

1,637 submissions from 78 countries:

## **S+T+ARTS PRIZE '23 for Alexandra Daisy Ginsberg (GB) and Richard Mosse (IE)**

(Linz/Brussels, June 19, 2023) In the end, 1,637 submissions from 78 countries were received by Ars Electronica between January 11 and March 13, 2023 for this year's S+T+ARTS Prize competition. The main prizes, each endowed with 20,000 euros, were awarded to Alexandra Daisy Ginsberg (GB) and Richard Mosse (IE). Their projects were recognized by a top-class international jury that included Mónica Bello (ES/CH), Francesca Bria (IT), Bernd Fesel (DE), Jun Inada (JP), and Meinhard Lukas (AT). Support was provided by the S+T+ARTS Prize Advisors Andrés Burbano (CO), Lydia Kallipoliti (GR), Jon McCormack (AU), Kyuseung Keith Noh (KR), Katja Schechtner (AT), Yasaman Sheri (CA), Kei Takeuchi (JP), Rodolfo Groenewoud van Vliet (NL), Ksenia Zaytseva (CA/RU), and the collective Hackers & Designers (NL).

### **S+T+ARTS = Innovation at the Nexus of Science, Technology, and the ARTS**

S+T+ARTS is a large-scale initiative of the European Commission that aims to combine technology and artistic practice in the best possible way and make it a win-win for both European innovation policy and the art world. The initiative promotes and supports people and projects that contribute to tackling Europe's social, environmental, and economic challenges.

### **S+T+ARTS Prize**

Part of the S+T+ARTS initiative is the prestigious S+T+ARTS Prize, which comes with a total of 40,000 euros in prize money. The annual competition honors innovative projects at the nexus of art, technology and science that contribute to economic and social innovation. Ars Electronica in Linz has been commissioned to organize the competition. In addition to prize money, the winners will receive prominent appearances at the Ars Electronica Festival and at events organized by consortium partners Bozar, Waag, INOVA+, T6 Ecosystems, French Tech Grande Provence and the Frankfurt Book Fair.

<https://starts-prize.aec.at/en/>

# S+T+ARTS PRIZE '23

## 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.

### **Pollinator Pathmaker** Alexandra Daisy Ginsberg (GB)

How would insects shape our gardens and parks? This question is the starting point of an experiment with which Alexandra Daisy Ginsberg is attempting to create the largest climate-positive work of art in the world.

Pollinators such as bees, butterflies, and wasps are indispensable for the flourishing of ecosystems. However, their populations are rapidly declining at an alarming rate. Whether due to soil sealing, monocultures, pesticide use, invasive species, or climate change, the reasons for their deaths are many and the consequences devastating. The loss of a pollinator species often means the extinction of a plant species that relies specifically on them for pollination.

To counteract this, Alexandra Daisy Ginsberg initiated the *Pollinator Pathmaker*. The online platform—or the algorithm behind it—helps to create an “empathetic” planting plan that favors the greatest possible diversity of pollinator species. To do this, the algorithm selects plants that thrive in the particular location and attract as many pollinator species as possible. Each garden designed in this way looks different and is an algorithmically generated living work of art for animals—and humans. For her *Pollinator Pathmaker*, Alexandra Daisy Ginsberg (GB) will be awarded the Grand Prize—Artistic Exploration 2023.

<https://pollinator.art/de>

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

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

# S+T+ARTS PRIZE '23

## Grand Prize—Innovative Collaboration

Awarded for innovative collaboration between industry or technology and the arts that opens new pathways for innovation.

### **Broken Spectre** Richard Mosse (IE)

*Broken Spectre* is the portrait of an intentional environmental catastrophe that unfolds along the 4,000-kilometer-long Trans-Amazonian Highway. Illegal logging, slash-and-burn agriculture, gold digging, prospecting, and panning, damming of rivers and the resulting floods, theft of indigenous lands, the establishment of vast monocultures, and factory farming—Richard Mosse documents the widespread but often invisible fronts of industrialized ecocide in the Amazon Basin. His dream-like, immersive video tells of violent excesses against nature and humans and asks about the responsibility that regional, national and international systems bear in the process. The narration in *Broken Spectre* plays with the iconography of Western films, focusing on a natural paradise and its indigenous population, who are colonized by righteous, hardworking pioneers—cowboys.

