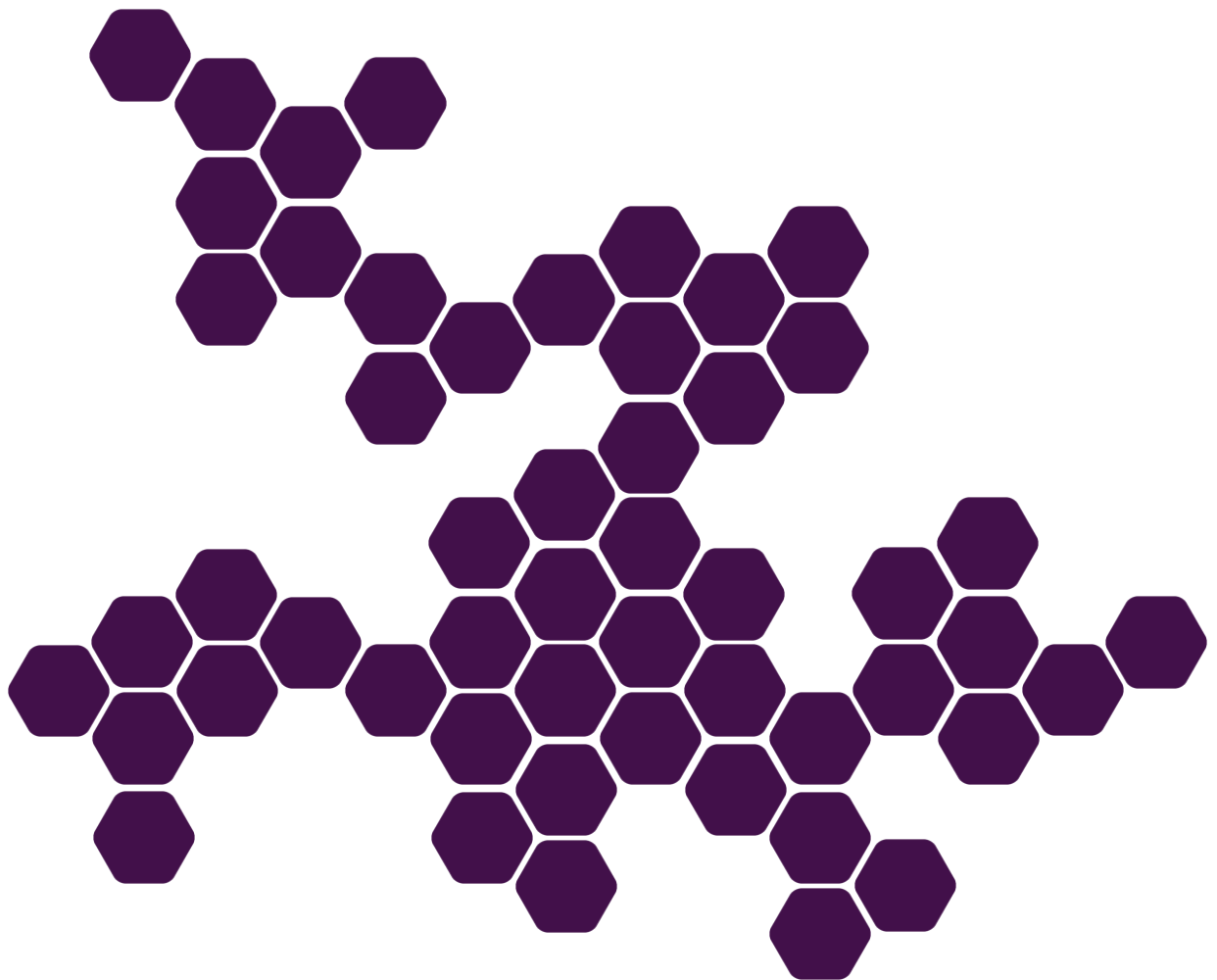


Annual Report

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ABOUT BIOART SOCIETY



SOLU Space is located in the Katajanokka district of Helsinki at Luotsikatu 13, in the ground floor of a 1904 building. Photo: Johanna Salmela.

Bioart Society is a Helsinki-based artist association developing, producing, and facilitating transdisciplinary activities and collaborations between art and science with an emphasis on biology, ecology, and life sciences. Bioart Society works in Finland and regionally with the Nordic and Baltic countries as well as internationally. It runs SOLU Space, an artistic laboratory and platform for art, science, and society in Katajanokka, Helsinki, and – together with the Kilpisjärvi Biological Station of the University of Helsinki – Ars Bioarctica, an art and science residency and education program with a focus on the subarctic environment. Bioart Society was established in May 2008 and has 127 members from Finland and other countries.

The name of the association is Suomen biotaiteen seura ry, Föreningen för biokonst i Finland rf. The society was approved by the Finnish Patent and Registration Office on November 11th, 2008. The business ID of Bioart Society is 2264812-3.

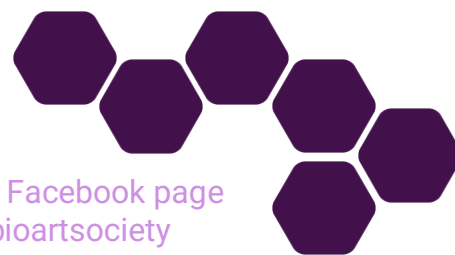
About the year 2020



The year 2020 was special in many ways for Bioart Society. After nearly four years of development, the SOLU project reached the intended level of implementation at the beginning of 2020. With it, the transdisciplinary art&science field was receiving continuous and increasing attention in Finland and internationally. Bioart Society has been able to show that SOLU could be fully implemented as planned and that the financial plan is feasible and sustainable in the current make-up. The attendance (visitors, participants, applicants, media, etc.) to programme, activities, and opportunities was high and increasing as well as the visibility in the cultural environment and media. Unfortunately, the work was put to an abrupt halt in March with the onset of the COVID-19 pandemic.

The pandemic has caused many changes both in the programme and the ways Bioart Society works. Exhibitions, talks, events, and residencies were postponed or put online, and new modes of working had to be developed. Because there was no information about possible COVID-19 support for organisations during the spring, Bioart Society had to partially put staff on furlough between April and July 2020 as production budgets of postponed activities had to be postponed as well. These measures resulted in a positive outcome. With hard work and tough decisions, Bioart Society was able to continue with a high quality programme, develop new partnerships, and gain new experience, especially online, which will benefit future plans and the audiences. The year will have consequences that will follow, like for any other cultural organisation, into the coming year, but Bioart Society pulled through this difficult time in a professional manner and, thus, is able to continue to produce its unique programme despite the challenges.

