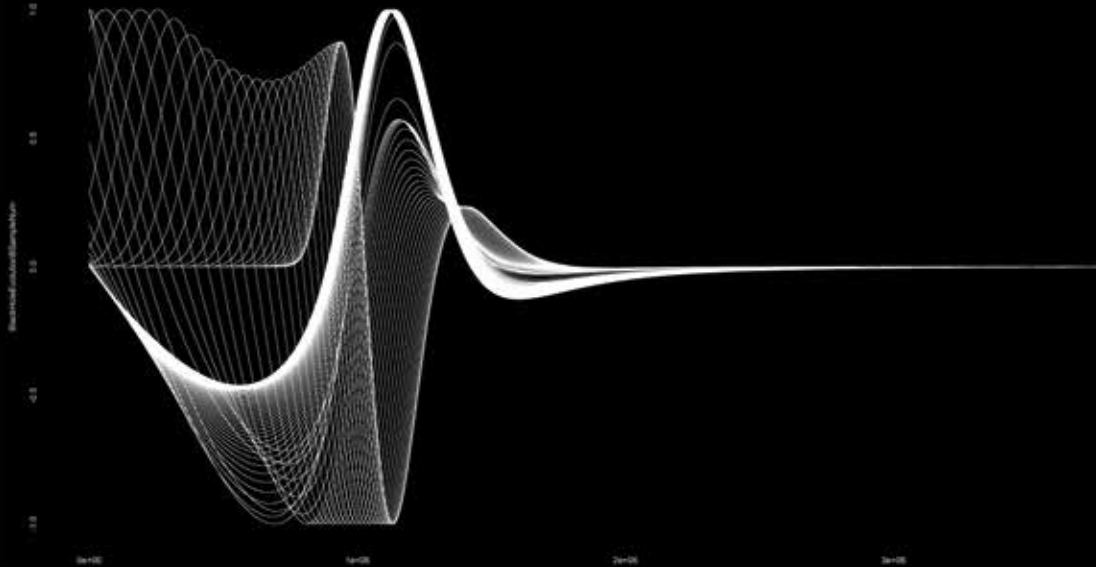
<https://u.aec.at/5A8BC31D>



**Joana Moll (ES)** is a Barcelona/Berlin based artist and researcher. Her work critically explores the way techno-capitalist narratives affect the alphabetization of machines, humans, and ecosystems. Her main research topics include Internet materiality, surveillance, social profiling, and interfaces. She has presented her work in renowned institutions, museums, universities, and festivals around the world. She is the co-founder of the Critical Interface Politics Research Group at HANGAR [Barcelona] and co-founder of The Institute for the Advancement of Popular Automatism. She is currently a visiting lecturer at Universität Potsdam and Escola Elisava in Barcelona; an artistic researcher in residence at HGK FHNW in Basel, a research fellow at BBVA Foundation, and a fellow at The Weizenbaum Institute in Berlin.

# Mikromedas AdS/CFT 001

Valery Vermeulen



*Mikromedas AdS/CFT 001* is part of the multimedia project *Mikromedas*.

*Mikromedas* is a data-driven music project in which the compositions produced use data stemming from space, deep space, and astrophysical simulation models. Unique systems and innovations in using astrophysical data and models as new tools for artistic creation were designed to realize the project. These include data sonification, data visualization, and algorithmic composition. The project is presented in several thematic performance series. The latest series within *Mikromedas* is the AdS/CFT series.

This new series focuses on the ultimate quest in today's field of theoretical physics, namely the search for a theory that would unite both worlds of quantum physics and Einstein's general theory of relativity. In the scientific community, this quest gave rise to the field of quantum gravity.

The first work in this series, a 45-minute music piece, is the proposed work *Mikromedas AdS/CFT 001*. The central focus is the fascinating world of astrophysical black holes. The main reason for doing so is black holes' role in understanding how quantum gravity might work. All of the music in *Mikromedas AdS/CFT 001* is composed using data stemming from numerical simulation models of astrophysical black holes and regions of extreme gravitational fields. Data used includes gravitational wave data, elementary particle trajectory data near black holes, and observational white dwarf data.

The work is presented in different forms—as a musical concert, a live audiovisual show, or an audiovisual installation.

The album, *Mikromedas AdS/CFT 001*, was released in December 2021 on the label Ash International, a subsidiary of the renowned Touch label. It received critical acclaim and has been featured extensively in international outlets and magazines such as *Music Radar*, *Tech Radar*, *The Wire UK*, *Electronic Sound Magazine*, *New Scientist*, *DJ Mag*, *Deutschland Funk*, and *Deutschland Funk Kultur* to name but a few.

With support from: Concertgebouw Brugge (BE); Baltan Laboratories (NL); Department of Mathematics | University of Antwerp (BE); Centre for Mathematical Plasma Astrophysics | KU Leuven (BE); Alabama Holography Research Group – Department of Physics and Astronomy | The University of Alabama (US); iMAL – Art Center for digital cultures & technology (BE); Liebig 12 Gallery (DE)  
Released on Ash International  
Publishing: Touch Music/Fairwood Music UK Ltd  
Live visuals: Jaromir Mulders

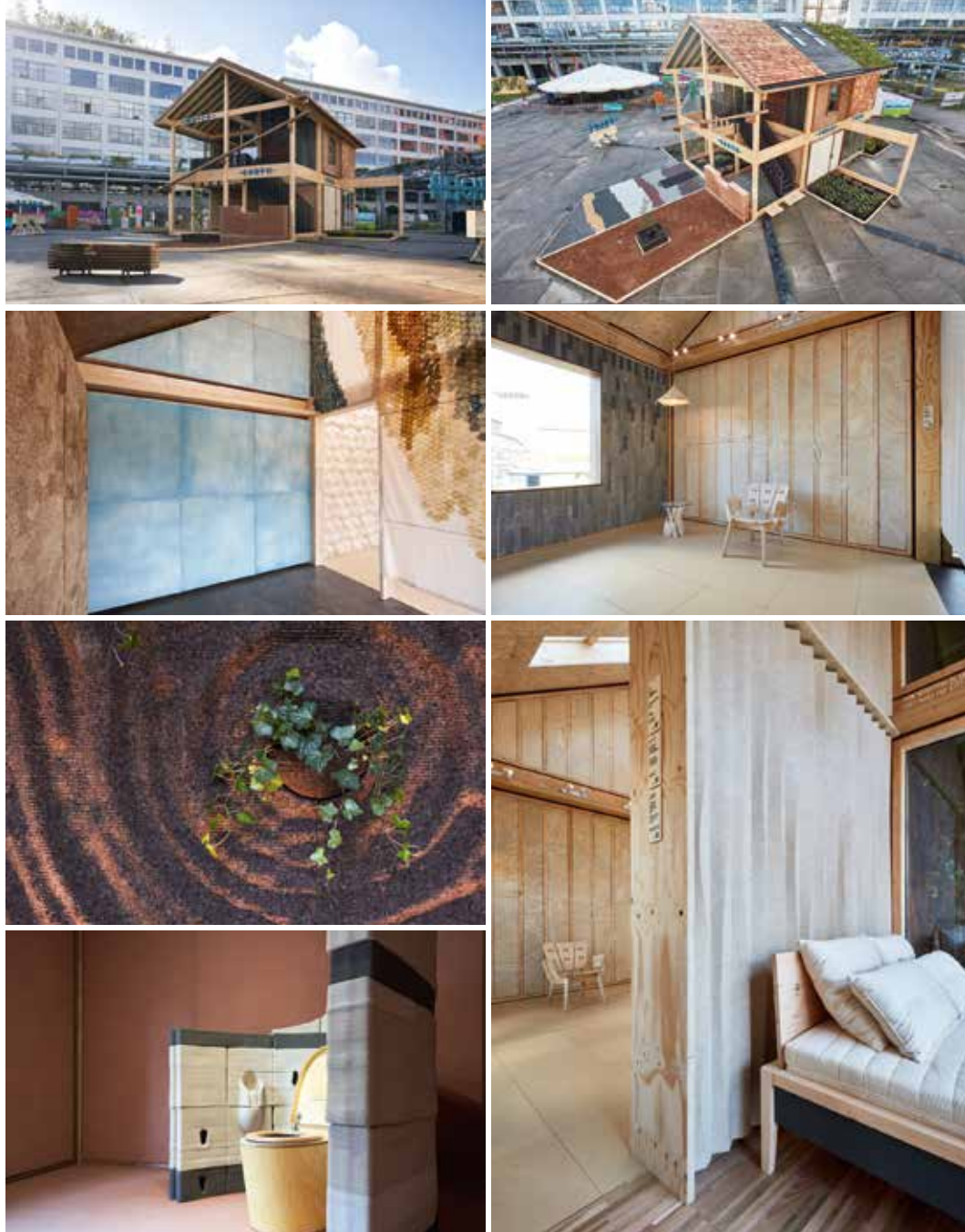
<https://u.aec.at/C8841C9A>



**Valery Vermeulen** (BE) is a Belgian electronic musician, music producer, mathematician, guest professor at the Royal Conservatory—School of Arts Ghent (BE), researcher at the Department of Mathematics at the University of Antwerp (BE), and guest lecturer at MA ArtScience in Den Hague (NL). He holds a PhD in mathematics as well as an MA in music production. His work covers a broad range of topics and disciplines, including (generative) sound synthesis, AI, biofeedback, astrophysics, theoretical physics, econometrics, and data sonification. His work has been widely shown and featured internationally.

# The Exploded View Beyond Building

Biobased Creations



*The Exploded View Beyond Building* (TEV BB) is an iconic exhibition in the form of a full-size house that is made entirely of biobased materials, circular construction methods, and stories about the changing value chain of which it is part.

It showcases over 100 biobased materials. Our goal was to show what is already possible when it comes to building with nature, and what will be possible in the very near future. Visitors can scan every material to read up on who made it, how it is made, how far the development of the material is, and so on. This way we give the visitor a real insight into the possibilities of sustainable building.

*TEV BB* also experiments with different circular building methods like urban mining, 3D printing, detachability, and modularity. The whole installation can be taken apart and built up somewhere else in no time.

We chose the shape of a house because this appeals towards a bigger audience the most. They can not only see the materials in real scale, they can touch them, walk through and around them, and feel what it means to build sustainably.

The house comes with storytellers on site and with tours and stories online, to give every visitor the explanation of the how and the why behind every material but also to tell the bigger story of how

building sustainably will change our landscapes, our agriculture, our value systems, our health, and the way we live in general. We find it very important to maintain the conversation on the changing value system we are witnessing now that we are moving towards more sustainability.

We brought producers, designers, builders, farmers, policy makers, artists, and knowledge institutes together in The Embassy of Biobased and Circular Building to share their insights, doubts, needs, and fears so we can build together towards a real circular system of sustainable construction. A network that meets, shares knowledge, invites others, and builds together. Because you can't change just one shackle without changing the whole chain.

Design: Pascal Leboucq

Concept: Pascal Leboucq & Lucas De Man

*The Exploded View Beyond Building* is made possible by: Floriade, Dutch Design Foundation, Biobased Creations, Caspar de Haan, BPD gebiedsontwikkeling, Jansen by ODS, Provincie Noord-Brabant, TNO, WAM&VanDuren Bouwgroep, Van Gelder

<https://u.aec.at/67DB83C6>



Through their artistic installations, **Biobased Creations** (NL) highlight the beauty and power of biobased materials, in order to accelerate the transition to a circular and sustainable society. During the Dutch Design Week (DDW) of 2019, they presented *The Growing Pavilion*, a pavilion that is fully biobased, 95% circular and 10 tons of CO<sub>2</sub> negative. Following this, they created *The Exploded View Materials & Methods* in 2020, a 1:4 archetype house built from state of the art biobased materials and circular methods. The next step was the construction of a 1:1 scale house, *The Exploded View Beyond Building* in 2021. With their unique combination of storytelling and imagination, Biobased Creations elicited a lot of admiration from the art, design, and construction worlds.