Just as scientists use imaging techniques to make processes visible and comprehensible, Richard Mosse, too, relies on technology to shed light on profit-oriented machinations. He uses a multispectral camera for aerial photography to capture the systematic organization and vast scale of the burning forest, UV microscopy to produce reflective and fluorescent ultraviolet macro time-lapse images of the forest biome, and analog S35-mm infrared film to visualize infrared light reflected from rainforest chlorophyll above 720 nm. During the on-site filming, Richard Mosse collaborated with “Acampamento Terra Livre” (an annual gathering of indigenous peoples in Brazil discussing land rights, environmental protection, culture, and social justice), as well as the Yanomami, Munduruku, Suruí, Kaingang, and other indigenous communities.

For *Broken Spectre*, Richard Mosse will be awarded the Grand Prize – Innovative Collaboration in 2023.

<https://www.richardmosse.com/>

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

## **S+T+ARTS PRIZE '23**

### **Honorary Mentions**

#### **Between the Lines**

Sarah Selby (GB)

Using the example of the British border regime, Sarah Selby shows how individual and formative experiences of people are transformed into mathematical formulas and statistical risk assessments in the mills of a technocratic system. Furthermore, she combines traditional administrative tools such as pen and paper with new technologies like DNA data storage to symbolically infiltrate the bureaucracy of the British border regime. Sarah Selby first asks migrants to record their personal experiences. She transforms these recordings into binary data, encodes them as synthetic DNA, and mixes them into the writing ink of conventional pens. She then distributes these pens to administrative staff of the British border regime. By using the pens in their workplaces, the immigrants' experiences are incorporated into the bureaucratic products of the system.

<https://www.sarahselby.co.uk>

<https://www.betweenthelines.org.uk>

Artist: Sarah Selby

Collaborators:

Cari Hyde-Vaamonde (<https://www.turing.ac.uk/people/enrichment-students/cari-hyde-vaamonde>)

Beyond Detention (<https://www.beyonddetention.org/>)

Twist Bioscience (<https://www.twistbioscience.com/>)

Commissioners

Science Gallery London in collaboration with Future Everything as part of 2023 Season: 'AI: Who's Looking After Me?' exhibition. (<https://london.sciencegallery.com/ai-season>)



## **Child of Now**

**Robert Walton (AU), Julianne Pierce (AU), Claire Coleman (AU),  
University of Melbourne, Arts Centre Melbourne, Phoria**

Aborigines have a concept known as “everywhen.” It is a place where all time is present, where the past 10,000 years of life along the Birrarung River become visible, bearing witness to the resilience of the Indigenous people who have endured natural disasters and the invasion of white settlers. Inspired by this, the audiovisual installation *Child of Now* invites us to imagine that all children would be born now. Immediately afterwards, these children would all be as old as we are at this moment. Then we are asked to think of ourselves just as such “Children of Now” in the future. As volumetric videos, their—that is, our—portraits become visible and each individual holographic “Child of Now” joins the never-ending stream of time that unites all generations. A kind of “future archive” is created before our eyes, populated by more and more holographic individual portraits and at the same time becoming a collective portrait of a contemporary society imagining its heirs and their living conditions.

<http://robertwalton.net/project/child-of-now/>

*Child of Now* by Robert Walton, Julianne Pierce, Claire Coleman

Supported by School of Computing and Information Systems and the Faculty of Engineering and Information Technology at University of Melbourne working in partnership with Arts Centre Melbourne. With additional support from Phoria.