Communications



[Bioart Society's website](#) | [Facebook group](#) | [Facebook page](#)
[Twitter: @bioartsociety](#) | [Instagram: @bioartsociety](#)

During 2020, Bioart Society continued to gain new newsletter subscribers and social media followers. The Instagram account had 2,873 followers and the Facebook page 1,819 followers by the end of the year. Bioart Society also hosts a lively Facebook group and a Twitter account. The monthly newsletter, which contains information about Bioart Society's exhibitions, events, and other opportunities as well as its members' events, had 1,002 subscribers by the end of the year.

The website is continuously developed further to improve functionality and to make it more user friendly. Accessibility information has been added on the page, as well as a "Publications" section, which features introductions and pictures on both Bioart Society books, PDF versions of exhibition catalogues and project publications, the first edition of

Bioart Society's Member Catalogue, and a selection of writings by and about Bioart Society.

Bioart Society's website and social media channels are mainly in English, in order to reach non-Finnish-speaking audiences, actors, and partners. Exhibition info is always available both in Finnish and in English – both on site and online.

During 2020, Bioart Society's activities have been featured in media, such as Yle's National TV News, Helsingin Sanomat, the largest subscription newspaper in Finland, and radio.



MEDIA REPRESENTATION



- > Articles:
 - > Philosophical magazine *niin & näin* 1/20: "Field_Notes – The Heavens – Taiteiden ja tieteiden välistä kenttätöytä subarktisella alueella" by **Anu Pasanen** and **Erich Berger**. English translation "[Field_Notes – The Heavens: art & science fieldwork in the Finnish Sub-Arctic](#)" on Bioart Society's website.
 - > Yle News, 11 March 2020: "[Mikä ihme on hiivagrammi? Biotaiteessa mikrobit maalaavat tauluja ja porkkanalle tarjotaan mahdollisuus seksielämään](#)" by **Jussi Mankkinen**. About the *Art as We Don't Know It* book and **Johanna Rotko's** art.
 - > Yle News, 14 November 2020: "[Maija Annikki Savolainen valaa taidetta sekajätteen polttokuonasta: 'Annan kierrossa olevalle materiaalille uuden muodon'](#)" by **Sanna Savela**. About **Maija Annikki Savolainen's** art and */data centre* exhibition at SOLU Space.
- > Book reviews:
 - > Helsingin Sanomat, 4 April 2020: "[Kasvustoja, kudoksia, tuntemattomien prosessien tutkimista ja elämän manipulointia – Biotaiteessa ihminen on eläin muiden joukossa](#)" by **Sini Mononen**. *Art as We Don't Know It* book review.
 - > Helsingin Sanomat, 11 December 2020: "[11 erinomaista taidekirjaa pukinkonttiin tai omaksi iloksi – HS:n kriitikot valitsivat suosikkinsa syksyn taidekirjasadosta.](#)" *Art as We Don't Know It* book chosen as one of Helsingin Sanomat's favourite art books of the year.
 - > we-make-money-not-art.com, 9 March 2020: [Art as We Don't Know It book review](#) by **Régine Debatty**.
 - > Makery, 27 May 2020: "[Art as We Don't Know It: Against the Unbearable Whiteness of Bioart](#)" by **Rob La Frenais**. *Art as We Don't Know It* book review.
 - > Neural, 15 September 2020: [Art as We Don't Know It book review](#).
- > TV and radio:
 - > Radio Helsinki, 21 October 2020: interview "Criss-Crossing Ecologies" on *Kaupunkielämää* programme. **Mari Keski-Korsu**, curator and producer of Bioart Society, and **Anna Puhakka**, producer of Annantalo, discussed the *Criss-Crossing Ecologies* exhibition.
 - > Yle TV News, and radio channels Yle Ykkönen, Yle Puhe, and Radio Suomi, 11 March 2020: "[Biotaiteessa mikrobit maalaavat tauluja.](#)" About the *Art as We Don't Know It* book, interviewing **Erich Berger**, **Johanna Rotko**, and **Lauri Linna**.

Members



In 2020, Bioart Society admitted 7 new members. The following members' applications were accepted: **Jussi Eronen, Taru Happonen, Sade Hiidenkari, Sara Ilveskorpi, Tuomas A. Laitinen, Sirja Moberg, and Raimo Saarinen**, bringing the current total of members to 127.

Board



In 2020, the board members were

- > **Mari Keski-Korsu**, chairperson (until 2 April 2020), artist
- > **Teemu Lehmusruusu**, chairperson (from 2 April 2020 onwards), artist
- > **Kira O'Reilly**, member, artist
- > **Christina Stadlbauer**, member, artist, PhD
- > **Kristiina Ljokkoi**, vice chairperson, curator at Helsinki Art Museum, HAM
- > **Kasper Mäki-Reinikka**, member, PhD student at Aalto University
- > **Ingvill Fossheim**, member, artist, PhD student at Aalto University
- > **Atte Korhola**, vice member, professor at Helsinki University
- > **Anniina Suominen**, vice member, professor at Aalto University.



Staff



Office team:

- > **Mari Keski-Korsu**, producer
- > **Johanna Salmela**, communications and office manager
- > **Piritta Puhto**, curator, senior producer
- > **Erich Berger**, director.

Email: [info\(at\)bioartsociety.fi](mailto:info(at)bioartsociety.fi)

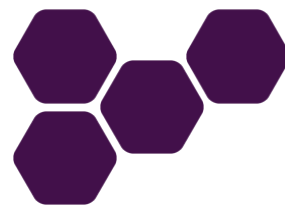


Ars Bioartica residency mentor:
Leena Valkeapää.