# The Plant Intelligence Plan

Tianyi Zhang



With ecological relationships as the breakthrough point and based on plant intelligence research, the *Plant Intelligence Plan* recognizes the initiative and rights of plants. The plan uses biotechnology tools and materials to restore the ecological relationship between commercially bred crops and animals, which human beings have alienated. Ecological Art often discusses and thinks about ecological problems through the artistic practice of ecological restoration (restoration of the physical ecological environment). As an Ecological Art practice, this work is not the restoration of the physical ecological environment but the restoration of the ecological relationship between animals and plants. This is one of its characteristics and it explores a new ecological restoration form.

This work advocates the world view and value of deep ecology and advocates non-anthropocentrism, which is another characteristic of the work. This work is not an Ecological Art practice based on the value of shallow ecology. It is not an ecological improvement art practice based on anthropocentrism value, nor an artistic practice of improving ecology only for human survival. The

work focuses on the ecological relationship between plants and animals neglected by humans, the “lord of all creation.” It proposes an improved value that removes anthropocentrism, criticizing anthropocentrism and the alienation caused by capital to ecological relations by restoring the aforementioned ecological relations between animals and plants. It advocates the construction of a new order of human civilization rather than a simple appeal to protect the ecology for human survival—a reformist value of the old system. It inspires people to rethink the relationship between man and ecology and calls for a return to equal ecological relations of non-anthropocentrism.

Artist: Zhang Tianyi  
Photography: Zhang Tianyi  
With support from: School of Design of the Central Academy of Fine Arts  
Special thanks to: Chen Xiaowen, Fei Jun, Song Xiewei



<https://u.aec.at/04575A32>



**Zhang Tianyi (CN)** is a Beijing-based artist, currently a PhD in Art and Technology research at the Central Academy of Fine Arts (Beijing). She holds a master's degree in Art and Technology from the School of Design of the Central Academy of Fine Arts and studied at the École Supérieure d'Art du Nord-Pas de Calais, France. Her creative and research interests are mainly in Ecological Art and Bio-Art. Her ecological artworks use interdisciplinary research as a creative method and regard technology as an important opportunity for ecological restoration. She is keen to explore new ecological restoration methods by combining machines and ecology, as well as new languages of Ecological Art. Based on the above Ecological Art practice, she discusses the relationship between humans and ecology in the latest scientific and technological context and the equal ecological relationship of non-anthropocentrism.



# UITSLOOT

Gijs Schalkx



A year-long quest on keeping the combustion engine alive in a fossil-free future and celebrating the power and agency that DIY culture brings. Why depend on big corporations and their promises to save the world when you can do it yourself? The Sloomotor is the one vehicle that truly delivers an alternative. Instead of relying on high-technology, incomprehensible devices, and resources from all over the world, it is powered by local, sustainable, and environmentally cooling sources. The fuel is harvested with minimal tools and DIY solutions, straight from your neighborhood pond or roadside ditch. Methane gas is many times worse for our environment than CO<sub>2</sub>, and by capturing these gasses before they enter our atmosphere, it can be used as a simple source of energy.

Through harvesting my own energy to fuel my combustion engine and supply myself with one of my greatest desires, I am bringing awareness to the processes and infrastructures that are sustaining us in the background of our society. Providing a new, more direct understanding of how desire, effort, reward, and impact balance out again. A method of bringing back means and ends together, rather than hiding the means behind complicated technology and slick devices as design has been doing for years. It might take eight hours to fill up the tank in order to drive 20 kilometers, but these 20 kilometers are the best of my life. All knowledge, drawings, sketches, and videos are available on [www.uitsloot.nl](http://www.uitsloot.nl), it gives agency over our own desires.

<https://u.aec.at/5E902FC4>



**Gijs Schalkx** (NL) is a designer, artist, and indie engineer. The power of DIY is central to his work. By combining speculative strategies with hands-on experimentation, Gijs believes we can become agents of our own desires once more. And that (sometimes ridiculous) actions can become a catalyzing force for people to imagine how the world could be different (in a way they could never have imagined before) and to act upon things as a result.

# Alone Together

Anna Anderegg, Swan Park, Marco Barotti, Sara Kim

*Alone Together* is a performative piece and a film, by Swiss choreographer Anna Anderegg. It was premiered at the Gwangju Biennale in April 2021. The work was created with a team of artists from Europe and South Korea.

For 30 years, we have seen the Internet gradually seeping into every corner of our lives. Most of us are constantly in touch with our fellow human beings on multiple analogue and digital levels. We have accepted that our attention, time, and personal data are the currency for online participation. But what does it mean for a society to be in a constant fragmented state of consciousness? How do our bodies evolve and endure in a state of physical isolation and permanent digital connection? What does it do to us when we are all almost permanently absent—in digital worlds?

*Alone Together* investigates the narcotic distraction with technology, consumerism, and celebrity culture. While the eyes of the performers linger through the digital windows on the happenings of the world, the viewers watch their disconnected bodies as they stare at their screens and gradually transform into hybrid living sculptures serving and glorifying the technological devices.

Choreography: Anna Anderegg  
Cinematography: Swan Park  
Sound design: Marco Barotti  
Architectural elements: Diagonal Thoughts – Sara Kim  
Performance: Seung Yoon Choi, Laureline Richard, Ixchel Mendoza Hernandez  
Dramaturgy: Johanna Hilari  
Lighting design: Our Labour – Chunghyung Lee, Chung Kihoon  
Costume design: Antoniya Ivanova  
Hyperlapse & animation: Wael Toubaji  
Visual segments: Milica Slacanin  
Production management: Jisoo Gook  
Management: Nadine Becker  
Co-producers: Gwangju Biennale, Kunsthau Pasquart, HeK (House of Electronic Arts Basel), Eunam Museum of Art, Bildstörung, POISON GmbH



Joo Young Kim

With support from: Swiss Embassy to the Republic of Korea, Swiss Fund Korea, ARKO (Korean Arts Council), ProHelvetia, Ernst Göhner Foundation, Stanley Thomas Johnson Foundation

<https://u.aec.at/485F0417>



**Anna Anderegg** (CH) is a Swiss choreographer. In her work she explores the interdependence of the human body and its habitat. **Swan Park** (KR) is a cinematographer working between Seoul and Tokyo. He is interested in exploring perspectives of urban landscapes. **Marco Barotti** (IT) is a Berlin-based media artist. He creates kinetic sound sculptures that deal with environmental and social issues. **Sara Kim** (KR) is the founder and principal architect at Diagonal Thoughts, an architecture studio based in Seoul.

# Digital SUPERPOWER!

Ling Tan

*SUPERPOWER!* is a community-led initiative that enables groups of people/communities to make sense of self-determined and complex urban issues in their environment via their own subjective perception. Participants use a set of social, gesture-driven, and data-collecting wearables to devise data experiments that capture their own perception of the issue in the form of subtle and inconspicuous body gestures. Past deployments explored public safety, air quality, and gender representation, to wheelchair accessibility and cultural diversity.

Developed during the pandemic, *Digital SUPERPOWER!* is a mobile version of the toolkit that enables communities to collaborate on data experiments remotely, using their phones to collect geolocated time-based perception data via touch

gestures and phone movements. It was trialed in 2021 where 15 young womxn creatives from Johannesburg (SA), Bulawayo (ZW), and London (UK) gathered online to discuss their experience surrounding gender safety issues and used the toolkit to collect their own and 100 other community members' perceptual data in their own city. Participants then developed digital artworks based on their data findings, later exhibited at Fak'ugesi Festival (SA).

*SUPERPOWER!* is an initiative developed by Ling Tan with the support of many NGO and arts organizations over the years.

<https://u.aec.at/FCFA386C>



**Ling Tan** (SG/UK) Part-time Associate Artistic Director at Chinese Arts Now Ltd. (<https://chineseartsnow.org.uk>), part-time Senior Design Lead & Creative Technologist at Umbrellium Ltd. (<https://umbrellium.co.uk>)

# Ent-

Libby Heaney



Quantum computers are being intensely pursued by big tech companies, but they are not yet in the public's consciousness. When fully developed, their immense processing power will undoubtedly change the world, enabling humans to see deeper into reality than ever before. This project aims to raise awareness around quantum computing through new visual languages developed through and about quantum programming, to speculate about its future risks and positive impacts. As the first artwork using quantum computing, *Ent-* is a 360 projection using fantasy and sci-fi to create an emotional, embodied experience. It is a reinterpretation of the central panel of Bosch's *The Garden of Earthly Delights*. Just as *The Garden of Earthly Delights* is both a celebration of and warning against desire, *Ent-* explores our desires for new technologies. And situated between heaven and hell, it provides an analogue for the double-edged potential of quantum com-

puting. The leap in computing power may exponentially accelerate surveillance capitalism, lead to new modes of warfare, and disrupt existing encryption methods. But *Ent-* also investigates the positive potential of quantum tech by accessing important concepts like superposition, which allows particles to exist in multiple states at once. Thinking in terms of these pluralities, experienced through *Ent-*'s entirely new blurred, pixelated aesthetic, has the potential to break down binary thinking and allow for new paradigms around complexity.

Artist development, research, concept development, direction: Libby Heaney  
 Producer and experience design: James B. Stringer  
 Lead Unreal developer: Jira Duguid  
 Unreal developer: Gabriel Stones  
 Quantum computing developer: Libby Heaney  
 Sound: Nabihah Iqbal  
 The artwork was commissioned by Light Art Space (LAS)



<https://u.aec.at/F41D74B6>



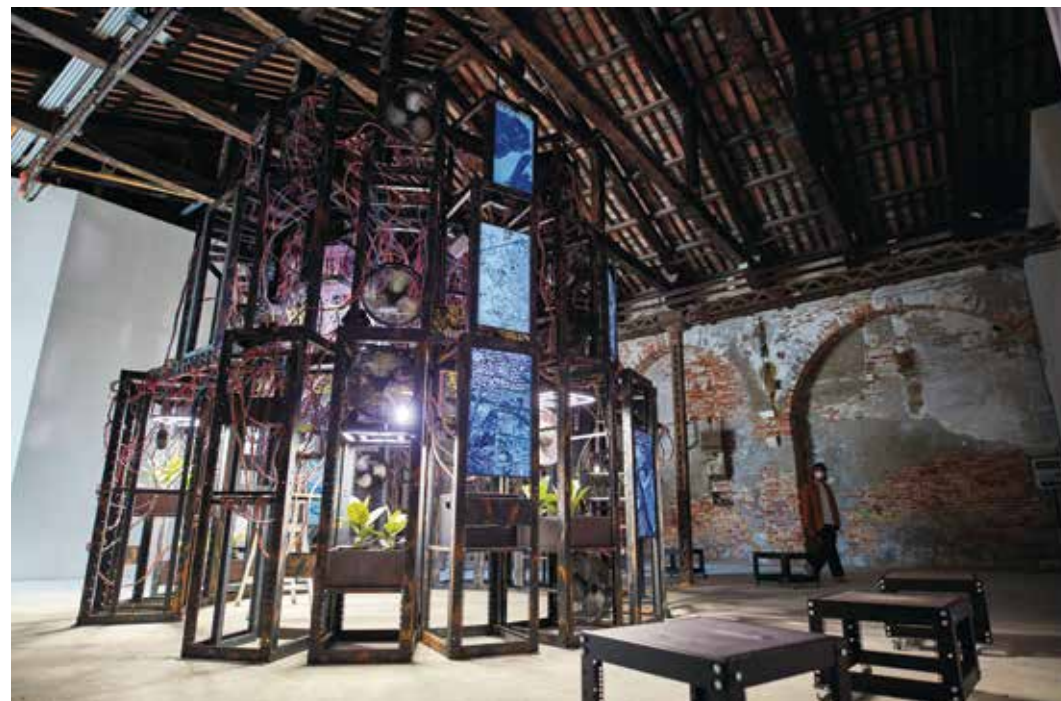
**Libby Heaney (GB)** is a British artist who holds a PhD in Quantum Information Science and an MA in Art and Science. She has exhibited widely in the UK and internationally, including solo exhibitions at arebyte Gallery, London (2022) and Light Art Space, Berlin (2022). She has performed at Sonar Festival, CCCB, Barcelona (2021), and Southbank Centre, London (2022). As well as quantum computing, Heaney's practice incorporates AI and VR. Heaney's work often subverts the capitalist uses of these tools, forcing them to work against themselves to expose their drawbacks or alternatives. Inspired by Surrealism and Dadaism, Heaney's work is playful and incorporates affect and noise to investigate subjectivity, truth and perception, as well as our seductive relationships with new technologies.