## **CLIMAVORE**

### **Cooking Sections (INT)**

*CLIMAVORE* asks how our food security is affected in times of increasingly virulent climate change. The annual cycle of spring, summer, fall and winter is already beginning to erode, growing seasons are becoming longer in some places and shorter elsewhere, extreme weather events are increasing, soils are leaching and rivers are flushing (plastic) waste and toxins into the oceans on a daily basis. *CLIMAVORE* seeks to address the consequences of this trend and adapt our food production and food consumption to this new reality. In Scotland, for example, *CLIMAVORE* is working on alternative aquacultures. A specially developed platform serves as a tide table: At high tide, the platform is submerged and the mussels and algae attached to it enrich the seawater with oxygen; at low tide, the construction comes to the surface and is transformed into a dining table for people. In collaboration with teachers and chefs, cooking classes are offered at the local high school and partner restaurants, and, together with marine biologists, community planting of seaweed and mussels is encouraged. Additionally, a production facility for manufacturing tiles from oyster and mussel shells is operated in cooperation with stonemasons. *CLIMAVORE* also conducts other prototype projects in Italy, Sweden, Turkey, the Alps, and Lake Erie.

<https://www.climavore.org/>

Cooking Sections: Daniel Fernández Pascual and Alon Schwabe  
Studio team: Rosa Whiteley, Remi Kuforiji  
Director of Care: Dani Burrows  
Director, CLIMAVORE Station Skye & Raasay: Shona Cameron  
Director, Becoming CLIMAVORE: Kelly Tsipni-Kolaza



## Hashd0x | Proof of War

### Egor Kraft (RU)

*Hashd0x | Proof of War* focuses on disinformation and propaganda as central components of warfare. The project consists of several works that put up for discussion prototypical open-source software and hardware that help distinguish fact from fiction, thus contributing to the fight against manipulated photo and video content. Proposed are, for example, *hashmarks*, blockchain-based alternatives to conventional watermarks that “citizen journalists” could use to tamper-proof authentic photo and video footage. With *Uncensorship Architecture*, Egor Kraft in turn argues for the construction of a decentralized blockchain infrastructure that is stored simultaneously on thousands of nodes. Journalistic research results could thus be protected from censorship and blocking. With *Decentralised Embargo*, Egon Kraft points out the hypocrisy of Western sanctions: Using a high-performance computer, Ethereum coins are mined and sent directly to the official cryptocurrency wallet of the Ukrainian state. Power for the server is sourced from Gazprom Germania, which in turn burns Russian gas to generate electricity. *Decentralised Embargo* thus simultaneously finances the Ukrainian and Russian military.

<https://hashdox.org/>

<https://github.com/Hashd0x/>

<https://vimeo.com/egorkraft/proofofwar>

Initial MVP is developed in cooperation with vSelf.  
With support from: Ethereum Swarm, Alexander Levy  
Gallery, European Media & Information Fund and Creative  
Europe program of the European Union.



## **Labyrinth Psychotica— The Anoiksis Experiment by Roomforthoughts**

Jennifer Canary (NL)

*Anoiksis* comes from the Greek and means “homeless”. In science, the term refers to the programmed cell death of human or animal cells that have lost cell-matrix contact. The Anoiksis Theory, in turn, challenges the common understanding of hallucinations and delusions. It assumes that the latter do not result from an impairment of the brain, but on the contrary from a brain that tries to advance a healing process. Hallucinations and delusions, in this reading, is a sane reaction to insane circumstances.

Jennifer Canary (NL) researches psychosis simulations and has developed a radical artistic research theory and method based on the Anoiksis Theory. Her mixed reality VR psychosis simulation puts subjects in a safe interactive waking dream state and simulates a whole range of subjective psychosis experiences for eight minutes. The project aims to improve the treatment of psychosis and the way we deal with psychotic people.

<https://www.labyrinthpsychotica.org>

Thanks to: The Doen Foundation, The Creative Industry Funds, The Mondriaan Funds, Jolijn Friederichs, Tim Knoote, Teresa Feldman (EE), Sigrid Bannenberg, Pinar Temiz, Alec Kopyt (USSR), Laura Schuster, Konstantin Leonenko (UKR), Jeanette Groenendaal, Suleika Elfassi, Dora Grootman, Megan Mateer (USA), Jeroen Zwaal, Linda Maissan, Kasia Szmigiero (P), Xiomara Vado Soto, Renana Elran (ISR), Suzanne Meyer, Dr. Wouter Kusters, Dr. Karlijn Roex, Dr. Wim Veling, Alwin Verdonk, Josephine Bosma, Rokus Loopik, Dr. Anna Cornelia Beyer (UK), Sam Gerrits, Angèle De Jong, Lieselotte Nooyen, Christien Oudshoorn, Nina Boas, Iris Jousma, Anneke de Weerd, Fausto, Marie-Anne Soyez (D), Dr. Sabine Wildevuur, Dr. Tycho Hoogland, Marjelle van Hoorn, Selma Steenhuizen, Ewout Stumphius and Nikola Nikolov (BG). TNO, Dutch Police Academy Ossendrecht (Harold + Frans), AMC UMC Academic Hospital (Jacqueline + Franka + Ellen), Zaans Justitieel Centrum (Ingrid + Remco) and all the teachers and students of the University of Applied Sciences Amsterdam and St Joost Avans!