Interns:

- > **Athanasía Aarniosuo**
- > **Laura Kaker.**

Collaboration partners

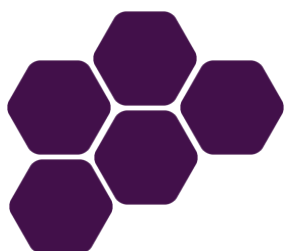


IN FINLAND

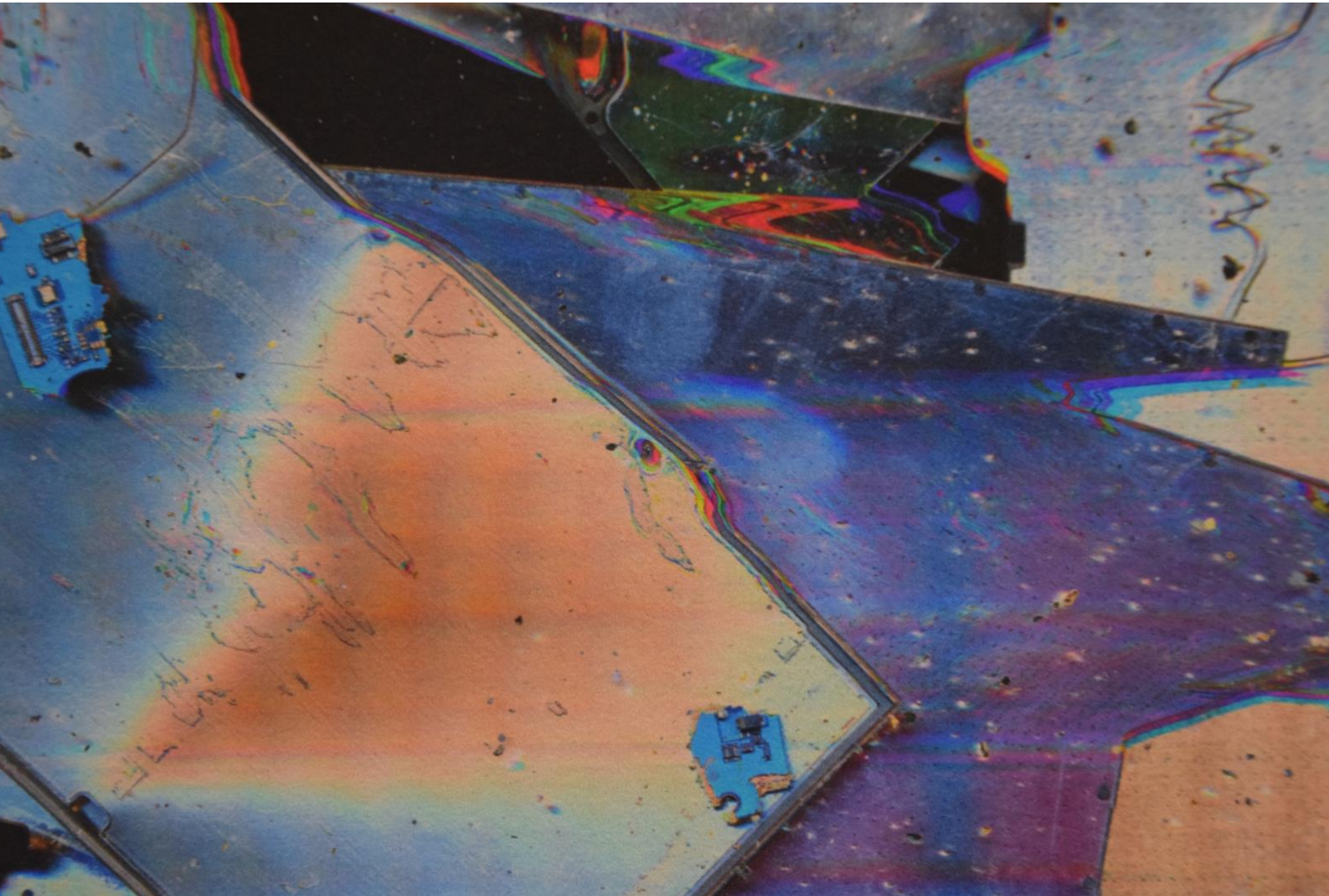
Aalto ARTS Books, Aalto Biofilia, Aalto University, Annantalo (City of Helsinki), Art Center KulttuuriKauppila, Chill Survive, Finnish Institute in Japan, Finnish Media Art Network (Alternative Party, Art & Craft School Robotti, Artists' Association MUU, AV-arkki, Finnish Light Art Society FLASH, HIAP – Helsinki International Artist Programme, Live Herring, m-cult, Northern Media Culture Association Magneetti ry, Photography and Media Art Association Valmed ry, and Äänen Lumo), Frame Finland, Kilpisjärvi Biological Station, Mediart Network, Museum of Impossible Forms, Pixelache, University of Helsinki, and Öro Island Residency Programme.

INTERNATIONAL

Art Lab Gnesta (SE), The Association for Arts and Mental Health (DK), Catch / Helsingør Kommune (DK), Cultivamos Cultura (PT), Hangar (ES), The Independent Air (DK), Institutio Media (LT), Kersnikova Institute (SI), KONTEJNER (HR), Kultivator (SE), Laboratory for Aesthetics and Ecology (DK), Maajaam (EE), Makery / Digital Art International (FR), NOBA – Norwegian Bioart Arena (NO), The Posthumanities Hub (SWE), Projekt Atol Institute (SI), RIXC (LV), Royal Belgian Institute of Natural Sciences (BE), SCHMIEDE HALLEIN – Verein zur Förderung der digitalen Kultur (AT), Turfiction (IS), Udruga za razvoj uradi sam kulture Radiona (HR), and Waag (NL).



PROGRAMME 2020



A detail of Maija Annikki Savolainen's /d a t a c e n t r e installation. Photo: Laura Kaker.

Bioart Society organised programme in its SOLU Space in the form of exhibitions, talks, and workshops. Some of the programme was moved online due to the COVID-19 pandemic and some of the planned programme had to be postponed. The programme was produced according to the strategic plan and topical lines which Bioart Society is interested in, together with artists and audiences. During 2020, the society participated in four Creative Europe Programme -funded projects and two Nordic Network projects, all of which continue into 2021 and beyond. The > **Ars Bioarctica** residency programme continued, even though most of the artist visits were postponed by a year.