STARTS Prize '22  
Ent-

Nomination

# Entanglement

ANNEX



*Entanglement* explores the materiality of data and the interwoven human, environmental, and cultural impacts of information and communication technologies. It highlights how data production and consumption territorialize the physical landscape and examines Ireland's place in the pan-national evolution of data infrastructure by foregrounding the material footprint of the internet and cloud services.

The story of the materiality of data is entwined with the Irish landscape both historically and in the present day. From the landing of the first transatlantic cable at Valentia Island in 1858 to today where Ireland has become one of Europe's primary data center hubs.

Entanglement uses the prism of heat to explore the material relationship between data infrastructure and architecture through a structure that collapses local and planetary-scale data infrastructure networks into the most primitive of socialising technologies: the campfire. The pavilion asserts that from the burning of campfires to the management of waste heat generated by contemporary data infrastructure, the production and distribution of information is intrinsically connected to the production and distribution of heat.

Fabrication: Space Forms Ltd.  
 Structural engineer: ARUP, Dublin  
 Graphic design: Alex Syngé



<https://u.aec.at/783888EE>



**ANNEX (INT)** is a collaboration of artists, architects, and urban researchers born and/or based in Ireland, who came together to curate the Irish Pavilion at the Venice Architecture Biennale in 2021. ANNEX explores the material and cultural implications of large technical systems for the built environment with reference to architecture, art, computer science, and gaming platforms. Members include Sven Anderson, Alan Butler, David Capener, Donal Lally, Clare Lyster, and Fiona McDermott.

STARTS Prize '22  
Entanglement

Nomination

# Gran Turismo Sophy™

Pete Wurman and the teams at Sony AI, Polyphony Digital and Sony Interactive Entertainment



Gran Turismo Sophy™ (GT Sophy) is a breakthrough in AI featured as a cover article in the Feb 10, 2022 edition of *Nature*.

Sony AI in partnership with Polyphony Digital, maker of Gran Turismo and Sony Interactive Entertainment, which provided the cloud infrastructure for massive scale AI training, developed a revolutionary superhuman autonomous AI racing agent that outraced the world's best drivers of the highly realistic PlayStation®4 racing simulation game, Gran Turismo™ (GT) Sport.

Sony AI researchers and engineers developed innovative reinforcement learning (RL) techniques including a new training algorithm called Quantile-Regression Soft Actor-Critic (QR-SAC), agent-understandable encodings of the rules of racing, and a training regimen that promoted the acquisition of nuanced skills for high-speed, wheel-to-wheel racing. Through these key innovations in RL

Techniques, GT Sophy mastered the skills of Race Car Control, Racing Tactics and Racing Etiquette, characteristics that are not present in earlier AI breakthroughs.

GT Sophy was developed with a view to how AI agents in games (as opponents or collaborators) can enhance the players' gaming experience.

Gran Turismo Sport: © 2021 Sony Interactive Entertainment Inc. Developed by Polyphony Digital Inc. "Gran Turismo" and "Gran Turismo Sophy" logos are registered trademarks or trademarks of Sony Interactive Entertainment Inc.

<https://u.aec.at/661AB969>



**Pete Wurman** (US) received his undergraduate degree from MIT in Mechanical Engineering and a PhD in Computer Science at the University of Michigan. He helped co-found Kiva Systems, the company that pioneered mobile robots in warehousing, which was acquired by Amazon in 2012. For their invention, Pete and his co-founders were inducted into the National Inventors Hall of Fame in 2022. Pete has over 50 academic papers and 60 patents, and is an IEEE Fellow and AAAI Fellow.

**Sony AI Inc.** As a wholly owned subsidiary of Sony Group Corporation, Sony AI was established in April 2020 to accelerate the fundamental research and development of AI with the mission to unleash human imagination and creativity with AI. <https://ai.sony>

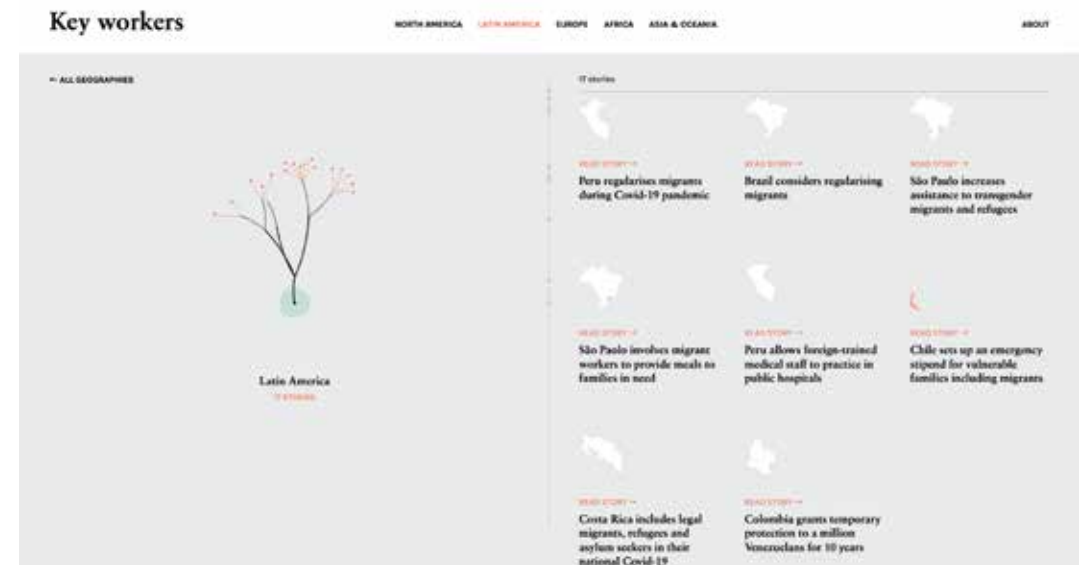
STARTS Prize '22  
Gran Turismo Sophy™

Nomination

# Key Workers.

## Migrants' contribution to the COVID-19 response

Federica Fragapane, Alex Piacentini, Marta Foresti/ODI



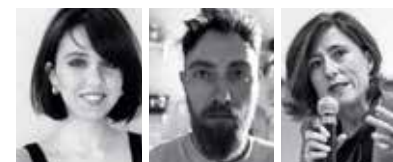
*Key workers* is a data visualization project designed with ODI. It aims to create a visual narrative of migrant workers' contributions to the COVID-19 response, showing examples of reforms, new initiatives and campaigns on their contributions in healthcare and beyond.

The project's core element is represented by trees as a visual metaphor for growing awareness of the essential contributions of migrants to the COVID-19 crisis. Each tree represents a geographic region and divides into three main branches for each level of the story. These further divide into branches according to the sectors of the stories—for example, healthcare, food, and agriculture. Each dot represents a reform, new initiative, or campaign. Interacting with the piece allows to read and explore the stories.

Giving a shape to these data sets helps show hidden stories: they're already being told, but they're often undervalued or taken for granted. Visualizing them helps to acknowledge them, hopefully making them more visible, using data visualization as a tool to bring the hidden to light. The website is regularly updated: the trees are growing, and users can periodically see new branches and new dots appearing.

Project co-designed by Federica Fragapane and Alex Piacentini  
Concept and research: Marta Foresti of ODI and ODI's team

<https://u.aec.at/5387CC81>



**Federica Fragapane** (IT) is an information designer. She designed data for Google, UN, BBC, Scientific American. Many of her projects have an experimental approach. **Alex Piacentini** (IT) is a visual designer, creative coder, and digital artist based in Milan. In his work he mixes graphic design, data visualization and interfaces, but also light, sound, visuals, and algorithms. **Marta Foresti** (IT/UK) is Executive Director of ODI Europe (<https://odi.org/en/about/our-work/odi-europe/>), working on migration and innovation, advising on international and local policy making, and delivery with a focus on sustainability and development.

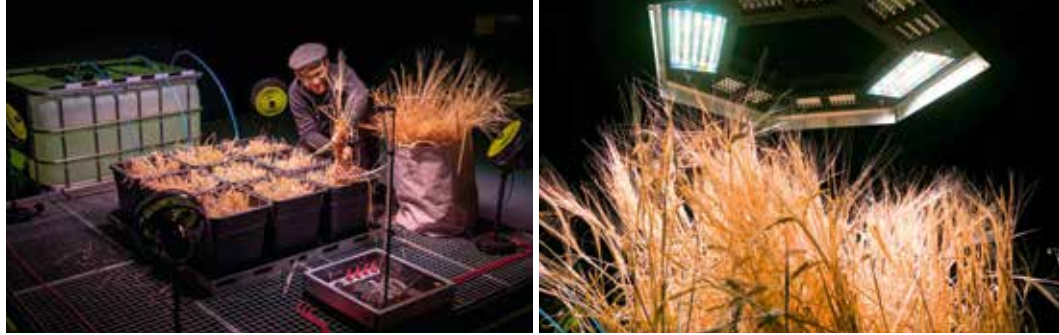
STARTS Prize '22  
Key Workers. Migrants' contribution  
to the COVID-19 response

Nomination

# LIFE SUPPORT SYSTEM

## Ecosystem Services Estimation Experiment

DISNOVATION.ORG



This artistic provocation seeks to estimate the orders of magnitude of critical ecosystem services fundamental to all planetary life processes. It is common to describe our relationships with society, the world, and the biosphere with metaphors from economics, which has specific understandings of value. Today's prevailing economics conventions are unable to recognize intrinsic value of the ecosystems on which all life depends. In cultures overdetermined by concepts from economics, we are left without adequate discursive instruments to socially or politically address the importance of ecosystem contributions to life on Earth. This experiment consists of 1 square meter of wheat, cultivated in a closed environment. Critical inputs such as water, light, heat, and nutrients are measured, monitored, and displayed for the public. This procedure makes palpable the immense scale of ecosystem contributions, and provides a speculative reference for a reckoning of the undervalued and over-exploited "work of the biosphere."