## **MetaPhase: a contrapuntal dialogue between a pianist and her avatar in the metaverse**

**Giusy Caruso (BE), LWT3 (IT)**

*MetaPhase* is the artistic output of a cross-sector encounter between an avant-garde pianist and researcher—Dr. Giusy Caruso (BE)—and an innovative start-up—LWT3 (IT). Together they have implemented an XR performance that uses motion tracking and VR technology to open the possibility of a unique live music co-creation for the performer and her audience. For this purpose, Giusy Caruso wears a suit with light-reflecting markers and a biosensor that uses surface electromyography (sEMG) to measure her gestures, specifically her muscle tension. Using an Oculus Rift, she enters a meta-performance scene developed with the Unity game engine, where she plays Steve Reich's *Piano Phase for Two Pianos* with an avatar pianist. This second virtual pianist is animated using previously recorded movements of the “real” pianist, whose biosignals now control image and video effects as well as audio parameters. The audience can choose their own perspective in all of this, viewing data in real time or even in post-production together with the pianist. *MetaPhase* celebrates the interdisciplinary collaboration of science, technology and art and expands the possibilities of a futuristic and phygital—that is; physical and digital—techno-aesthetics.

<https://lwt3.com/project/giuseycaruso/>

Concept and pianist (Royal Conservatoire Antwerp, IPEM – University Ghent): Dr. Giusy Caruso

LWT3 Team:  
Hardware and data engineer: Dr. Paolo Belluco  
Designer and VR director: Samuele Polistina  
VR developer: Andrea Randone  
Fashion and product designer: Luigi Sossi  
With support from: Royal Conservatory of Antwerp, IPEM – University Ghent, Yamaha Music Europe



## **Sensing for Justice—SensJus**

Anna Berti Suman (IT)

Inspired by a court case brought by U.S. fishermen against petrochemical giant Formosa Ltd. and won in 2019 thanks to the evidence they gathered, *Sensing for Justice—SensJus* aims to show the leverage that local people can have when it comes to environmental protection. The focus is on regions in southern Italy that, like the former mining areas of Sardinia, the Sulcis region or the oil-rich valleys of Basilicata, suffer from environmental destruction as well as extreme social inequality. *Sensing for Justice—SensJus* works with researchers and local communities, and it is primarily their questions, ideas, and interests that shape the course and focus of the collaboration and its artistic outcomes. Creativity is understood here as a form of caring and empathy that must also have a place in research. The result of such a process is, for example, the *Story of a civic sentinel*. The graphic novel emerged from field research and tells of the successes, but also of the challenges, that citizens face in the fight against oil pollution.

<https://sensingforjustice.webnode.it/>

<https://cordis.europa.eu/project/id/891513>

Author: Anna Berti Suman, European Commission—Joint Research Centre (JRC), Ispra  
Project mentor: Sven Schade, European Commission—Joint Research Centre (JRC), Ispra  
Artistic collaborators:  
Freelance illustrator: Alice Toietta  
Visual storyteller: Bela Pinheiro  
Performer and social theater operator: Alessia Romano  
The project received support of the Marie Skłodowska-Curie grant n. 891513, under H2020-EU, running from 2021 to 2023 (<https://cordis.europa.eu/project/id/891513>). A pilot of the project was developed previously thanks to the concluded research grant (2020-2021) of the Dutch Research Council NWO, the Rubicon fellowship n. 66202117. The artistic component of the project benefited from the synergy with the European Commission Joint Research Centre Art & Science initiative, in particular the Resonances IV Program on the theme “Naturarchy.”