Publications



ART AS WE DON'T KNOW IT

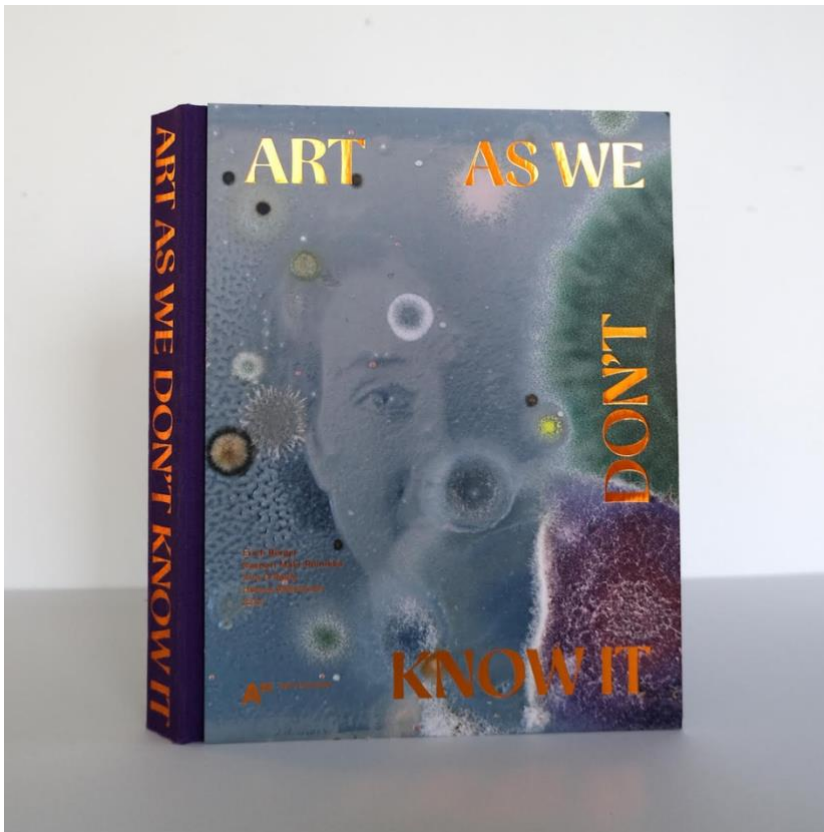
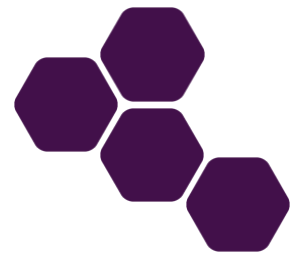


Photo: Johanna Salmela.

The book *Art as We Don't Know It*, edited by **Erich Berger, Kasper Mäki-Reinikka, Kira O'Reilly, and Helena Sederholm**, and published by Aalto ARTS Books, was **> launched** on 5 March 2020. The book received an Edvard Richter Recognition Award for meritorious art writing in December 2020, and an ICMA Award of Excellence in the category of scientific books, educational textbooks, and schoolbooks in January 2021. It was also selected as one of the most beautiful books of 2020 by the Finnish Book Art Committee.

What worlds are revealed when we listen to alpacas, make photographs with yeast, or use biosignals to generate autonomous virtual organisms? Bioart invites us to explore artistic practices at the intersection of art, science, and society. This rapidly evolving field utilises the tools of life sciences to examine the materiality of life, the collision of human and nonhuman. Microbiology, virtual reality, and robotics cross disciplinary boundaries to engage with arts as artists and scientists work together to challenge the ways in which we understand and observe the world. This book offers a stimulating and provocative exploration into worlds emerging, seen through art as we don't know it – yet.

Art as We Don't Know It showcases art and research that has grown and flourished within the wider network of both Bioart Society and Biofilia during the previous decade. The book features a foreword by curator **Mónica Bello**, and a selection of peer-reviewed articles, personal accounts and interviews, artistic contributions, and collaborative projects which illustrate the breadth and diversity of bioart. Other contributors are **Markus Schmidt and Nediljko Budisa, Andy Gracie, Adriana Knouf, Marta De Menezes and Luis Graca, Marietta Radomska and Cecilia Åsberg, Crystal Bennes, Bartaku, Erich Berger, Antero Kare, Laura Beloff, Johanna Rotko, Kasper Mäki-Reinikka, Teemu Lehmusruusu, Antti Tenetz, Ian Ingram and Theun Borssele, Paul Vanouse, Rian Ciela Visscher Hammond, Paula Humberg, Denisa Kera, Leena Valkeapää, Lifepatch, Jurij Krpan, Anu Osva, Kristiina**

Ljokkoi and Tomi Slotte Dufva, Ulla Taipale and Christina Stadlbauer, Margherita Pevere, Heather Davis, Elaine Gan and Terike Haapoja, Ida Bencke, Mari Keski-Korsu, Oron Catts and Ionat Zurr, Kira O'Reilly, Pia Lindman, Helena Sederholm, and Lauri Linna. The resulting book is a tantalising and invaluable indicator of trends, visions, and impulses in the field.

The book marks the 10th anniversary of Bioart Society. Instead of looking back the society joined forces with Biofilia – Base for Biological Arts to have a glimpse forward and to scan what kind of questions and topics in the realm of bioart, art&science, and its politics could be relevant for the society's work in the coming years.

BIOART SOCIETY MEMBER CATALOGUE

Bioart Society Member Catalogue introduces the work of Bioart Society members. A total of 53 members shared their work in the catalogue, which was launched in December 2020. The catalogue is available [online](#). The members' CVs and portfolios can be viewed at SOLU Space on demand.

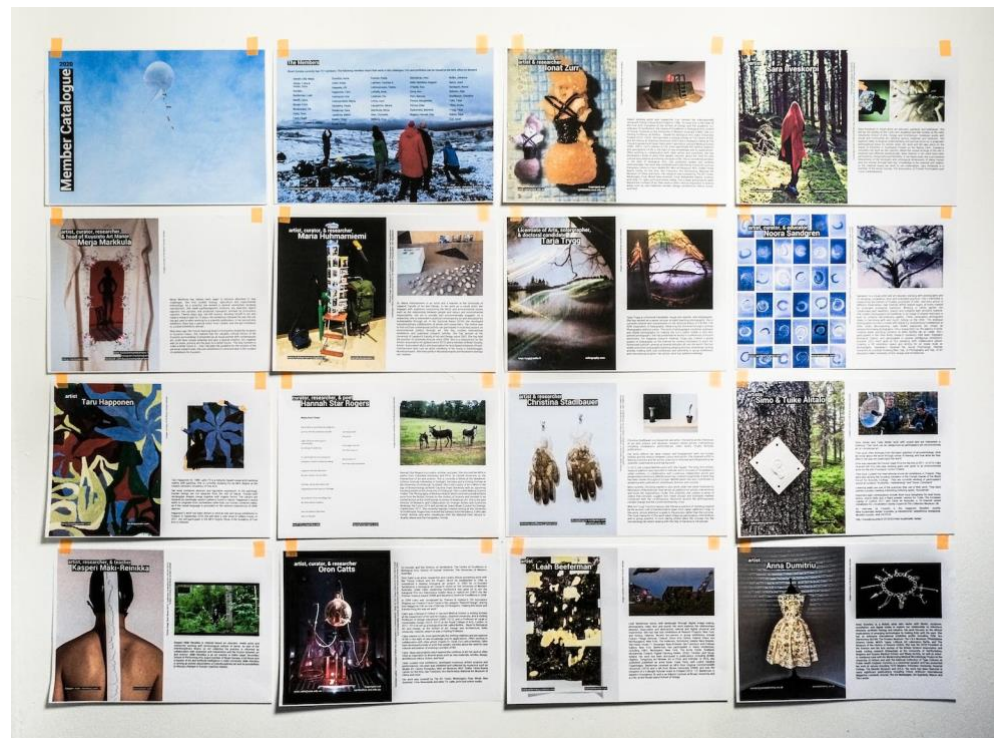


Photo: Johanna Salmela. Editing: Till Bovermann.