Conception: DISNOVATION.ORG  
 Web developer: Jerome Saint-Clair  
 Hardware developers: Vivien Roussel, Thomas Demmer  
 Production: iMAL | Coproduction: Biennale Chroniques  
 Support: CNC (Dicréam)

<https://u.aec.at/15225C7F>



DISNOVATION.ORG is a research collective set up in Paris in 2012, whose core members include Maria Roszkowska, Nicolas Maigret, and Baruch Gottlieb. They work at the interface between contemporary art, research and hacking, and compose tailor-made teams for each investigation together with academics, activists, engineers, and designers. More specifically their recent artistic provocations seek to empower Post Growth imaginaries and practices by challenging the widespread faith that "economic growth" and "technological fixes" will solve the ecosystemic disruptions they produced in the first place.

STARTS Prize '22  
 LIFE SUPPORT SYSTEM (Ecosystem  
 Services Estimation Experiment)

Nomination

# Neo Stone Age

Erco Lai



Erco Lai

The concrete industry is at the root of several environmental issues; high CO<sub>2</sub> emissions in several parts of the production chain, pollution related to mining, and biodiversity loss in a world more and more covered by concrete. We are in urgent need of alternatives to build in more harmony with our surroundings. What can designers learn from the geological processes of mineral formation? Can we develop new building methods using geopolymerization in the near future, to build in symbiosis with planet Earth?

The design-research project *Neo Stone Age* questions if we can use industrial by-products, like lime pellets from the water softening process and slags from power plants, as building materials. We inves-

tigated how to combine "mineral waste products" with the method of geopolymerization, a chemical process to bind minerals with minerals. With this method, we aim to pave the path to "artificial" stone, by making use of industrial waste, and to create (more) circular building materials. With this project, we hope to contribute to both the imagination and realization of alternative building materials, using "unwanted minerals" to close biogeochemical material flows within our built environment and the urban ecosystem.

Advisor: Esmee Geerken

<https://u.aec.at/3B2402D0>



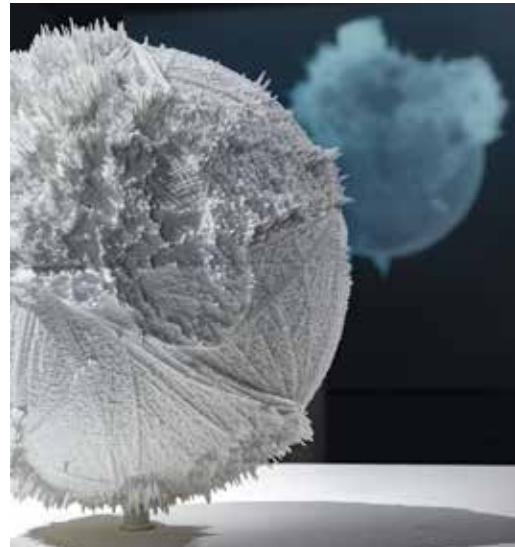
Erco Lai (TW) Graduated in 2021 from Master Industrial design, Royal Academy of Art The Hague (KABK). During the program, I devoted myself to geological processes and matters. From this non-human perspective, I attempt to develop a human-Earth hybrid building system and imagine what future sustainable manufacturing can look like. Meanwhile, my design approach is listening to a matter by hand-on experiments and shaping it in the most "natural" way. Within my practices, I attempt to create the beauty of balancing between control of design and spontaneity of materials.

STARTS Prize '22  
 Neo Stone Age

Nomination

# Political Atmospheric

Manifest Data Lab



Richard Stonehouse

*Political Atmospheric* consists of 3 x large 3D printed models of atmospheric CO<sub>2</sub> derived from climate data and 2 projections that animate the same information as a group of connected works. These works construct geographic topographies producing bitter-sweet crustal geologies, scars, ridges, and archipelagos of carbon emissions, that describe how a focus on extraction at the expense of the environment has overwhelmed and refigured the planet's atmosphere. Our approach is to reverse engineers' climate models to emphasise information often obscured or not considered directly relevant in scientific usage. The works show that from the 1750s onwards, growing industrial activity in the Global North is responsible for 92% of CO<sub>2</sub> with only 8% from the Global South. This extractivist activity mirrors wider historic processes of power distribution visited on poorer countries and shows that the atmosphere is as contested a space as the territories beneath. We seek to make tangible and materially present the infrastructures, future scenarios, fluxes, and energy exchanges that have caused these effects by exploiting the potential for scientific climate data to operate as a public form with emotional and political impact.

Manifest Data Lab:  
Project team: Tom Corby, Gavin Baily, Jonathan Mackenzie, Sarah Bagshaw, Louise Sime, Giles Lane, Erin Dickson, George Roussos  
With support from: The UK Arts and Humanities Research Council (AHRC), the British Antarctic Survey, the University of the Arts London

<https://u.aec.at/33FD9D12>



The Manifest Data Lab (MDL) is a collective of artists, designers, and climate scientists who critically engage with climate data. Using experimental drawings, maps, animations, and models we precipitate new meanings from this information to expose and make tangible the material, social, and cultural ways in which we are implicated in climate crisis. MDL is situated at Central St Martins, University of the Arts, London. The British Antarctic Survey is a partner organisation.

STARTS Prize '22  
Political Atmospheric

Nomination

# Project PLATEAU

MLIT: Ministry of Land, Infrastructure, Transport and Tourism



MLIT



2. Enhance data ecosystem of developing 3D city models and creating use cases.

We are not only focusing on data development, but also on data utilization. Data by itself does not create value, so we emphasize providing 3D city models to the market for generating innovation and new business.

3. Open format, open source, vendor-free. We have adopted OGC CityGML2.0 as the standard specification for 3D City Models in Japan, because the open format can be used by anyone, at that, we provide the source code for various software for 3D City Models as open. System engineers and other professionals play a key role in creating innovations using data, so we make efforts to create easy environment for system developers to use data by promoting projects as openly as possible.

This project was made possible by the flat and cross-sectoral collaboration of experts from a wide range of fields, including the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), the study and development of data specifications for 3D city models, the creation of use cases, and the dissemination of information.

A project led by Japan's MLIT: Ministry of Land, Infrastructure, Transport and Tourism to develop and open data on 3D city models throughout Japan. The project aims to make urban policy sustainable, human-centric, and agile through the development of 3D city models, use cases, and promotion of their use. The goal is not just to digitize the city, but to realize digital transformation (DX) of urban policy.

There are three main aims of the project:

1. Creation of new solutions using existing data. Our 3D city models are developed by reusing the basic maps for urban planning, the map is created by the local governments regularly, so we realize a data development methodology that is reasonable and scalable.

<https://u.aec.at/56271CCB>



Ministry of Land, Infrastructure, Transport and Tourism (JP) is one of the administrative organs in Japan that is responsible for the comprehensive and systematic use, development, and conservation of national land, the harmonious development of social infrastructure, the promotion of transportation policy, meteorological services, and maritime safety and security. The City Bureau, which promotes PLATEAU, is an internal department established in 2011 that is responsible for urban renewal, community development, and regional development.

STARTS Prize '22  
Project PLATEAU

Nomination

# Quorum Sensing: Skin Flora Signal System

Helena Nikonole, Lucy Ojomoko



*Quorum Sensing: Skin Flora Signal System* develops DIY approaches for modifying human skin microbiome in order to produce smells that can be easily detected to self-diagnose or prevent diseases. Moreover this project connects three kingdoms in a symbiotic relationship, uniting bacteria, plants, and animals (such as humans). By creating genetically modified skin microbiome bacteria, producing smells of flowers as a response to a trigger like a disease or fever, the project suggests to consider skin microbiome as a terminal or an interface. Some diseases are asymptomatic, but can be detected on a molecular level. The entity or the organ, created as a prototype within the framework of the project, is able to reveal diseases by decoding molecular processes and producing smells that can be detected and identified. In terms of medicine, this system can be considered as a method of diagnostics and self-diagnostics or even disease prevention. However we can expand this understanding in terms of bio-semiotics and see it as a new, artificially created but nevertheless natural sensing organ with the specific ability to

redefine the existing signal system (smells) and to use the familiar sensation (olfactory) to encode and decode the information on a biochemical level.

Kernsikova Institute; Biotechnical Faculty (Mycosmo Infrastructural Centre); ART4MED project, co-funded by the Creative Europe program of the European Union and Ministry of Public Administration of the Republic of Slovenia

<https://u.aec.at/081E363D>



**Helena Nikonole** (TR/RU) is a new media artist, independent curator, and educator currently based in Istanbul. Interested in Artificial Intelligence, hybrid art, and bio-semiotics, she explores the potential possibilities and risks of technology to understand the modern technology- and media-determined world. Her works have been exhibited at venues such as ZKM, Ars Electronica, and CTM. **Lucy Ojomoko** (RU) is a molecular biologist and artist. She is focused on scientific and artistic research in the field of neuro- and synthetic biology. Her works were devoted to the exploration of intraspecific communication and the study of plasticity limits of living systems. She is author of several publications in peer review journals and has patents.

**STARTS Prize '22**  
**Quorum Sensing:**  
**Skin Flora Signal System**

Nomination

# SolarSoundSystem

Cédric Carles



Atelier 21

As one of the projects of Atelier 21, *Solar Sound System* offers sound systems powered by the sun and bicycles for events, as well as an educative tool to introduce sustainability to the public. Thanks to its design, participants can enjoy music with 100% renewable energy generated speakers, turntables, and sound mixers. Since 2016, *Solar Sound System* also has their own solar powered radio station, Radio3S.org. With seven active branches in Lausanne, Paris, Marseille, Berlin, Biarritz, Hong-Kong, and Tel-Aviv, and more than

600 events, the organization aims to teach the public about the ease of renewable energy use, and to inspire them to take steps to lower their reliance on fossil fuels.

Atelier 21 is a laboratory of public utility in the field of energy transition. Atelier 21 aims to:

- Promote the realization of cultural, educational, and experimental projects in the field of energy, design, music, architecture, and visual arts in general.
- Systematically proposes a conscious approach in the mode of production and in the development of eco-concepts.
- Communicate by example. Informs and stimulates the creation of pilot projects in the context of sustainable development.

Co-founder, designer, and researcher: Cédric Carles  
Co-founder, artist, and engineer: Thomas Ortiz  
Co-founder, webmaster, and photographer: Ruben Ben

<https://u.aec.at/127A7F2B>



**Cédric Carles** (FR) is a French-Swiss artist and designer. A change-maker and community-creating artist, his work mixes an experimental approach with a tangible eventual reflection on our spatial and climatic environment. His projects go beyond a cult specific to the design of the object, opening up to other disciplines, with a vast field of educational and social innovations. Passionate about energy issues, Cédric Carles, as an artist, transition designer, and also director of Atelier 21 in Paris, develops artistic and ecological interventions in public space.

**STARTS Prize '22**  
**SolarSoundSystem**

Nomination

# SpreeBerlin—The Voice of a River

JKUKULA



In the context of the climate crisis and the accompanying social change, the project examines the relationship between Berlin and the Spree, the urban space, the citizens, and the body of water. How can the river be given its own “political” voice and what can contribute to creating more awareness of the Spree and the influence of humans? With the help of the buoy developed in the project, the body of water draws attention to pollution. Digital tools and media, such as measuring devices and apps, record the actual state of the river and communicate this to citizens in an accessible way. Exciting historic and current articles on the topic are also displayed. A future layer on the website highlights the unused potential and illustrates how the city could change for the better with the help of the river, and inspires citizens and politicians to take action. In the hot summer months, the buoy pumps oxygen into the river and supplies it to the Spree and its creatures. The planet-centric approach provides a holistic and “green” solution to the various problems and ensures a healthier balance between the stakeholders involved.

