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Awarding of the European Commission's STARTS Prize:

The STARTS Prize 2020 goes to the artists Andrea Ling (CA) and Olga Kisseleva (RU)

(June 8, 2020, Linz/Brussels) STARTS stands for Science, Technology, and Arts. The European Commission's initiative aims to promote innovative cooperation between science, technology, and the arts and to bring it to the wider public's attention in the form of the annually awarded STARTS Prize. The "STARTS PRIZE '20—Grand Prize Artistic Exploration" goes to the Canadian architect and installation artist Andrea Ling, and the "STARTS Prize '20 Grand Prize—Innovative Collaboration" is being awarded to the Russian artist Olga Kisseleva. Both artists can look forward to a STARTS trophy and 20,000 euros each. On this occasion, the Honorary Mentions go to Julian Goldman (US) and Victoria Manganiello (US), Karen Palmer (GB), Dave Hakkens (NL), Pei-Ying Lin (TW), M Eifler (US), Paolo Cirio (IT), Avril Corroon (IE), David Quiles Guilló (ES), Lauren Lee McCarthy (US) and Jiabao Li (CN). The international and renowned STARTS jury consisted of Mara Balestrini (IT), Clara Blume (AT), Francesca Bria (IT), Domhnaill Hernon (IE), Nobu Ide (JP), Alexander Mankowsky (DE) and Kei Shimada (US/JP). In total, the STARTS Prize 2020 received 1,775 entries from 89 countries.

The European Commission's STARTS Initiative

"S+T+ARTS = STARTS Initiative—Innovation at the Nexus of Science, Technology, and the ARTS" is a European Commission initiative that views the digital transformation of industry, culture, and society as the main driver for interdisciplinary and cross-genre cooperation on innovation. The initiative aims to link technology and artistic practice in the best possible way and to benefit both European innovation policy and the art world. STARTS wants to put the spotlight on people and projects that contribute to dealing with Europe's social, environmental, and economic challenges.

As part of this initiative, the prestigious STARTS Prize, which is endowed with a total of 40,000 euros in prize money, is intended to honor and put a spotlight on innovative projects at the interface of art, technology, and science (Science, Technology and Arts—STARTS for short). The STARTS Prize seeks out and awards prizes to projects that successfully experiment with cooperation between science, technology, and the arts and have the potential to contribute to economic and social innovation. Ars Electronica, Bozar, and Waag have been entrusted to make the STARTS Prize a reality.

European Commission: <https://ec.europa.eu/>

Horizon 2020. European Union funding for Research & Innovation:
<https://ec.europa.eu/programmes/horizon2020/en>

European Union: https://europa.eu/european-union/index_de

STARTS Initiative: <https://www.starts.eu/>

STARTS Prize: <https://starts-prize.aec.at>

BORZAR: <https://www.bozar.be/>

Waag: <https://waag.org/>

Ars Electronica: <https://ars.electronica.art/news>



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STARTS Prize '20

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.

EDEN – Ethics – Durability – Ecology – Nature / Olga Kisseleva (RU)

<http://www.kisseleva.org>

With “EDEN,” the Russian artist Olga Kisseleva wants to use innovative technologies in art to stimulate unorthodox thinking with a view to solving ecological challenges. Her project promotes global biodiversity by looking for ways to allow extinct or endangered plant species to grow again or to save them. Olga Kisseleva works closely with partners from science and industry such as Orange Telecom France, the Centre National de Recherche Scientifique, and the Institut National de Recherche Agronomique (INRA).

The starting point for “EDEN” was a more than 600 year old elm tree. For generations, the tree had shaped the townscape and life in the French city of Biscarosse, but in 2012, the tree fell victim to elm dieback, which caught Olga Kisseleva’s attention. Together with INRA, she crossbred two elm species to create a tree resistant to the fungus responsible for elm extinction. Just like the old elm, this tree now grows into the sky in the middle of the square in Biscarosse. In the next step, Olga Kisseleva investigated how trees communicate with their environment. Together with cooperation partners such as Orange Telecom and the Institute of Applied Ecology, she developed sensors that measure the molecular emissions by which plants communicate with their environment. Through a telecommunications network, the artist has now connected trees all over the world and enabled an unprecedented exchange between plants, all the while making it visible or audible to humans. Through interactive installations and performances with light or sound, people can also take part in this communication and learn about plant signals.