The members featured in the 2020 catalogue are the following: **Ulla-Maija Alanen, Tuike and Simo Alitalo, Bartaku, Leah Beeferman, Laura Beloff, Erich Berger, Till Bovermann, Oron Catts, Charli Clark, Jaime Culebro Camacho, Anna Dumitriu, Antye Greie, Lilli Haapala, Taru Happonen, Ove Holmqvist, Maria Huhmarniemi, Paula Humberg, Sara Ilveskorpi, Alekski Jaakkola, Mari Keski-Korsu, Timo Kokko, Kaisu Koski, Paula Kramer, Tuomas A. Laitinen, Teemu Lehmusrusu, Anne Lehtelä, Pia Lindman, Lauri Linna, Minna Långström, Merja Markkula, Christelle Mas, Sirja Moberg, Ines Montalvao, Kasper Mäki-Reinikka, Kira O'Reilly, Anu Osva, Marcus Petz, Margherita Pevere, Piibe Piirma, Marietta Radomska, Hannah Star Rogers, Johanna Rotko, Jussi Saivo, Noora Sandgren, Silja Selonen, Christina Stadlbauer, Tarja Tella, Antti Tenetz, Emilia Tikka, Tarja Trygg, Tiina Vainio, and Ionat Zurr.**

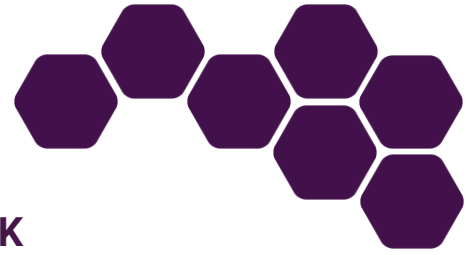
The member catalogue is compiled and designed by **Athanasía Aarniosuo**.

Multiyear projects



FERAL LABS NETWORK

1 December 2018 – 31 March 2021.



Feral Labs Network, a network of temporary dislocated hubs for research in art, technology, and communities, consisted of six partners from six EU countries, who joined in their common interest in art-science research, and contemporary do-it-yourself (DIY) and do-it-with-others (DIWO) communities. Instead of presentational modes like exhibitions and festivals, the Feral Labs Network focused on connecting and organising a series of camps and similar kinds of temporary creative environments, all with a strong emphasis on process-based activities like peer learning, field work, research, and co-creation. What these activities have in common is their deliberate setting in a remote environment, away from the usual urban set-up of contemporary creative hubs.

In the span of two years, the project partners created a variety of temporary creative hubs that varied in scope, format, and topics covered, but all had a joint methodological starting point: temporary, international, remote, open, and transdisciplinary (art-technology-science). The actions within the project were additionally extended and connected through strong transnational outreach, media strategy, and the accompanying developmental, as well as community-oriented artist-in-residence programmes.

In 2020, the Rewilding Culture catalogue, that was published in 2021, was under production.

The Feral Labs Network was initiated and coordinated by Projekt Atol Institute (SI) in partnership with Makery / Digital Art International (FR), Catch / Helsingør Kommune (DK), SCHMIEDE HALLEIN – Verein zur Förderung der digitalen Kultur (AT), Bioart Society (FI), and Udruga za razvoj uradi sam kulture Radiona (HR). Feral Labs is co-funded by the Creative Europe Programme of the European Union.

BIOFACTS



BioFacts consists of a series of artistic research work labs open for artists and practitioners from Finland and abroad. During 2020, the programme introduced fundamental techniques of working with biological arts and served as a vehicle to discuss art and science, materials, techniques, safety and policy, biopolitics, ethics, and artistic examples through hands-on work.

The project includes working with yeast, bacteria, algae, single cell organisms, plants, and DNA, and introduces how to build DIY equipment. It addresses conceptual, artistic questions and discusses issues of working with living material in exhibitions as well as curatorial strategies. The [> MaterialeX workshop](#) and the [> yeastogram workshop](#) were produced as part of BioFacts during 2020.

Biotechnology and life sciences have become key technologies of our time. An increasing number of artists are interested in how those technologies transform our everyday life. The programme provides artists with a possibility to familiarise themselves with the principles to be able to produce informed cultural responses, public awareness, and discussion through artistic work.

BIOFRICTION

1 October 2019 – 30 September 2021.

Biofriction is a research project with the goal of generating and facilitating spaces for exchange where artists, curators, theoreticians, and different social collectives, such as activists and educational projects, can collaborate in transdisciplinary experimental proposals that offer practical alternatives to existing problems in contemporary Europe, such as the rise of essentialist discourses that launch not only a worrying discourse but also policies of marginalisation and exclusion.

During 2020, Bioart Society organised, as part of Biofriction project, the exhibition **> Photosonic Landscapes in Color** by artists **Minna Långström** and **Leah Beeferman**, and the online panels **> Photosonic Landscapes** and **> Braiding Friction**.

Biofriction is realised in collaboration with Hangar (ES), Cultivamos Cultura (PT), Kersnikova Institute (SI), and Bioart Society. Biofriction is co-funded by the Creative Europe Programme of the European Union.

STATE OF THE ART NETWORK

Autumn 2020 – Spring 2023.



*Launch of Nordic Network programme,
22–23 October 2020.*



*Fireside talks – online conversation,
8 December 2020.*

State of the Art is a Nordic-Baltic transdisciplinary network of artists, practitioners, researchers, and organisations who have come together to discuss the role, responsibility, and potential of art and culture in the Anthropocene.