## **Server Farm**

**James Bridle (GB)**

*Server Farm* is the vision of a computer constructed from and with plants and animals. The starting point is the consideration that all processes of modern computer technology—from storage, retrieval and processing of information to networking, power supply and management, input, output and display—can be performed by biological systems. *Server Farm* therefore seeks to create a unique agricultural facility that captures, stores, processes, and shares data in fields, orchards, and gardens. From encoding information in DNA to mapping algorithms with slime molds, from mycelial networks to carbon sequestration, and from heavy metal hyperaccumulators to permaculture processing, *Server Farm* aims to show that both tools and knowledge are available to leave behind the toxic technological infrastructures of the present and replace them with decentralized, rooted, and regenerative alternatives.

<http://serverfarm.jamesbridle.com/>  
<https://vimeo.com/642669678>

*Server Farm* has received previous support from the STRP Festival, Eindhoven, NL



## Turba Tol Hol-Hol Tol

“Turba” stands for “peat” in Spanish, “Hol-Hol Tol” means “heart” (tol) of the peatlands (hol-hol) and comes from the language of the Selk'nam, a South American people who suffered a genocide by gold prospectors and sheep farmers at the end of the 19th century. In 2022, “Turba Tol Hol-Hol Tol” was the title of the Chilean pavilion at the 59th International Art Exhibition of the Biennale di Venezia and was meant to evoke a very special love for peatlands...

Wetlands are under threat everywhere today. However, their conservation is important for the planetary ecosystem and climate, and in Patagonia also essential for the survival of the last Selk'nam. For 8,000 years, the Selk'nam people lived in the peat bogs on Tierra del Fuego. Then came the colonists and with them the catastrophe. Contrary to the official historiography, which declared the Selk'nam people, language, and culture dead in the mid-20th century, there is a small community that has survived to this day and is fighting for its recognition and future.

*Turba Tol Hol-Hol Tol* was aimed at making this struggle visible to all: with a website, a scientific peatland experiment, a book and a multi-sensory installation in the Chilean pavilion at the Biennale di Venezia. The latter allowed visitors to immerse themselves in the world of Patagonia's peatlands and learn about the material and cultural dimensions of these unique and threatened ecosystems.

[www.turbatol.org](http://www.turbatol.org)

*Turba Tol Hol-Hol Tol*, the Chilean Pavilion at the 59th International Art Exhibition – La Biennale di Venezia  
Curator: Camila Marambio  
Artists:  
Sound: Ariel Bustamante  
Art History: Carla Macchiavello  
Film: Dominga Sotomayor  
Architecture: Alfredo Thiermann  
Cultural producer: Juan Pablo Vergara  
Organization: MINCAP – Ministry of Cultures, Arts, and Heritage of Chile; DIRAC – Cultures, Arts, Heritage, and Public Diplomacy Division of the Ministry of Foreign Affairs of Chile  
Commissioner: Ximena Moreno, MINCAP  
Assistant Commissioner: Daniela Aravena, DIRAC  
Coordinators:  
Project Management, MINCAP: Carolina Martínez  
Producer in Italy, MINCAP: Alessandra Dal Mos  
Creative Collaborators:  
Selk'nam poetry and song: Hema'ny Molina  
Ecology: Bárbara Saavedra  
Design: Rosario Ureta  
Web design: Mateo Zlatar  
Web design: Carola del Río  
Book editorial coordination: Constanza Güell  
Museography: Sebastián Cruz  
Lighting: Antonia Peón-Veiga  
Art direction: Nico Arze  
Art direction: Christy Gast  
Direction of photography: Benjamín Echazarreta  
Rumors voice: Isabel Torres  
Selk'nam guide: Fernanda Olivares