With “Datascape” Olga Kisseleva went one step further. With the help of Orange Telecom France, she developed an interactive program that gives form to and analyzes the communication activity of a whole region’s plant network. Information about the trees growing in the region and about links between plant heritage, the climate, and society are brought together in a dynamic database, which in turn becomes a source of interactive visualizations. In her artistic-scientific projects, Olga Kisseleva focuses on our interactions with nature. It makes our responsibility as humans visible and conscious through an



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innovative use of communication and biotechnology. For “EDEN,” Olga Kisseleva has been awarded the “STARTS Prize '20” for innovative collaborations between art and science.

Olga Kisseleva (RU)

Olga Kisseleva is considered a key figure in the international art and science scene and advocates for a close cooperation between art and hard sciences such as biology and geophysics. In her numerous experiments, calculations, and analyses, she always strictly adheres to scientific methods. Olga Kisseleva has had important exhibitions at the Museum of Modern Art (Paris), KIASMA (Helsinki), Museo Nacional Centro de Arte Reina Sofia (Madrid), Fondation Cartier for Contemporary Art (Paris), the Centre Georges Pompidou (Paris), the Guggenheim Museum (Bilbao), the NCCA (Moscow), and at the Dakar (2002), Tirana (2003), Moscow (2011), Istanbul (2013) and Venice (2019) Biennials. Her works are represented in many of the world's most important museum collections, including at the Centre Pompidou, the Louis Vuitton Foundation, the ZKM, the Moscow Museum of Modern Art, and MoMA in New York. Olga Kisseleva teaches contemporary art at Sorbonne University in Paris; she is head of the Art & New Media program and founding director of the Art&Science International Institute.



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STARTS PRIZE '20

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.

Design by Decay, Decay by Design / Andrea Ling (CA)

<https://www.ginkgobioworks.com/2020/01/06/2019-creative-in-residence>

For “Design by Decay, Decay by Design,” artist Andrea Ling worked with the biotech company Ginko Bioworks to introduce the process of natural decay into the design process. The process for developing these new biomaterials uses rapid prototyping technology as a crucial element of biological engineering. The work opens a discourse on how industrial product development could be approached today from a bottom-up perspective. What would happen if the design thinking process were to be redesigned in such a way that the waste that a product generates after its life span became the initial material for design considerations? “Design by Decay, Decay by Design” was created in 2019 within the Ginkgo Bioworks creative residency, which centered around the question of how to design a world without waste. “As an architect and artist, I know that most of what I create ends up in the landfill,” says Andrea Ling (CA). This very idea became the starting point for a project that sees waste not just as the product of decay and deconstruction, but as a starting point and input for renewal and construction. Andrea Ling uses enzymes, fungi, bacteria, and other biological substances both to break down and connect biological matter. By selecting certain species, carefully controlling the environmental conditions, and taking note of specific nutrient requirements, she initiates and shapes the process of decay and stages mutability as a desired property in the physical world. Andrea Ling creates bioplastics with very distinct mechanical and physical properties, all of which are environmentally friendly and easily biodegradable. “Design by Decay, Decay by Design” is made up of three projects that Andrea Ling has created together with scientists from Ginkgo Wetlabs:

First, enzymes were extracted from fungi and human saliva and then introduced into biocomposites, such that they were transformed rather than simply destroyed. The series of experiments focused on decomposition as a manufacturing process. A second experiment focused on using different strains of streptomyces bacteria to populate cellulose and other bioplastics in order to transform them. A third experiment focused on the use of different fungal species such as “Aspergillus niger” (black mold) and “Trichoderma viride” (green mold) in mixed cultures to transform materials and selectively break them down. What is fascinating here is the role that biotechnologies can play in industrial production processes in



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the future. With her work, Andrea Ling has created a blueprint for the widespread use of rapid prototyping technologies in dealing with cell cultures and petri dishes, as well as for the increasingly important role of using biological rather than mineral raw materials as an important part of production processes. "Design by Decay, Decay by Design" therefore represents the struggle for a type of industry that recognizes the extraordinary advantages that open up when we think of natural disintegration as renewal. Through her work, Andrea Ling wants to promote access to circular systems that have the ability to grow, adapt, and reproduce from literal decay. Such systems, she is convinced, have a resilience that the currently dominant industrial systems have searched for in vain. Not least because of the climate crisis, Andrea Ling is convinced that we must change our priorities from the ground up and stop looking at everything only in terms of economic benefit. She is hence not merely looking for ways to make processes more environmentally friendly but wants to create a completely new kind of design that sees both the process of making and the process of destroying as something provisional and not just consumptive. With "Design by Decay, Decay by Design," Andrea Ling would like to move away from permanent materials that destroy ecosystems and instead create transient materials that restore the environment. For "Design by Decay, Decay by Design" Andrea Ling is receiving the "STARTS PRIZE '20" for outstanding artistic exploration.