Special thanks: Kunsthochschule Weißensee, Fakultät Produkt Design; Prof. Nils Krüger and Prof. Lucy Norris for supervision and the BMBF, “Wissenschaft im Dialog” for support

The project was funded by “Science in Dialog – BMBF” as part of the university competition in the bio-economy year 2021. Through the GermanDesignGraduates cultural award, the project was as well supported with a bit of money. In addition, small funds were raised through teaching formats such as at the VHS Berlin or the CityLab. Unfortunately, the funding has now been used up and the project is just waiting to be continued.



<https://u.aec.at/F9602B0D>



**Jakob Kukula** (DE) is a multidisciplinary artist and designer. Born and raised in Berlin, the city’s thriving scenes and rapidly changing urban structures exert a lifelong influence on him and his work. After finishing his product design studies at Bauhaus University in Weimar, NY, and Amsterdam, he returned to Berlin, working for Studio Olafur Eliasson and finishing his Master Thesis at KHB Weißensee. Currently, he is exploring a Planet-Centric Design practice, questioning the relationship between humans and nature, trying to find ways to regenerate, and suggesting ideas for a social and planetary transformation.

STARTS Prize '22  
SpreeBerlin—The Voice of a River

Nomination

# Susceptible

Anna Dumitriu, Alex May



*Susceptible* is a data-driven interactive digital artwork based on cutting-edge research from CRyPTIC, an international consortium led by the University of Oxford. CRyPTIC’s research analysed thousands of images of the tuberculosis (TB) bacteria growing in the presence of different antibiotics. Researchers then combined that data with information about the whole genome sequences of those bacteria, in order to predict, for the first time, which of the four first-line antibiotic medicines will be effective in treating a patient with tuberculosis based on the DNA sequence of the bacteria infecting them. CRyPTIC brought together 10,290 Mycobacterium tuberculosis samples, representing all major strain lineages, obtained from people in sixteen different countries across six continents, along with a knowledge base of M. tuberculosis genome mutations that are associated with resistance or susceptibility to the four drugs. In the artwork TB bacillus swarm around the bronchi and alveoli of the lung. The four antibiotics

are represented by different colored cloud-like elements inspired by the appearance of the medicines. The TB bacteria each represent a different sample, which, if they are susceptible to one of the four drugs, are destroyed when a participant guides them to it. The artwork is layered with time-based origin and destination data from London’s Gatwick Airport from before, during, and after the COVID-19 pandemic lockdown period in the form of contrail-like threads which cross the images. It shows explicitly the massive reduction in flights that occurred during the 2020 pandemic.

Lead artist: Anna Dumitriu  
Creative technologist: Alex May  
Curatorial advisor: Irini Papadimitriou  
Supported by DRIVA Arts DRIVA (Digital Research and Innovation Accelerator) led by the University of Brighton and funded by the European Structural Investment Fund and Arts Council England

<https://u.aec.at/E4899FF1>



**Anna Dumitriu** (GB) is an award winning internationally renowned British artist who works with BioArt, sculpture, installation, and digital media to explore our relationship to infectious diseases, synthetic biology, and robotics. Past exhibitions include ZKM, Ars Electronica, BOZAR, and HeK. **Alex May** (GB) is a British contemporary artist whose practice questions how our individual and collective experiences of time, and formation of memories and cultural record, are mediated, expanded, and directed by contemporary technologies. Past exhibitions include LABoral, IMPAKT, FACT, and HeK.

STARTS Prize '22  
Susceptible

Nomination





How does it feel to be a slime mold? Or a toad? Or a plant? The virtual reality experience *Symbiosis* from the Dutch collective Polymorf is a unique experience for all the senses. Wearing a specially designed suit full of sensors, you temporarily escape the limitations of the human body and the world as humans know it. *Symbiosis* is a performative, multi-user, and multi-sensory VR installation in which the human body will be redesigned. It allows every participant to embody a post-human or even nonhuman reality: a completely symbiotic human-animal or human-technologic relationship. As a designer collective that likes to mix different styles and approaches, Polymorf is inspired by the work of biologist and philosopher Donna Haraway. In the current age in which the climate and atmosphere are changing as a result of human activity, she is thinking about a future in which humans have a less central place. Her ideas turn self-evident truths upside down.

*Symbiosis* hints at a future life in true symbiosis with other organisms and technologies on this planet. To complete the multi-sensory experience, the virtual world participants are presented with is supplemented with smells, soft robotics, and plant-based snacks tailored to each creature.

Designed and produced by Polymorf in collaboration with Studio Biarritz  
 Directed by: Marcel van Brakel and Mark Meeuwenoord  
 Interaction design: Luciano Pinna, Frank Bosma, Martijn Zandvliet and Wijnand van Tol  
 3D Lead designer: Roberto Digiglio  
 Wearables: Maurice Spapens  
 Food design: Karpendonkse Hoeve  
 Sales, partnerships, production: Marieke Nooren  
 Distribution: Popkraft  
 Partners: IDFA Doclab & MIT Media Lab, STRP and Breda Photo  
 Financially supported by: Netherlands Film Fund and Creative Industries Fund NL, Amsterdam Fund for the Arts (AFK)



<https://u.aec.at/OA8C1706>

**Polymorf (NL)** is an interdisciplinary experience design collective. Polymorf designs by any media necessary to create speculative design and multisensory experiences using cutting-edge technologies. Polymorf explores the possibilities for taste, scent, and touch to create multi-sensory strategies for story and experience design working closely with various industries and universities all over the world. By directly influencing the affective response, Polymorf incorporates visceral meaning in their designs to reflect on the now, the (post-) human condition, and the relationships between humans and technology. Their work has been shown and awarded internationally.

**STARTS Prize '22**  
**Symbiosis**

Nomination

## The Glass Room: Misinformation Community Edition

Tactical Tech



Photo courtesy of Microwave Festival

*The Glass Room: Misinformation Community Edition* is an interactive community engagement exhibition that invites people to think critically and proactively about their relationship with digital technologies. It is a space to reflect, discuss, and debate how technology impacts our daily lives and how we consume information, focusing on misinformation, political influence, and democracy. How can we identify “fake news” and verify information? How does misinformation amplify on social media? How do online profiling and political influence work and affect our decisions? The exhibition takes visitors on an exploration journey through the digital information flows and how they influence us as citizens, voters, and consumers. *The Glass Room: Misinformation Community Edition*, developed by Tactical Tech, is available in an easy-accessible, inspiring and creative format, enabling organizations worldwide to host their own local exhibitions. With this innovative and collaborative approach, we empower existing societal networks—libraries, cultural institutions, community centers, maker spaces, and schools across Europe—that are trusted by their own communities.



Photo courtesy of Microwave Festival

*The Glass Room: Misinformation Community Edition* is a Tactical Tech's project. Curation, production and research: Tactical Tech Exhibition design: La Loma In collaboration with: Density Design Team; DoubleCheck; Deepfake Lab; Hooked *The Glass Room: Misinformation Community Edition* was funded by the European Union and the Swedish International Development Cooperation Agency.



<https://u.aec.at/F2F9DEC9>

**Tactical Tech (INT)** is an international non-profit organization that, during the last 20 years, has worked at the intersection of technology and society, using art and a design-based approach to promote conversations around technology and its impact on people's lives. We have pioneered work on demystifying technology and on privacy and digital security questions. Through our collaborative approach, we work with partners and civil society organizations worldwide to build systemic and sustainable capacity and enable them to engage their audiences in critically assessing the impact of technology.

**STARTS Prize '22**  
**The Glass Room:**  
**Misinformation Community Edition**

Nomination

# Vertical Walking

Rombout Frieling

Our European population is ageing and our cities have become denser and hence more vertical. Stairs require a lot of effort and can become a real challenge for people as they get older. Elevators seem to suggest that we have given up on finding new ways of using our body (other than pushing the button). However, designer Rombout Frieling believes there must be more harmonious ways to move our bodies through our increasingly vertical habitats. Together with—among others—physical therapists and dancers, Rombout initiated the *Vertical Walking* project. The end result is a harmonious movement: still entirely human-powered, but only requiring a fraction of the effort compared to stairs. *Vertical Walking* allows even severely disabled patients, who are unable to use stairs any more, to still move themselves vertically independently. Pilot installations enable people, like Jannie, an MS sufferer, (see movie) to continue living independently in their own multi-storey homes. Most importantly the solution provides much needed movement, exercise, and also a sense of achievement and pleasure for people who are increasingly limited in their abilities. Early studies indicate that the agility and fitness of people using the *VertiWalk* system significantly increases. *VertiWalk* functions independently of electricity and only needs 85x85cm of floor space. The system is self-standing and can be easily installed. Rombout has been approached by thousands of Europeans who would like *VertiWalk* in their daily lives, but the compliance and certification process for such an unconventional solution is not so easy and requires funding. Rombout has taken on this challenge and any potential prizes will go towards bringing *VertiWalk* to Europeans in need.



© Rombout Frieling lab  
With support from:  
Creative Industries Fund NL;  
Dyson Foundation

<https://u.aec.at/C0717873>



Mariëtte van Uijert

**Rombout Frieling** (NL) makes matter move man. As a designer, engineer and researcher, Rombout believes we are still stuck in a “mind” driven world: Whereas *technologies of the mind* (ICT, screens, internet) have developed immensely, we tend to still overlook the potential and the needs of our most precious asset: our bodies. With his team in Eindhoven, he takes on challenges in which the Body can become part of the solution. Rombout is Dyson Innovation Fellow at the Royal College of Art in London. He previously directed the Intelligent Lighting Institute at Eindhoven University of Technology and the GLOW Festival of Light and Architecture.

STARTS Prize '22  
Vertical Walking

Nomination

# WITHER—A Slice of Rainforest Disappearing at the Rate of Deforestation

Thijs Biersteker



The deforestation of the Brazilian Amazon continues at an alarming rate. In an ongoing partnership between the United Nations Educational, Scientific and Cultural Organization (UNESCO) and artist Thijs Biersteker, *Wither* is a slice of digital rainforest that disappears at the same rate as the Amazon rainforest. It updates every time new data is available, becoming a living monument to the biodiversity loss happening right now. Every leaf that becomes transparent marks the loss of 128 square meters of rainforest, 641 square meters each second (based on data from 31 July 2020–31 July 2021). This confronts us with the urgency of the climate emergency and the importance of respecting and valuing Earth’s essential living systems.

*Wither* (2022) by Thijs Biersteker in collaboration with UNESCO  
Support received from: UNESCO—data

<https://u.aec.at/22B74862>



**Thijs Biersteker** (NL) creates interactive awareness installations about the world’s most pressing issues today. In his work he seamlessly combines scientific research and new technologies to deliver an empowering experience that is accessible both intellectually and technologically. His immersive art installations, often described as eco – or awareness art, turn the impact of topics like climate change, air pollution, ocean plastic, and the Anthropocene into tangible experiences that travel the world to create awareness around these topics. He is also the founder of Woven Studio, where science-based artworks are created in a circular and sustainable way.

STARTS Prize '22  
WITHER—A Slice of Rainforest  
Disappearing at the Rate of Deforestation 257

Nomination

**S+T+ARTS**   
**PRIZE'22 July 2022**

All nominations are judged by a jury to decide on the two prize-winning projects and up to ten Honorary Mentions.



**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 on 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.



**Alexander Mankowsky** (DE), born 1957 in Berlin, studied Social Science, Philosophy and Psychology at Freie Universität Berlin. In 1989 he started working in the Daimler research institute in Berlin. The multidisciplinary approach in the institute integrated a wide array of disciplines, from social sciences to artificial intelligence. His current working topics are Futures Studies, focusing on the ever changing culture of mobility, the interdependency of social and technological innovation, and other aspects of envisioning paths into the future.