By developing creative practices, transdisciplinary collaborations, and public engagement, the network aims to create resilience and concrete actions for living the change in culture,

economy, and environment, and to find concrete hands-on methods to deal with the Anthropocene and the environmental crisis.

The network wants to strengthen competencies in remote hosting and participation as well as practical sustainability, which will be applied in the production of the activities and throughout the network.

The programme starts in practice in 2021.



The projects m/other becomings, ART4MED, and ArchIVE were initiated in 2020. The related programme starts in 2021.

> m/other becomings

Spring 2021 – Spring 2022.



Through durational collaborations between experimental cultural institutions, artists, and thinkers, m/other becomings will cultivate intergenerational and multispecies methodologies, make space for the investigation of domestic resistance practices, and probe technologies of reproduction, resilience, and recuperation.

The project offers a closer look at the im/possibilities of mothering, not as an essence, but as troubled practice, and as a modest, utopian, and oftentimes exhausted precursor of hope. It asks what it means – and may come to mean – to make, to mend, and to make space for kin, in spite of and against the social reproduction of sameness and compliance, and the (bio)politics of gendered and racialised violence. The aim is to explore reproductive futures, and how life sciences give an opportunity to transform and challenge our ideas and possibilities of reproduction and the maternal.

How may we come to mother, to host, and to make dwelling for each other in ways that cancel the brutal mechanisms of othering from within political and ecological landscapes enrolled in and wretched by ongoing necropolitics of coloniality and extractive capitalism? What happens when the technologies and politics of the maternal are unleashed from the affective and economic structures of heteronormative reproduction, from natality, and even from species' genealogies? m/other becomings will investigate junctions and leaky borderlands between motherhood and otherhood. Tentatively probing into the potentials of bringing forth an insurgent, but also non-innocent, politics of care by investigating the strangeness of mothers as it pushes against conventional notions of body, self, family, and belonging.

m/other becomings is a collaboration between Laboratory for Aesthetics and Ecology (DK), The Association for Arts and Mental Health (DK), Kultivator (SE), Art Lab Gnesta (SE), and Bioart Society (FI).



> ART4MED

1 November 2020 –
31 October 2022.

The ART4MED Creative Europe project centers at the intersection of art, health, and biomedical research. During 2021–2022, ART4MED takes the form of extended residencies, a series of workshops, seminars, and exhibitions in Finland and across Europe.



ART4MED kickoff meeting, 7 & 11 December 2020.

ART4MED addresses the following questions: What kind of artistic approaches can deal with such complex issues as health and biomedicine, and what are successful strategies for production and presentation? How can we share good practices and methodologies for cross-disciplinary collaboration? How can we consolidate and broaden the networks of contemporary cultural operators dealing with health and biomedical research? How can we disseminate this content beyond our immediate peer networks? How can art improve awareness of the wider public on issues of health and care?

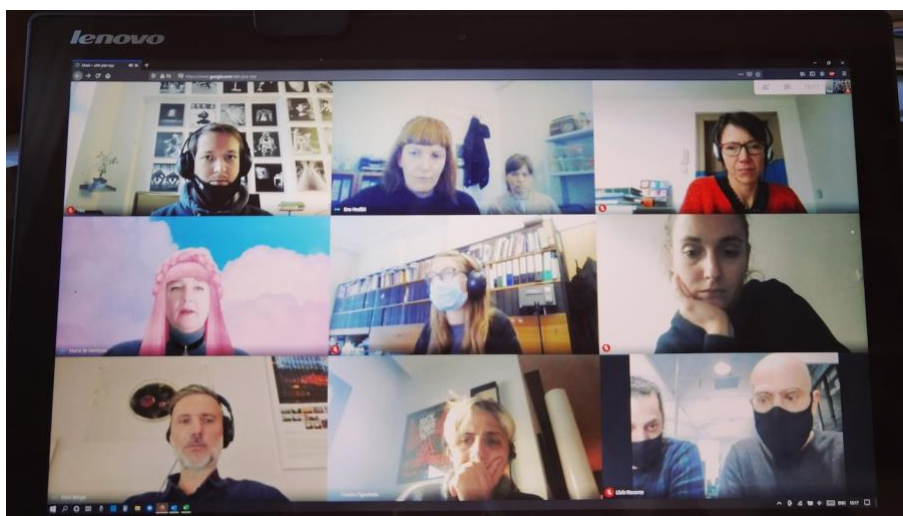
Bioart Society collaborates with **Emilia Tikka**, a transdisciplinary designer and researcher, who is working on a new project titled *Xeno-Optimizations for Arctic Survival*. "Speculating on biomedical enhancement and posthuman survival in more-than-human worlds of the Finnish Arctic as global warming advances two times faster in arctic areas, radical re-imaginings of human-nature-technology relations are urgently required. Non-occidental cosmologies will form a frame for collaborative technoscientific speculations, critically engaging with questions of biomedical use of the genome-editing technology CRISPR and more-than-human survival in the era of climate crisis," Tikka explains.

ART4MED is a collaboration between Makery (FR), Waag (NL), Laboratory for Aesthetics and Ecology (DK), Bioart Society (FI), and Kersnikova (SI). It is co-funded by the Creative Europe Programme of the European Union.

> ArchHIVE

The ArchHIVE Creative Europe project aims to create an open-source digital platform to document bioart practices. ArchHIVE addresses the challenges of creating and distributing cohesive digitisation and dissemination methods for best practices. As part of the project, Bioart Society will deliver case studies for exhibitions as well as wet lab and field workshops.

Created through the collaboration of six partners working in the NGO and museum sector, publishing, and IT and audio-visual field, the platform serves as a catalyst and a facilitation tool for the digitisation, archiving, and distribution of artworks and museum specimens, remote event participation, planning and realization, augmented publishing, staff and student education and training, and content contextualisation and interconnection.



Signing of contract, 12 December 2020.

The project partners are Cultivamos Cultura (PT), KONTEJNER (HR), Bioart Society (FI), Kersnikova (SI), Hangar (SP), and Royal Belgian Institute of Natural Sciences (BE). ArchHIVE is co-funded by the Creative Europe Programme of the European Union.



Residencies



Photo: Rozan van Klaveren.

Bioart Society is the motor behind Ars Bioarctica which is a long-term art&science initiative with a focus on the subarctic environment. It was started in autumn 2008 together with the Kilpisjärvi Biological Station of the Faculty of Biological and Environmental Sciences, University of Helsinki. Ars Bioarctica fosters projects between artists and scientists to develop new kinds of scientific and artistic thinking, and through this participate and contribute to the discussion on the relation of humankind and nature. It is located in Kilpisjärvi, the most Northern part of Finland. The activities of Ars Bioarctica encompass the Ars Bioarctica residency programme, the Field_Notes field laboratories, specific workshops, and educational services for university programs.