Climate change and biodiversity: Nicole Püschel  
*Sphagnum* LAB: Susanne Abel, Matthias Krebs, Jan Peters, Anja Prager, Greta Gaudig  
agustine zegers, Denise Milstein, Randi Nygård, Karolin Tampere, Simon Daniel Tegnander Wenzel, Freja Carmichael, Sonja Carmichael, Elisa Jane Carmichael  
Ensayos scents: Jasper Coleman, Caitlin Franzmann, Renee Rossini  
Film post-production: Hans Toso, Tiff Rekem, Josh Widdicombe, Rus Gant, Stefan Grabowski  
Installation Crew: Rebiennale; Eidotech  
Gallery Attendants: Maria Costan Davara, Vittorio Da Mosto, Fernanda Olivares Molina, Malika Mouj, Isabel Torres  
Partner Institutions: Embassy of Chile in Italy; ProChile; Wildlife Conservation Society – Chile; Fundación Hach Saye; Ensayos; Michael Succow Foundation, partner in the Greifswald Mire Centre  
With support from: Parque Karukinka in Tierra del Fuego; Fundación Arte Precario; Fundación Kreen; Fundación Mustakis; Fundación Arte+; Film Study Center & Department of Art, Film, and Visual Studies, Harvard University; Royal Institute of Art, Stockholm; Collegium Helveticum; Akademie Schloss Solitude; The SeedBox funded by Mistra-Formas, University of Linköping; Torfwerk Moorkultur Ramsloh; Hellmann Worldwide Logistics; Die Beauftragte der Bundesregierung für Kultur und Medien; Caspar-David-Friedrich-Jubiläum; Universitäts- und Hansestadt Greifswald; Office for Contemporary Art, Norway; CEINA – Centro de Extensión del Instituto Nacional José Miguel Carrera; Sinestesia.cc; RioLab; Tamaas; TBA21 – Ocean Space; We Are Here Venice.  
Acknowledgements: Víctor Leyton, Denise Lira-Ratinoff, Ivette Martínez, Patricia Ready, Sandra Terdjman, Andrea Tese, Pomp Wong, Ana María Yaconi



## **VFRAME: Computer Vision for OSINT/OSI Research** Adam Harvey(us), Josh Evans(us), Jules LaPlace (us)

*VFRAME* develops open-source image processing software and neural network models to identify and document human rights violations in conflict zones. Launched in 2017 to bridge the gap between commercial AI systems and the needs of investigative research, *VFRAME* now plays a leading role in the development and application of new techniques that combine 3D photogrammetry, 3D rendering, and 3D printing to generate synthetic data for neural network training. Rather than following the problem-ridden industry trend of mining data from online sources, *VFRAME* uses an artistic approach of digital fabrication, sculpting, photography, and 3D art to tap into a virtually unlimited source of training data. The result are powerful computer vision models that enable the automated identification of illegal cluster munitions in videos from conflict zones. In 2022, *VFRAME* found a perfect partner in the international platform Mnemonic, which trains human rights activists and journalists to use tools and archiving strategies to analyze and verify digital information. The past year also marked the beginning of the collaboration with the non-governmental organization Tech 4 Tracing, through which *VFRAME* gained direct access to real ammunition to create even more detailed 3D scans.

<https://vframe.io>

Director, founder, computer vision: Adam Harvey  
3D design and emerging 3D technologies: Josh Evans  
Information architecture and front-end development: Jules LaPlace  
With support from: Prototype Fund (Bundesministerium für Bildung und Forschung); NLNet  
Foundation and Next Generation Internet (NGIO); NESTA; SIDA; Tech 4 Tracing

# S+T+ARTS PRIZE '23

## Nominations

### ALL PLAYERS TOOL LAB

Masatane Muto (JP), Dentsu Lab Tokyo (JP)

<https://all-players-tool-lab.com/>

Creative director: Naoki Tanaka, DENTSU INC.  
Art director: Yusuke Koyanagi, DENTSU INC.  
Creative technologist: Shintaro Murakami, DENTSU INC.  
Creative technologist: Keita Kuki, DENTSU INC.  
Copywriter: Tina Toda, DENTSU INC.  
Producer: Kohei Ai, DENTSU INC.  
Producer: Miyuki Fujishima, DENTSU INC.