**Andres Colmenares** (CO/ES) is the co-founder of IAM, the creative research lab that helps responsible citizens and organizations make better decisions by using futures as tools to anticipate challenges

and opportunities, while exploring the socio-ecological impacts of digital technologies and infrastructures. In his role as a strategist, curatorial designer, and creative foresight consultant he has led and developed partnerships with organizations as NESTA, Tate, Red Bull, University of Arts London, and BBC. He is also co-director of The Billion Seconds Institute, a lifelong learning initiative to reimagine the digital economy, and organizer of IAM Weekend, the annual community-driven gathering in Barcelona for creative professionals looking to collectively rethink the futures of the internet(s). He is a faculty member of the Masters in Design for Emerging Futures at the Institute for Advanced Architecture of Catalonia and has been invited as guest lecturer to institutions such as Merz Akademie, Berghs School of Communication, and ELISAVA School of Design & Engineering of Barcelona, where he is now leading a new master's program on the impact of Arts, Design & AI in society. He also has contributed opinion articles and writes short fiction for publications such as *CRACK Magazine*, *Branch Magazine*, *The Site Magazine* and *LS:N Global*.



**Lucía García** (ES) is a law graduate from the Universidad Complutense de Madrid with postgraduate studies in European Affairs and Cultural Institutions Management. She started her career training as a

broker and as a risk analyst in Paris and London. After this, she returned to Madrid to work as Coordinator of the International Fashion Week, later taking up the position, for six and a half years, of Commercial Director of ARCO, the International Contemporary Art Fair of Madrid, Spain. In August 2006, a year prior to its official opening, she arrived at LABORAL Centro de Arte y Creación Industrial to work closely with the founding director in launching the project as its General Coordinator and Head of Public Programs. In September 2011 she was appointed Managing Director and Secretary General of LABORAL, a position that she held for 15 years, until June 2021. In August 2021, after a public merit-based competition, she was elected and appointed General Director of iMAL (Interactive Media Art Laboratory), Brussels.



**Asako Tomura** (JP) is the General Manager of the Corporate Technology Strategy Division at the Sony Group Corporation. She also serves as Visiting Researcher at the University of Tokyo and as an

Adviser for the Project to Support Emerging Media Arts Creators, Agency for Cultural Affairs, Government of Japan, 2017–2019. Tomura has 25 years' experience as a content-plus-sustainability professional, with a particular focus on the integration of advanced technology into new experiences, entertainment, and social issues. After completing her master's degree in Chemistry and Media Arts at Keio University, she started her career at Shiseido in advertising. She joined Sony Corporation in 2001, and while employed at Sony Pictures Entertainment (Japan) and at Aniplex, Inc., oversaw the launch of the digital content distribution business for film and animation. Afterward, as Head of CSR Innovation in Sony HQ, she engaged with NGOs, the United Nations, and other organizations, on projects that utilized technology to tackle social issues from 2010 to 2014. She also acted as community manager of creators for Sony's new concept Life Space UX in 2015. Currently, she oversees content development, Science & Technology Communication and sustainability. As a visiting researcher at the KAKEHI Yasuaki Laboratory, the University of Tokyo Interfaculty Initiative in Information Studies, she is researching the collective creations of artists and engineers. Award: Sound installation *Acoustic Vessel Odyssey*, the 22nd Japan Media Arts Festival Entertainment Division Jury Selections, 2018.

# S+T+ARTS PRIZE '22 International 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.



**Ghislaine Boddington** (UK) is an award-winning artist, curator, director and presenter, specializing in the future human, body responsive technologies, and immersive experiences. She is co-founder and Creative Director of *body>data>space*, a pioneering interactive creative design collective who have advocated for the living body to be at the heart of the digital debate since the early 1990s. With a background in dance and performing arts and a long-term focus on the blending of our virtual and physical bodies, she engages in highly topical and future digital issues for our living bodies, including personal data usage, identity and representation of the self, connected body enhancements, digital intimacy, and collective embodiment of the future.



**Amanda Masha Caminals** (ES) is co-director and curator of the Mutant Institute of Environmental Narratives (IMNA), the laboratory of Matadero Madrid that fosters artistic practices in connection with journalism, science and technology as a response to the challenges of the climate crisis. Previous to that, she directed the CITY STATION of the Environmental Health Clinic by artist Natalie Jeremijenko at the Centre for Contemporary Culture of Barcelona (CCCB). She is founder of the organization Translocalia, a network of artists, curators, and designers to plan for the future through art. She holds a BA in Humanities, a degree in History of Art and an MA Hons in Curating Contemporary Art from the Royal College of Art in London.



**Michela Magas** (GB/HR) is a designer who bridges science and art, design and technology, and academic research and industry. She is Chair of the Industry Commons Foundation, innovation advisor to the European Commission and the G7 leaders, Member of President von der Leyen's High Level Round Table for the New European Bauhaus, and member of the Advisory Board of CERN IdeaSquare (ISAB-G). Michela is the founder of Stockholm-based MTF Labs and has been feeding policy directly from grassroots experimentation with its global community of 8000 contributors from the arts and sciences over the past 10 years. In 2017 she was awarded European Woman Innovator of the Year and in 2016 she was presented with an Innovation Luminary Award for Creative Innovation by the European Commission and Intel Labs Europe.



**Areti Markopoulou** (GR) is an architect, researcher, and urban technologist working at the intersection between architecture and digital technologies. She is the Academic Director at IAAC in Barcelona, where she also leads the Advanced Architecture Group, a multidisciplinary research group exploring how design and science can positively impact and transform the present and future of our built spaces, the way we live and interact. Her research and practice focus on redefining the architecture of cities through an ecological and technological spectrum combining design with biotechnologies, new materials, digital fabrication, and big data. Areti is co-founder of the art/tech gallery StudioP52 and co-editor of *Urban Next*, a global network focused on rethinking architecture through the contemporary urban milieu. She is the project coordinator of a number of European research funded projects on topics including urban regeneration, circular design, and construction and multidisciplinary educational models in the digital age. Areti is the founder and is currently chairing the Responsive Cities International Symposium in Barcelona while she has served as Head Curator of international exhibitions such as *Future Arena* and *On Site Robotics* (Building Barcelona Construmat 2017–19), *Print Matter* (In3dustry 2016), *HyperCity* (Shenzhen Bi-city

*Biennale*, 2015), and *MyVeryOwnCity* (World Bank, BR Barcelona, 2011). Her work has been featured in exhibitions worldwide and together with Lydia Kallipoliti she has been appointed the Head Curator for the Tallinn Architecture Biennale 2022.



**Lisa Przioda** (DE) studied Communication Science (BA) at the Ludwig Maximilian University in Munich, Germany and Communication Management at the University of Hohenheim (MSc) in Stuttgart, Germany. Since 2015 she is part of the Innovation Management Global team at the corporate sector Research and Advance Engineering of Robert Bosch GmbH in Renningen near Stuttgart, Germany. Within the department she is responsible for the research campus' innovative and creative space "Platform 12" as well as the company's very own corporate coworking space "X-Change Lab." From 2015-2020 she was responsible in organizing the *Wimmel Research Fellowship* for the company, a stipend offered to artists with the aim to foster the dialogue between research, art, and business for all parties involved.



**Nana Radenković** (RS) is one of the co-founders of *Nova Iskra*, where she focuses on creating mentoring programs, trainings and workshops for individuals, organizations, and companies interested in taking an active role in the processes of transformation—not only of their projects and businesses, but also through the creation of new ways in which we could learn, live, and work in the future. She holds an MA in Management in Culture, Interculturalism and Mediation in the Balkans from the University of the Arts Belgrade, and has extensive experience in working in the private, public, and civil sectors. She was a professor at the Faculty of Media and Communications in Belgrade, and a mentor within the *Nelt Educational Program* and *Creative Mentorship*.



**Kei Shimada** (JP) is a Japanese American entrepreneur, award winning innovation leader, and currently Managing Director of R/GA Tokyo since April 2021, where he helps his clients prototype the

future. He focuses on world first, region first, and industry first projects, having led teams to develop Japan's de facto national database of evacuation shelters, produced the world's first AI classic concert at *Ars Electronica* that won a Silver Lion at the Cannes Festival, and created the world's first smart speaker that won a CES Innovation Award. Previously, he was leader of the *Digital Makers Lab* at IBM Japan, and before that the *Global Innovation Director* at *Dentsu*. Kei is one of Japan's most active global keynote speakers, having spoken in approximately 40 countries, and also contributes as pitch mentor for the Japan chapter of the world's largest accelerator *PlugandPlay*. He is also one of three official evangelists assisting the Prime Minister's Office in their promotion and business development around the national QZSS satellite. He is a graduate of *Waseda University* and has an Executive MBA degree from *Quantic School of Business and Technology*.



**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 is also leading the *HAKUHODO* side of a collaborative project with *ARS ELECTRONICA*.



**Lining Yao** (CN) is an Assistant Professor at the *Human-Computer Interaction Institute (HCII)*, *Carnegie Mellon University*, *School of Computer Science*, and directs the *Morphing Matter Lab* (<https://morphingmatter.cs.cmu.edu/>). *Morphing Matter Lab* develops materials, tools, and applications of adaptive, dynamic, and intelligent morphing matter from nano to macro scales. Research often combines material science, computational fabrication, creative art and design practices. Lining and her lab work anti-disciplinarily, publishing and exhibiting across science, engineering, design and art. Lining gained her PhD at *MIT Media Lab* in 2017.



# ARS ELECTRONICA 2022

Festival for Art, Technology & Society

## Organization

**Ars Electronica Linz GmbH & Co KG**

## Co-CEOs

Gerfried Stocker, Markus Jandl  
Ars-Electronica-Straße 1, 4040 Linz, Austria  
Tel: +4373272720  
Fax: +4373272722  
info@ars.electronica.art

## Co-organizer Kepler's Garden Johannes Kepler University Linz

**Rector:** Meinhard Lukas

## Co-organizer Campus University of Art and Design Linz

**Rector:** Brigitte Hütter

**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:** Kristina Maurer,

Vanessa Hanneschläger

**Head of Operations:** Xenia Kentz

## Production Team:

Hannah Bachl, Pablo Bes Alonso, Klaus Birklbauer, Julia Blaas, Hortense Boulais-Ifrène, Fabiana Braunstorfer, Bernd Breitenauer, Tonia Büttner, Ana Maria Carabelea, Sophia Calo, Eugenie DeSmedt, Daniela Duca, Miha Erjavec, Jaka Erjavec, Stephan Feichter, Marion Friedl, Jessica Galirow, Magdalena Giegler, Carla Gimeno Grauwinkel, Roland Grilberger, David Grohe, Nur Selin Gunes, Jürgen Hagler, Karam Harwash, Carolin Heim, Randolph Helmstetter, Alexander Hens, Markus Hillebrand, Ferenc Hirt, Magdalena Hrnicek, Katharina Hof, Holger Hörtnagl, Jovana Jankov, Lisa Kainz, Alexandra Kalinowska, Kohei Kanomata, Mihaela Kavdanska, Michaela Keplinger, Ruth Köchl, Maria Koller, Veronika Sanna Krenn, Anna Kuthan, Lisa Lepschi, Katja Lux, Adrian Meissner, Moritz Merten, Claudia Moser, Philipp Nelweg, Andrew Newman, Emiko Ogawa, Maria-Nefeli Panetos, Victoria Pieler, Benjamin Pittertschatscher, Moana Ponesch, Daniela Poschauko, Gabriele Purdure, Christina Radner, Michael Samhaber, Andrea Scheinecker, Thomas Schlager, Marie-Louise Schmidinger, Armin Seidl, Karl Seiringer, Manfred Seifriedsberger, Sumreen Shahzad, Lisa Shchegolkova, Karla Spiluttini, Helmut Steinecker, Olena Syrbu, Andrea Tešanović, Lukas Traxler, Georgios Tsampounaris, Jochen Tuch, Edin Turalic, Joschi Viteka, Helena Viteka, Laura Welzenbach, Mariia Zolotova