The Ars Bioarctica residency programme has an open call once a year. There are four residency periods in different seasons of the year. Applications from artists of any discipline and stage of professional career are welcome.

The Ars Bioarctica resident artists and researchers in 2020 were **Rozan van Klaveren, Kati Rapia, Pia Siren, and Ilona Valkonen**. All the other nearly 15 artists and artist groups were either cancelled or postponed to the year 2021 due to travel restrictions.

The station has a new director, **Jouni Heiskanen**, with whom Bioart Society has continued to develop the residency collaboration and renewed the partnership agreement. During autumn 2020, the society chose 20 artists or artist groups for the residency of the year 2021. **Leena Valkeapää** continued as our residency mentor.

/D A T A C E N T R E PRODUCTION RESIDENCY AT SOLU SPACE

In December 2020, visual artist **Maija Annikki Savolainen** worked at SOLU Space preparing her solo exhibition */d a t a c e n t r e*, which opened to the public in 2021. Savolainen also kept an [online journal](#) of her working. A sequence of [> reading circles](#) in connection to the exhibition took place in December 2020 – January 2021.



From Maija Annikki Savolainen's /d a t a c e n t r e exhibition. Photo: Laura Kaker.

/d a t a c e n t r e was an exhibition, held in January–February 2021, shifting through time. Mirroring the format of a residency, the exhibition performed as a site for ongoing research, material experimentation, and knowledge transmission. Throughout the duration of the show, Savolainen continued to work with the exhibition's components, developing new constellations of text, photographs, and materials such as glass, quartz stones, and geopolymers made of municipal waste incineration slag. Through fusing and re-configuring these materials, Savolainen asks what kind of fossils digital pictures will leave behind.

/d a t a c e n t r e reflects on a residency undertaken in rural Scotland in 2019, North AiR, Expanding Entanglements. The exhibition presents stone circles as ancient data centres: sites for gathering, processing, and distributing knowledge. Savolainen explores quartz stone as a connecting material which bonds together the sites of Tomnaverie, a neolithic stone circle in Aberdeenshire, and SOLU, a contemporary art gallery in Helsinki. It is speculated that crushed quartz, found around stone circles, used to connect people to the moon and stars in neolithic times. Today, silicon made of ultra-pure quartz is known for its semiconducting properties and is the material foundation for our wireless communication

infrastructure. Over time and space, the function of the mineral remains the same, connecting us through the skies.

The exhibition was curated in collaboration with **Yvonne Billimore** and the exhibition's video projections were realised in collaboration with **Otso Havanto**, a multidisciplinary new media artist and maker.



TOKYO ART&SCIENCE RESEARCH RESIDENCY

The open call for the Tokyo art&science Research Residency 2020 hosted by BioClub Tokyo in partnership with the Finnish Institute in Japan for Finnish and Finland-based artists resulted in the unanimous selection of artist **Johanna Rotko**. She is working with living materials, mainly with different yeasts. She will dedicate her residency to research colored yeast species that are used in traditional fermentation processes in the Japanese kitchen. Those species can be found in different misos but also in dried berries and other everyday products in the markets of Tokyo.

"I'm honored to have been selected for the residency, and I'm looking forward to the work in a fully equipped BSL laboratory – and to be able to explore the Japanese umami sources," says Rotko.

Rotko is known for her work with yeastograms – living images – that are formed by cultivating yeast on biological growth media to create images out of conventional photographs. Rotko was first introduced to yeastograms in 2013 during a workshop organized by artist collective Pavillon_35 and Bioart Society, and she has been working with yeast images since then. In her works, Rotko explores the themes of transiency, material loss, change, and time. She currently focuses on different yeast species, biological colours, and the many purposes of yeast. Rotko's works have been exhibited in Mänttä, Dublin, Oulu, Corvallis, Helsinki, Kotka, Dortmund, Tokyo, and Paris.

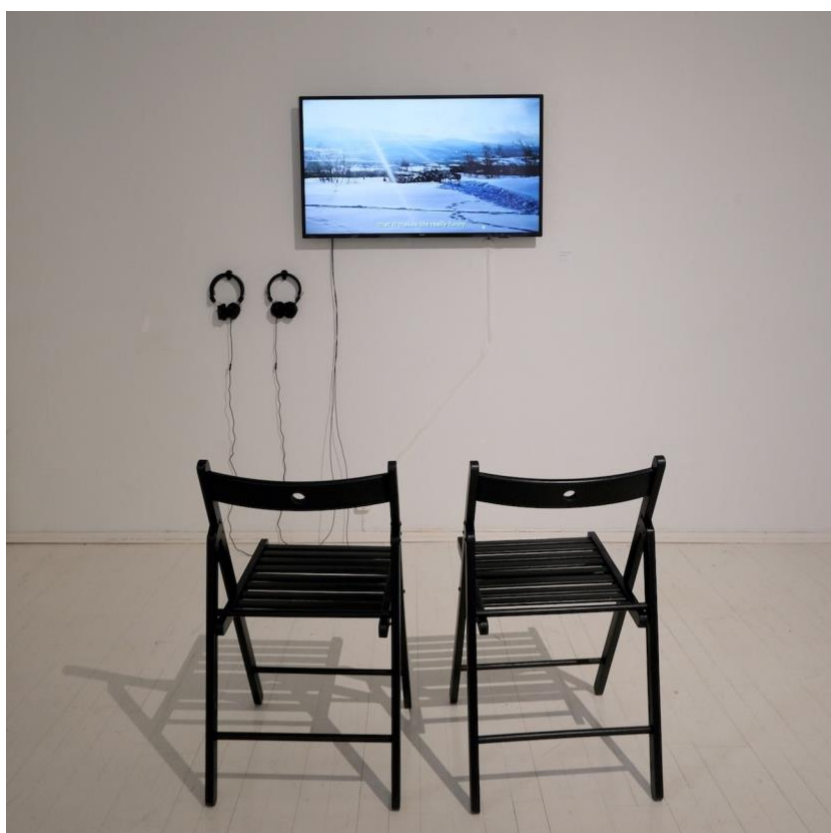
Rotko's residency is postponed to autumn 2021 or spring 2022 due the pandemic conditions.