Andrea Ling (CA)

Andrea Ling (CA) is an architect and installation artist who works at the intersection of art, fabrication technologies, and biological sciences. Her most recent work focuses on how the critical application of biologically and computationally mediated design processes can move society away from exploitative systems of production to regenerative ones. She was the 2019 Ginkgo Bioworks creative resident exploring how to design the decay of artifacts in order to access material circularity. Andrea is a founding partner of designGUILD, a Toronto-based art collective and a former project lead for Philip Beesley Architect where she worked on a series of international immersive kinetic installations and textiles for Iris van Herpen. She is also a former research assistant and designer for the Mediated Matter Group, at the MIT Media Lab, where she and her teammates won Dezeen's 2019 project of the year with their research project, Aguahoja I, which will be shown in 2020 at the MoMA and 2021 at SFMOMA. Andrea has a MS from the MIT Media Lab and a M.Arch. from the University of Waterloo with a background in human physiology from the University of Alberta.



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STARTS Prize 2020

Honorary Mentions

c o m p u t e r 1. 0 / Julian Goldman (US), Victoria Manganiello (US) aka SOFT MONITOR

www.softmonitor.today

“c o m p u t e r 1.0” imagines a display for the future, by looking at displays from our past. Artists Julian Goldman and Victoria Manganiello create a large-scale textile woven by hand using hollow polymer tubing and natural fiber thread. A patterned series of colored liquid/oil/air pixels will be pumped into the tubes in a sequence dictated by data from adjacent motion sensors and a series of computer-controlled valves, air compressors, and pumps. This textile will function as a lo-fi computer display, made with ancient natural materials and techniques juxtaposed with contemporary digital technologies. “c o m p u t e r 1.0” also functions as a historical lens showing how our relationship to computing technology has always been fraught with opposed promises of utopian and dystopian futures. We represent this digital heritage with digitized cloth, recalling current topics of data, privacy, and equity surrounding our communication infrastructure.

Perception iO / Karen Palmer (GB)

<http://karenpalmer.uk/portfolio/perceptionio>

“Perception iO” (Input Output) focuses on law enforcement and bias. The participant assumes the role of a police officer watching an interactive training video of an escalating volatile situation. They experience the interaction from the perspective of a cop’s body camera and come into contact (separately) with a black protagonist and white protagonist. Each protagonist plays either the role of a criminal or of a person with mental health issues. The “Perception iO” system tracks the participants facial expression. How they respond emotionally to the scene has consequences for the characters and influences the branching narrative to prompt the cop to either arrest, assist or shoot the character on the screen. The “Perception iO” immersive experience is a convergence of neuroscience, behavioral psychology, film, AI, facial emotion detection, eye tracking, bias and social justice. It reveals how a person’s emotions (and eye tracking functionality currently in development) influences their perception of reality through an immersive storytelling experience. The immersive experience generates self-reflection and discussion on issues of bias, ethics and accountability for the participants.



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Precious Plastic Universe - The alternative plastic recycling system / Dave Hakkens (NL)

<http://preciousplastic.com>

“Precious Plastic Universe” addresses plastic waste as one of the biggest problems for our environment and aims to boost plastic recycling globally by making it more understandable and accessible for everyone. Open source recycling machines, products, and online collaboration tools are developed so that anyone can become part of this alternative plastic recycling ecosystem, called the “Precious Plastic Universe”. At the center of the Universe are starterkits, which are packages of tools and tutorials to help people create sustainable businesses around each step of the plastic recycling value chain—from plastic collection, machine manufacturing, shredding and product manufacturing.