## Press

Christopher Sonnleitner, Robert Bauernhansl, Shirin Darwish, Mario Romera Gómez, Felix Grabner, Marlene Grinner, Martin Hieslmair, Katia Kreuzhuber, Mario Schmidhuber, Amelie Steininger, Yazdan Zand

## Marketing

Meli Posch, Hannah Bachl

## Prix Ars Electronica 2022

**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:** Victoria Absmann, Christl Baur, Marion Friedl, Carla Gimeno Grauwinkel, Jürgen Hagler, Manuela Hillmann, Ferenc Hirt, Kristina Maurer, Hans Christian Merten, Christina Radner, Maria-Nefeli Panetos, Jutta Schmiederer, Karla Spiluttini, Joschi Viteka, Laura Welzenbach

## Ars Electronica Linz GmbH & Co KG

### Co-CEOs

Gerfried Stocker, Markus Jandl

### Ars Electronica Center

Andreas Bauer, Christoph Kremer  
Sahel Ahmadzai, Viktoria Aistleitner, Bettina Anderl, Sonja Bailer, Joan Bairam, Reinhard Bengesser, Anastasia Bragina, Sarah Brait, Lisa-Maria Brandstötter, Manuela Bruckner, Jingjing Cao, Julia Croton, Moritz Danner, Aline Darwish, Shirin Darwish, Blanka Denkmaier, Johannes Egler, Katrin Fenninger, Melinda File, Karin Gabriel, Philipp Gartlehner, Mitra Gazvini-Zateh, Elisabeth Gerhard, Firas Ghilan, Dominic Gottinger, Melanie Gruber, Nicole Grüneis, Harald Haas, Birgit Hartinger, Haitham Harwash, Alexandra Heiligenbrunner, Katherine Heller, Thomas Hillinger, Christine Hinterkörner, Katharina Hof, Florian Hofer, Gerold Hofstadler, Jacqueline Hofstadler, Sri Rahayu Hofstadler, Eva Hofstädter, Fabian Hollinetz, Katharina Hollinetz, Anca Ignat, Armin Isa Imamovic, David Jentgens, Sabrina Kaselitz, Sandra Kiendler, Thomas Kollmann, Verena Langthaler, Sabine Leidlmair, Johanna Leitner, Anna Katharina Link, Jakob Luckeneder, Katja Lux, Ulrike Mair, Clemens Mock, Erika Mondria, Claudia Moser, Marco Mrcela, Silvia Mukherjee, Daniel Murina, Sophie Netzer, Sophie Netzer, Andrea Oberfichtner, Michaela Obermayer, Dietmar Peter, Gerald Peter, Svetlana Petrovic, Armin Pils, Ulrike Rieseneder, Petra Saubolle-Hofmann, Alina Sauter, Birgitt Schäffer, Sarah Schmidt, Lydia Schneeberger, Thomas Schwarz, Lindita Shabani, Majd Shukair, Magdalena Sick-Leitner, Elias Silber, Minoosh Sorkhkamal Zadeh-Steininger, Martin Spanka, Elisabeth Spöck, Danny Stika, Margarethe Stöttner-Breuer, Johannes Stürzlinger, Bhoomesh Tak, Thomas Viehböck, Raffaella Vornicu, Manuel Walch, Florian Wanninger, Gregor Woschitz

## Ars Electronica Futurelab

Horst Hörtnert, Roland Haring, Hideaki Ogawa  
Flavia Andessner, Friedrich Bachinger, Florian Berger, Patrick Berger, Alexandre Bezri, Kerstin Blätterbinder, Birgit Cakir, Arno Deutschbauer, Manuel Dobusch, Marianne Eisl, Stephan Feichter, Peter Freudling, Matthew Gardiner, Bernadette Geißler, Barbara Habringer, Peter Haider, Peter Holzkorn, Susanne Kiesenhofer, Anna Kuthan, Elisabeth Luger, Maria Mayr, Stefan Mittlböck-Jungwirth-Fohringer, Otto Naderer, Nicolas Naveau, Ali Nikrang, Anna Oelsch, Maria Anna Pfeifer, Daniel Rammer, Erwin Reitböck, Raphael Elias Schaumburg-Lippe, Simon Schmid, Yoko Shimizu, Georgios Tsampounaris

## Ars Electronica Festival / Prix / Exhibitions

Martin Honzik, Veronika Christina Liebl, Karl Julian Schmidinger

Christl Baur, Pablo Bes Alonso, Ana Maria Carabelea, Marion Friedl, Jessica Galirow, Vanessa Hanneschläger, Ferenc Hirt, Xenia Kentz, Michaela Keplinger, Veronika Sanna Krenn, Kristina Maurer, Hans Christian Merten, Andrew Newman, Emiko Ogawa, Victoria Pieler, Christina Radner, Manfred Seifriedsberger, Karla Spiluttini, Laura Welzenbach

## Ars Electronica Management Services

Elisabeth Kapeller, Stephan Kobler

Isabella Albel-Feicht, Robert Anderle, Jennifer Bauer, Robert Bauernhansl, Patrick Buchinger, Barbara Diesendreither, Michaela Frech, Marlene Grinner, Karin Gruber, Martin Hieslmair, Sabine Hummelbrunner, Thomas Jannke, Daniela Krassnitzer, Katia Kreuzhuber, Dominic Lengauer, Florian Miesenberger, Horst Morocutti, Daniel Nimmervoll, Edith Noska-Neubauer, Melanie Posch, Gabriele Purdue, Mario Romera Gómez, Mario Schmidhumer, Christopher Sonnleitner, David Starzengruber, Michaela Wimplinger, Yazdan Zand

## Ars Electronica Solutions

Michael Mondria, Andreas Pramböck, Michael Kaiser

Ina Badics, Chris Bruckmayr, Stefan Dorn, Stefanie Farkashazy, Michaela Fagner, Manuela Gruber, David Holzweber, Ramona Kranzl, Fadil Kujundzic, Kornelia Maier, Harald Moser, Patrick Müller, My Trinh Müller-Gardiner, Katalin Romics, Dominik Trichlin, Markus Wipplinger

## Johannes Kepler Universität |

### Johannes Kepler University

**Rector:** Meinhard Lukas

**Vice-Rectors:** Christopher Lindinger, Alberta Bonanni, Elgin Drda, Stefan Koch, Christiane Tusek

**Project Coordinators:** Gregor Pechmann, Jasmina Cehic

**Team:** Magdalena Neuhofer, Lisa Katharina Pollak, Mario Epner, Karin Pühringer, Martina Hochradl, Kerstin Gabauer, Pia Herzog, Margit Haider, Melanie Neundlinger, Alexander Freischlager, Stefan Kronawitheitner, Gerald Hanusch, Christian Kern, Michael Schleiss, Amir-Ali Eshghi, Klemens Lengauer, Martin Titz, Elisabeth Ulbrich, Barbara Mayr-Forster, Wolfgang Weiß, Margot Berger, Aleks Gajewski, Manuela Kurz, Margit Littringer, Thomas Isensee, Hannes Bauer, Christian-Alexander Göhring, Julian Hengstschläger, Dijana Arambasic, Sarah Vogl, Lara Steglehner, Wolfgang Niederhauser, Marion Draxler, Tanja Jany-Fink, Marion Draxler, Christian Savoy, Sonja Raus, Elke Strobl, Susanne Hametner, Janine Ulz, Angelika Fanninger-Wenter, Sabine Hajnal, Angelika Rametsteiner, Silvia Kagerer, Martina Mottl, Sabine Leitner, Ines Bindreiter, Bernadette Weinreich, Katharina Heidel, Nadine Lichtenberger, Eva Hirtenlehner, Erich Viehböck, Claudia Sturm, Bianca Wegscheider, Nina Mühlbacher, Peter Pirklbauer, Adrian Vitale, Willibald Somasgutner, Wolfgang Frank, Michael Fuchs, Manfred Pührmayr, Thomas Grاسبöck, Josef Hofer, Wolfgang König, Zdravko Marjanovic, Jolanda Tröls, Torsten Roß, Manuela Sassmann, Johann Wagner-Mistlberger, Herma Schumann, Franz-Josef Bodingbauer, Andrea Mitter, Brigitte Reindl, Karin Müller, Carola Pöppel, Silvia Wöss, Vincent Koch, Elisabeth Kopatsch, Michaela Lindbichler, Carina Purner, Jozef Badura, Martin Gregus, Melisa Bajrektarevic, Ghiasi Nezamoddin, Dragan Durisic, Manfred Pichler, Thomas Ladendorfer, Andreas Himmelblauer, Christian Schmiedhuber, Petru Mihai, Gerald Atmender, Walter Auböck, Markus Schiller, Alexander Wurm, Manfred Walter, Wilhelm Nimmervoll, Mohammed Al Arjawi, Wolfgang Ladendorfer, Hubert Silberner, Markus Schagerl, Friedrich Außerwöger, Rudolf Reitermayr, Günter Pilgerstorfer, Andreas Reindl, Ernst Berger, Ernst Keplinger, Thomas Bernhard, Alex Frederic Rot, Abdullah Katirci, Gerhard Priesner-Grömer, Sandra Spiesberger, Ewald Ziss, Herbert Minihuber, Sylwia Siemionow, Andreas Birngruber, Ewald Dörner, Günter Wolfhager, Walter Braun, Sertac Lalelidir, Zoran Zusah

## Universität für künstlerische und industrielle

### Gestaltung Linz | University of Art and Design Linz

**Rector:** Brigitte Hütter

**Vice-Rectors:** Erik Aigner, Karin Harrasser, Gitti Vasicek

**Team:** Manuela Naveau, Sylvia Leitner, Chiara Matschnig, Marlies Hajnal, Simon Hochleitner  
Christa Sommerer, Laurent Mignonneau, Fabricio Lamoncha, Michaela Ortner, Albert Lang, Ute Ploier, Sander Hofstee, Irene Posch, Monja Hirscher, Alexis Dworsky, Lukas Löcker, Gerhard Funk, Joachim Smetschka, Holunder Heiß, Christoph Nebel, Gerlinde Schmierer, Marta Beauchamp, Fadi Dorninger, Reinhard Reisenzahn, Stefan Tiefengraber, Peter Lehner, Ewald Haider, Markus Haider, Christian Forstner, Donatus Gruber, Frank Linimayr, Ronald Nösterer, Alfred Wollersberger, Markus Decker, Johannes Kremsner, Antonio Zingaro, Alexandra Furtner, Eva Fostel, Julia Gschwendtner, Peter Illetschko