### Critical Climate Machine

Gaëtan Robillard (FR)

<https://robillardstudio.github.io/ccm.html>

<https://vimeo.com/667971904>

Art and research: Gaëtan Robillard  
Machine Learning algorithm: John Cook, Travis Coan,  
Constantine Boussalis, Mirjam O. Nanko  
Musical research: Jérôme Nika  
Sound design: Tony Houziaux  
Computer music: Dionysios Papanikolaou  
Art and education: Özlem Sulak  
Engineering: Laurine Capdeville, Jolan Goulin  
The Refutation Game: Gaëtan Robillard, Laurine Capdeville  
Sound production: IRCAM Centre Pompidou  
Equipment: Laboratoire des Intuitions, ESAD TALM-Tours

CCM is part of the *MediaFutures* project, and has received funding from the European Union's framework Horizon 2020 for research and innovation program under grant agreement No 951962. As part of CCM, Patterns of Heat is an artistic research conducted in the framework of the intelligent. museum project at the ZKM | Center for Art and Media Karlsruhe and at the Deutsches Museum.

### FANGØ a Facebook, Amazon, Netflix and Google Obfuscator

Martin Nadal (ES)

<http://fango.martinnadal.eu/>

Thanks to: EMAP/Onassis Stegi 2020/2021, Deutscher Künstlerbund NEUSTART Modul D 2022mur.at 2023

### Future Materials

<https://www.futurematerialsbank.com>

*Future Materials* is a project by the Jan van Eyck Academie. It receives support from Innovationlabs, a program on behalf of the Dutch Ministry of Education, Culture and Science, the Creative Industries Fund NL, and CLICKNL. Previously supported by the DOEN Foundation.

*Future Materials* is part of GALA – Green Art Lab Alliance and collaborates with the MA program Material Futures at Central Saint Martin (UK) and with CHILL – Chemelot Innovation and Learning Labs, at the Brightlands Chemelot Campus (NL).

### Geo-Llum

Samira Benini Allaouat (IT)

<https://samall.org/GEO-LLUM>

Thanks to:  
Derek Lovley  
Abraham Esteve Nuñez / Bioe Group  
Miguel Alegre  
Akasha Hub  
Green City Lab

### Hyper-Dust

Erlu Ni (CN), Songnan Guo (CN),

Shuyi Fan (CN), Ziyao Lin (CN)

[www.hyper-dust.com](http://www.hyper-dust.com)

Project team: Erlu Ni (CN), Songnan Guo (CN), Shuyi Fan (CN), Ziyao Lin (CN)  
Adviser: Xiewei Song, Xinrong Zhang, Jun Fei, Siyang Jing  
Cooperative researcher: Xia Yi, Yan MoYang  
Exhibition assistance: Li Ruoxuan, Zhang Baiyu  
Supporting organizations: Design School of CAFA (the Central Academy of Fine Arts), Eco-Vision Plan

### Im/Possible Images

Rosa Menkman (NL)

<https://beyondresolution.info/impossible>

<https://vimeo.com/691029308>

Artist: Rosa Menkman  
With support from: CERN, City of Barcelona, HEK Basel, Lothringer 13 München



## **Inside the NYPD's Surveillance Machine**

Superposition (NL)

<https://nypd-surveillance.amnesty.org>

Design & Development: Superposition (Bram Bogaerts, Casper Schipper, Robin Smits)

Data & Research: Amnesty International

Amnesty International would like to thank the more than 7,000 digital volunteers from around the world who analyzed every intersection in New York City to find and categorize surveillance cameras, gave invaluable feedback and peer-to-peer support. Without them this research would not have been possible.

The project was commissioned and paid for by Amnesty International, an international nongovernmental organization (NGO) that gets the majority of its income from individual donations.

## **It Could Be You**

HsienYu Cheng (TW)

<https://chenghsienyu.com/it-could-be-you>

With support from: Panasonic Taiwan & Hong's Foundation, Taiwan Contemporary Culture Lab, Google Colab, Python Jupyter, PaperSpace

## **MBc02 – Uncovering the hidden impact of the internet**

Thijs Biersteker (NL)

<https://thijsbiersteker.com/mbco2>

<https://www.youtube.com/watch?v=Ghvw06xmJ0o>

MB>CO2 (2022) by Thijs Biersteker

## **Not allowed for algorithmic audiences**

Kyriaki Goni (GR)

<https://kyriakigoni.com/projects/not-allowed-for-algorithmic-audiences>

<https://vimeo.com/manage/videos/604759242>

This artwork was developed within the framework of the Ars Electronica ArtScience Residency enabled by Art Collection Deutsche Telekom in partnership with Johannes Kepler University Linz. Part of the Art Collection Telekom.