Proposals of Collaboration with the Viral Entities - Tame is to Tame, Virophilia / Pei-Ying Lin (TW)

<http://peiyinglin.net/>

“Proposals of Collaboration with the Viral Entities” is an artistic reflection on our relationship with viruses. Especially in the context of the Corona pandemic, it provides a deeper understanding of our role as human species in the ecosystem we inhabit. With “Virophilia”, Pei-Ying Lin has translated non-mainstream scientific knowledge into a thought-provoking artwork. Her cookbook, set up for the year 2068, where food is prepared with viruses integrated as functional ingredients, hints at productive change in the perception of ourselves in the biosphere: The symbioses between us and the Other opens room for innovation.

Prosthetic Memory / M Eifler (US)

<http://www.blinkpopshift.com/2020#/prosthetic-memory>

As a result of a brain injury M Eifler (US) suffered a permanent loss of their long-term memory and tried to overcome this with “Prosthetic Memory”. “Prosthetic Memory” is an experiment composed of journals, video recordings of daily events and thoughts and processed by a personalized AI algorithm that triggers video projections. With “Prosthetic Memory” M Eifler (US) impressively demonstrate a self-empowering approach to new technologies.

Sociality / Paolo Cirio (IT)

<https://Sociality.today>

This artwork documented over twenty-thousand patents of socially manipulative information technology. On the project’s website Sociality.today the artist and activist shows thousands



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of compositions with images of flowcharts and titles of inventions, informing on devices that enable discrimination, polarization, addiction, deception, and surveillance. With this problematizing piece, Cirio exposed evidence of social manipulation and questioned the ethical, legal, and economic structures of such technological apparatuses.

SOMEONE / Lauren Lee McCarthy (US)

<https://lauren-mccarthy.com/SOMEONE>

<https://lauren-mccarthy.com>

“SOMEONE” invites people to act as a human version of Amazon Alexa. Four participants’ homes are installed with custom-designed smart devices, including cameras, microphones, switches, lights, and appliances. In an exhibition there is also a command center with computer stations. Visitors can peek into the four homes via the laptops, watch over the occupants, and remotely control the devices in their homes. Visitors may hear smart home occupants call out for “Someone”—prompting the visitors to step in as their home automation assistant and respond to their needs. “SOMEONE” is a meditation on the smart home, the tensions between intimacy vs privacy, convenience vs agency, and the role of human labor in the future of automation.

Spoiled Spores / Avril Corroon (IE)

<https://avrilcorroon.com/Spoiled-Spores-1>

Responding to the housing crisis in Ireland and London, “Spoiled Spores” is an installation of up to 25 toxic cheeses made with a culture of toxic black mold sampled from rental accommodation in Dublin and London. “Spoiled Spores” examines the extortionately priced housing that tenants are forced to endure and juxtaposes this with the manufacturing of high-end artisanal commodities for middle and rentier class consumers. For a year Corroon scraped numerous forms of mold from dank walls and ceilings in London and later in Dublin. Perfectly aged, these apparently high end luxury cheeses are one of a kind, each with an ingredient list including the rental cost, and uniquely named after corresponding tenants.

The Wrong / David Quiles Guilló (ES)

<https://thewrong.org>

“The Wrong” was born in 2013 as a collaborative effort to create and promote digital art & culture, launching a global art biennale open to participation, happening both online & offline. Online happens in pavilions—virtual curated spaces in any accessible online media where selected artworks are exhibited. Offline happens in embassies, institutions, art spaces, galleries, and artist run spaces in cities around the world. An extended team of curators appoint themselves to feature what they like best of the new digital art scene today. Since



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2013, more than 5,500 artists and curators have officially participated in “The Wrong Biennale”. The next edition is scheduled to take place on November 1, 2021.

TransVision / Jiabao Li (CN)

<https://www.jiabaoli.org/transvision>

[https://www.ted.com/talks/jiabao li art that reveals how technology frames reality?language=en](https://www.ted.com/talks/jiabao_li_art_that_reveals_how_technology_frames_reality?language=en)

<https://www.youtube.com/watch?v=2i8sySIJBeA>

Through three perceptual machines, TransVision questions the habitual ways in which we interpret and understand the visual world intervened by digital media, and how technology mediates the way we perceive reality. The three wearable helmet objects demonstrate our distortion of reality through digital media-induced hypersensitivity, obsessive online searching behavior and in the form of human perception as part of the value chain.