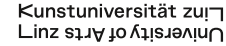
ORGANIZER



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



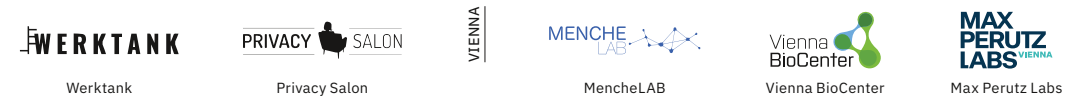
EVENT PARTNERS



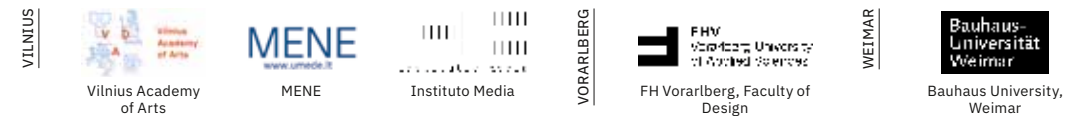
IN COOPERATION WITH



GARDEN PARTNERS



CAMPUS GARDEN PARTNERS



ARS ELECTRONICA RECEIVES SUPPORT FROM

 European Union's Horizon 2020 research and innovation programme	 Europäische Union Erasmus+ 2014-2020	 Europäische Kommission Vertretung in Österreich	 Horizon Europe Erasmus+ 2021-2027
 Creative Europe 2014-2020	 Creative Europe 2021-2027	 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
 Chile	 Ministerio de Relaciones Exteriores, Dirección de Asuntos Culturales Chile	 Ministerio de las Culturas, las Artes y el Patrimonio Chile	 Agency for Cultural Affairs, Government of Japan / Bunka-cho Art Platform Japan
 Vlaamse Gemeenschap, Department Culture, Youth and Media	 Istituto Italiano di Cultura	 Québec Government Office in Berlin	 Klima- und Energiefonds
 Spanische Botschaft	 Institute Francais Autriche	 Grand Palais Paris/Louvre	 Österreichische Botschaft des Heiligen Stuhls
 Verwertungsgesellschaft der Filmschaffenden VdFS GenmbH	 Taiwan Creative Content Agency (TAICCA)	 National Taiwan Science Education Center (NTSEC)	 Österreichische Forschungsförderungs GmbH
 Botschaft der Bundesrepublik Deutschland Wien	 Embajada del Perú en Austria	 Fonds zur Förderung der wissenschaftlichen Forschung	

MOBILITY PARTNER

Höglinger Denzel  
Und weiter geht's.  
Autohaus Höglinger

SPONSORS

 HAKUHODO Inc.	 BMW	 Oberösterreich Tourismus	 The Cisneros Fontanals Art Foundation (CIFO)	 GREINER AG
 Arbeitsmarktservice	 MIC – managing international customs & trade compliance	 Dynatrace	 Art Collection Deutsche Telekom	 Wirtschaftskammer Oberösterreich
 VH Award by Hyundai Motor Group	 HYUNDAI MOTOR GROUP	 RISC Software GmbH	 Ableton AG	 ACOnet
 Aruba Networks, Inc.	 Association for Robots in Architecture	 BBP GmbH	 bellaflorea Gartencenter GmbH	
 CCF - Computer Center Feldbach	 Dorotheum	 Cisco Systems	 Fortinet	 Graf Carello GmbH
 Hilti Austria Ges.m.b.H.	 Ing. Martin Pemwieser GmbH	 Klangfarbe - Musikinstrumente und tontechnische Geräte Handelsges.m.b.H.	 Motorola	
 Nikkei Innovation Lab	 4YOUgend - Verein OÖ Jugendarbeit	 S. Spitz GmbH	 S.S.T. Security	 Siemens Wien
 Startbahn, Inc.	 TEUFELBERGER Group	 Ton & Bild Medientechnik GmbH	 Tourismusverband Linz	
 Triple A Aqua Service GmbH	 Vöslauer Mineralwasser GmbH	 Wacom Co., Ltd.	 Wiener Städtische	

## SUSTAINABILITY PARTNERS



AFB mildtätige und gemeinnützige Gesellschaft zur Schaffung von Arbeitsplätzen für behinderte Menschen mbH



BIO AUSTRIA



Brantner Green Solutions



Climate Austria



KlimaKultur-GreenEvent OÖ



Klimabündnis OÖ



Klimaticket



Linz AG



RINGER GmbH



Viva con Agua

## PROJECTS



STARTS Prize



STARTS EU



STARTS Residencies



EMAP European Media Art Platform



esero Austria



STEAM INC



Creative School



Studiotopea



OSHub



Roots & Seeds XXI



Beyond Quantum Music



WeSTEAM



CCI Thrive



DOORS



Arbeiterkammer OÖ



Pädagogische Hochschule OÖ

## MEDIA PARTNERS



OÖ Nachrichten



TIPS



FM4



DER STANDARD



ARTE



Wiener Zeitung



Ö1

## COOPERATION PARTNERS

ANISN

Antre-Peaux

Art Hub Copenhagen

Atelierhaus Salzamt

AWS – Jugend Innovativ

BGZ Berliner Gesellschaft für internationale Zusammenarbeit

Bike Kitchen Linz

Bildrecht

Black Euphoria

Bozar

Bruckner Orchester Linz

C³ Center for Culture & Communication Foundation

Cap Sciences

CCCB: Centre de Cultura Contemporània de Barcelona

Center for Promotion of Science

Centrica

Centro Azkuna de Ocio y Cultura

Changemaker Educations

Chester Beatty Library

Cluj Cultural Centre

CoderDojo Linz

Copernicus Science Center

Creative Region

CYENS Centre of Excellence

Danish House of Natural Sciences

De Toneelmakerij

Dedale

Den Frie Centre of Contemporary Art

Det Norske Teatret

Digital Art International

Ecsite

Edinburgh Futures Institute

Estonian Academy of Arts

Europe for Festivals, Festivals for Europe EFFE

European Science Engagement Association EUSEA

European Theatre Convention

EXIT-sozial

FAB Verein zur Förderung von Arbeit und Beschäftigung

Fachhochschule St. Pölten

FACT

Finnish Museum Association

Frankfurter Buchmesse

Fraunhofer MEVIS: Institute for Medical Image Computing

French Tech Grande Provence

Geomatics Research Group

Gluon

gnration

Grand Garage

Heretic

Hexagone

iMAL Art Center for Digital Cultures & Technology

Impact Hub Siracusa

IMZ International Music & Media Centre

In4Art

INOVA+

Institute of Musicology SASA

Institut Incontri, Hochschule für Musik, Theater und Medien

instruments of things

itworks Personalservice

Kepler Salon – Verein zur Förderung von Wissensvermittlung

Kersnikova Institute / Kapelica Gallery

King's College London

Knowledge Pavilion

Kontejner

L.E.V. Festival

La Casemate

LABoral Centro de Arte y Creación

Landestheater Linz

Laznia Centre for Contemporary Art

le lieu unique

Leiden University

Leonardo OLATS

LINZ CENTER OF MECHATRONICS GMBH

LIVA

Lulea Tekniska Universitet

Luxemburg Science Center

Mariendom Linz

Matsudo International Science and Art Festival

MAXXI - Museo nazionale delle arti del XXI secolo

mb21 - Medienkulturzentrum Dresden

m-cult

MediaFutures

MEET Digital Culture Center

Michael Culture Association

Município de Figueira de Castelo Rodrigo

MUSEUM BOOSTER

Nähküche Linz

NAROM

National STEM Learning Centre

NeMe

Nemo

NESTA

Netherlands Institute for Sound and Vision

New Art Center Belgrade

OMAI

Onassis Stegi

Onl'Fait

OÖ Landeskultur GMBH

Otelo

Oulu University of Applied Sciences

Parque de las Ciencias

Polycular OG

Project Atol

Quo Artis

Radonia Makerspace

RIXC

roadLAB - Technisches Museum Wien

Romanian Space Agency

Schauspielhaus Graz

SciCo

Science for Change

Science Foundation Ireland

Science Gallery Dublin

SCIENCE IN

Seconde Nature

Slovensko narodno gledališče Nova Gorica

Snowball

SONY CSL Paris

SpielFabrique

Stadt Dortmund

Stadtgärten

Stadtwerkstatt

STATE Studio

STePS

Stichting Saxion

Succy

T6 Ecosystems

Teatrul Național "Marin Sorescu"

Technical University Dresden

The Culture Yard

The Northern Photographic Centre

Théâtre de Liège

Today's Art

Under the Milky Way

University of Amsterdam

University of Arts London: Central Saint Martins

University of Barcelona

VFQ Gesellschaft für Frauen und Qualifikation mbH

Vrije Universiteit Amsterdam

Waag

Werkleitz Centre for Media Art

White Castle Games Agency

WRO Art Center

Zabala Innovation

Zaragoza City of Knowledge Foundation



# CyberArts 2022

## Prix Ars Electronica 2022

Computer Animation · Interactive Art+ · Digital Communities · Pioneers of Media Art ·  
u19–create your world · Ars Electronica Award for Digital Humanity · Klasse! Lernen.

## STARTS Prize '22

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

Ars Electronica Linz GmbH & Co KG  
Ars-Electronica-Straße 1  
4040 Linz, Austria  
ars.electronica.art

**CEOs:** Gerfried Stocker, Markus Jandl

**Editors:** Gerfried Stocker, Markus Jandl

**Editing:** Jutta Schmiederer

**Translations:** (German–English): Douglas Deitemyer

**Copyediting:** Catherine Lewis, Jutta Schmiederer, Ingrid Fischer-Schreiber

**Graphic design and production:** Gerhard Kirchschräger

**Typeface:** IBM Plex Sans

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

**Paper:** Claro Bulk, 135 g/m<sup>2</sup>, 300 g/m<sup>2</sup>

**Photos:** pp. 192–198, 258–259, Ars Electronica, vog.photo

© 2022 Ars Electronica

© 2022 for the reproduced works by the artists, or their legal successors

© 2022 Hatje Cantz Verlag

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

ISBN 978-3-7757-5364-7

Printed in Austria

Cover illustration:

Front: Jung Hsu, Natalia Rivera: *BiOfilm.net: Resist like bacteria*; photo: Jung Hsu

Dora Bartilotti: *Voz Pública*, photo: Rhizomes Films

Back: Holly Herndon, Mathew Dryhurst, Herndon Dryhurst Studio: *Holly+*, photo: Andrés Mañón  
Giulia Foscari, UNLESS: *Antarctic Resolution*, photo: Courtesy of UNLESS, Delfino Sisto Legnani



## Documentation of the Prix Ars Electronica 2022

Lavishly illustrated and containing texts by the prize-winning artists and statements by the juries that singled them out for recognition, this catalog showcases the works honored by the Prix Ars Electronica 2022. The Prix Ars Electronica is the world's most time-honored media arts competition. Winners are awarded the coveted Golden Nica statuette. Ever since its inception in 1987, the Prix Ars Electronica has been honoring creativity and innovativeness in the use of digital media. This year, experts from all over the world evaluated 2,338 submissions from 88 countries in four categories: Computer Animation, Interactive Art +, Digital Communities, and the u19—create your world competition for young people. The volume also provides insights into the achievements of this year's winner of the Golden Nica honoring Visionary Pioneers of Media Art and the winners of the Ars Electronica Award for Digital Humanity and the Austrian education award „Klasse! Lernen. Wir sind digital.“

## STARTS Prize '22

STARTS (= Science + Technology + Arts) is an initiative of the European Commission to foster alliances of technology and artistic practice. As part of this initiative, the STARTS Prize awards people and projects that have the potential to make a sustainable positive impact on Europe's economic, technological, social, and ecological future. The STARTS Prize of the European Commission was launched by Ars Electronica, BOZAR, Waag, T6 Ecosystems, INOVA+, French Tech Grande Provence, and the Frankfurt Book Fair.

This catalog presents the winners of the European Commission's two Grand Prizes in 2022, which honor Innovation in Technology, Industry and Society stimulated by the Arts, and more of the STARTS Prize'22 highlights.

272 pages, 594 illustrations



ISBN 978-3-7757-5364-7



9 783775 753647