## **The (m)Otherhood of Meep (the bat translator)**

Alinta (Alinta Krauth) (AU)

[www.alintakrauth.com/otherhood](http://www.alintakrauth.com/otherhood)

main video: <https://youtu.be/J8zNuyS5yj0>

Trailer: [https://youtu.be/Bs3jGPqB\\_rE](https://youtu.be/Bs3jGPqB_rE)

Artist: Alinta Krauth

Javascript code assistance: Tristan Griffin

Aviary assistance: BatsQLD Organisation

## **The Glacier Trilogy**

Theresa Schubert (DE)

<https://www.theresaschubert.com/works/glacier-trilogy1/>

<https://www.theresaschubert.com/works/glacier-trilogy2/>

<https://www.theresaschubert.com/works/glacier-trilogy3/>

Funded by: S+T+ARTS4Water, an initiative by the European Commission within Horizon 2020

Residency at: Cittadellarte – Fondazione Pistoletto (IT)

Physical resources: Photo Archives of the Italian Glaciological Committee Turin (CGI) and Sella Foundation Biella

Voice & singing: Joseph Schnurr

Simulation programming: Sage Jensen

Glass blowing: JoGa Glass Turin

AI consultation: Moises Horta Valenzuela

Icecore meltwater: EUROCOLD Lab, University di Milano-Bicocca

Digital resources: customized StyleGAN, EsreGAN, VQGAN models. TINITALY, a digital elevation model of Italy with a 10 m cell size. Istituto Nazionale di Geofisica e Vulcanologia.

## **The Living Dead: On the Trail of Female (2022)**

Laura Cinti (IT)

[https://www.c-lab.co.uk/projects/living\\_dead](https://www.c-lab.co.uk/projects/living_dead)

Conservation scientist & drone pilot: Dr Debbie Jewitt, Ezemvelo KwaZulu-Natal Wildlife, South Africa; Dr Howard Boland, C-LAB, UK

## **The More The Better (Two Truths and a Lie)**

Mihály Kornai (HU)

<https://www.theia.studio/>



## **TRACEWASTE**

Susi Gutsche (AT)

<https://www.tracewaste.eu>

Assistance, design: Dimitrije Andrijević  
Sound design: Sebastian Scholz  
Coding: Max Pellert  
Technology partnership: Paul Pinault  
Supported by SONY CSL: Vittorio Loreto, Alessandro Londei,  
Bernardo Monechi, Matteo Bruno & MAXXI Foundation: Chiara  
Bertini and Alessio Rosati in the framework of the artist  
residency "Big Data and the City"

The project has received funding in the framework of the  
European S+T+ARTS initiative under grant agreement  
LC01641664.

## **Transient – Impermanent Paintings**

Quayola (IT), Andrea Santicchia (IT)

<https://youtu.be/WzfBkArrN28>

Audiovisual concert performed by Quayola and Andrea  
Santicchia aka SETA  
Software developed by Quayola Studio

## **Urban Data Forest**

Monika Seyfried (PL), Cyrus Clarke (FR),  
Grow Your Own Cloud (INT)

<https://growyourown.cloud/urban-data-forest/>  
[https://www.youtube.com/watch?v=4Om\\_DU1ZadE&embeds\\_referring\\_euri=https%3A%2F%2Fgrowyourown.cloud%2F&source\\_ve\\_path=MjM4NTE&feature=emb\\_title](https://www.youtube.com/watch?v=4Om_DU1ZadE&embeds_referring_euri=https%3A%2F%2Fgrowyourown.cloud%2F&source_ve_path=MjM4NTE&feature=emb_title)

Created by: Monika Seyfried and Cyrus Clarke; Grow Your Own  
Cloud

Visual identity: Aleksander Znosko Studio [www.znosko.pl](http://www.znosko.pl)

Design collaborator: Connor Dolan

Project advisor: In4Art

*Urban Data Forest* project was part of the Fellowship co-  
commissioned by In4Art and Witteveen+Bos within the  
framework of Repairing The Present. Repairing The Present is  
co-funded by the STARTS program of the European Union.