Exhibitions

Leena Valkeapää, Oula A. Valkeapää, Tarja Tella,
Silvia Ploner, Nicolas Perret, & Alice Smits:

TIME AND RIVER ARE ALIKE

12 December 2019 – 31 January 2020 at SOLU Space.
91 visitors.



Leena and Oula A Valkeapää, *Manifestations* – installation view. Photo: Johanna Salmela.

The *Time and River are alike* exhibition offered a glimpse into Bioart Society's > **Ars Bioarctica** residency, mediated through video, audio, and photo works by five artists. The exhibition borrowed its name from the video work *Manifestations* by artists **Leena** and **Oula A. Valkeapää**. The sentence is one of many poetic observations Oula, a Sámi reindeer herder, has sent to his partner Leena via SMS while out in the fells with his reindeer. *Manifestations* is an intimate diary of the everyday life in the wilderness.

In her photographic series *BASICS 2018*, photographer **Tarja Tella** works with the landscape around Kilpisjärvi by substituting particular portions of the landscape with similar, yet alien, elements. The results range from playful observations to critical takes on the scales of human intervention into natural landscapes.

All Depends on the Sun, originally conceived as a radio-play but presented in video format in the exhibition, is a work by **Silvia Ploner** and **Nicolas Perret**, an artist duo based in Berlin and Paris. They followed the rumour of sound produced by aurora borealis, creating a work that delves into this phenomenon with the aim to open up wider reflections on sound and listening.



On the left: Tarja Tella, *BASICS* 2018, 2018 – a part of the series. On the right: Silvia Ploner and Nicolas Perret, *All Depends on the Sun* – installation view. Photo: Johanna Salmela.

In 2018, Amsterdam-based curator **Alice Smits** was part of the Second Order working group of *Field_Notes*, a field laboratory held at the Kilpisjärvi Biological station every second year. In the video *Tracing the Land*, Smits follows the work of her fellow groups with her camera, and devises a beautifully rough and fast portrait of the intense and intuitive field work done during the week.



Johanna Rotko:

LIVING IMAGES

6–12 March & 13 August – 13 September 2020 at SOLU Space.
119 visitors.



Image: Johanna Rotko, *Wild Yeastogram*. Research result from 2018, image printed in 2019.

Visual artist **Johanna Rotko** works with living materials, mainly different yeasts. The *Living Images* exhibition consisted of yeastograms – images made with living yeast cells – photographs taken between 2014–2020, and a video of the artist's working processes.

After exposing yeast cells to UV for about 48 hours, Rotko photographs the different states of growth and change as the images get covered by molds and other species. From this archive of photos, Rotko then selects works for her exhibitions. The yeastograms themselves are biodegradable, and they return to the nature's cycle as biowaste.

The main themes of *Living Images* are one's own relationship with nature and how nature is affected by human actions. Rotko's work presents a biocentric worldview, which does not place people above nature. It raises concerns about the state of the world and complex issues such as the loss of biodiversity.

Bioart is inevitably based on manipulation of living materials, but Rotko interferes with the yeastogram processes as little as possible to let her works emerge from what grows in and around the petri dishes.



*Johanna Rotko, Living Images – installation view.
Photo: Mari Kaakkola.*

*Brandon Ballengée, Cecilia Jonsson, Julia Lohmann,
Soichiro Mihara, Leena Saarinen, & Antti Tenetz:*

CRISS-CROSSING ECOLOGIES

20 August – 5 December 2020 at Annantalo, Helsinki.

Co-organised with Annantalo.

2,985 visitors.

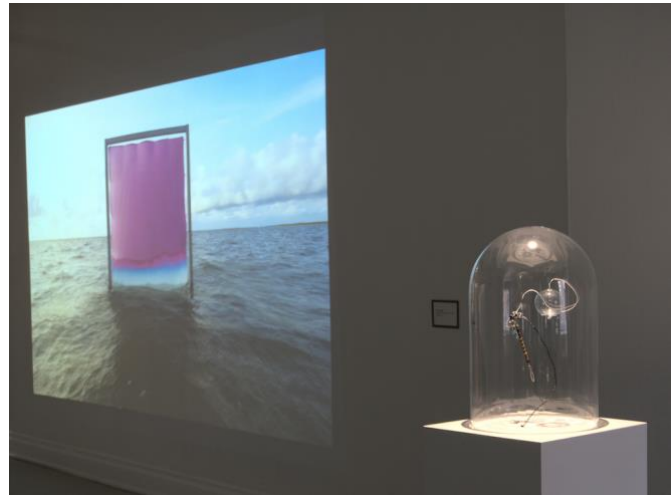


Julia Lohmann, Kombu Ahtola, 2020. Photo: Mari Keski-Korsu.

The art&science exhibition *Criss-Crossing Ecologies* is the first collaboration project of Bioart Society and Annantalo, an arts centre for children, young people, and families in Helsinki. The exhibition, curated by **Erich Berger**, **Mari Keski-Korsu**, and **Anna Puhakka**, presented works that combine artistic observations of phenomena and the search of poetry in the factual through the lenses of art, science, and design. The participating artists devised various ways of bringing out the unknown and invisible.

Brandon Ballengée highlighted the deteriorating environment through mutated frogs he collects from his field trips. **Cecilia Jonsson**'s work demonstrates the acidity of the sea with a giant indication device. In her work, **Julia Lohmann** focuses on seaweed as a material: what does this material tell us about the state of the seas, and what could be done to stop the acidification? In **Soichiro Mihara**'s work, on the other hand, one can hear radioactive radiation, which became quite important in his home country after the Fukushima nuclear accident. **Leena Saarinen** aims to bring the languages of people and birds closer to each other by creating an alphabet for birdsong. **Antti Tenetz**'s work explores the possibilities of artificial intelligence and biology from the perspective of space.

The aestheticisation of each research subject is a poetic quest leading to deeper questions: What is coexistence in different environments, and what are the ways humans relate to the ecosystem they are part of? How can the changing world be perceived in these works? The transdisciplinary approach of the artists assists to bring these questions into light.



On the left: Cecilia Jonsson, *Tides*, 2017–. On the right: Soichiro Mihara, *Bell*, 2013. Photo: Mari Keski-Korsu.



Leena Saarinen, *Birdsong*, 2019. Photo: Mari Keski-Korsu.



Antti Tenetz's *Perihelion*. Photo: Mari Keski-Korsu.



Brandon Ballengée, *Malamp: Reliquaries*, 2001 (detail). Photo: Mari Keski-Korsu.

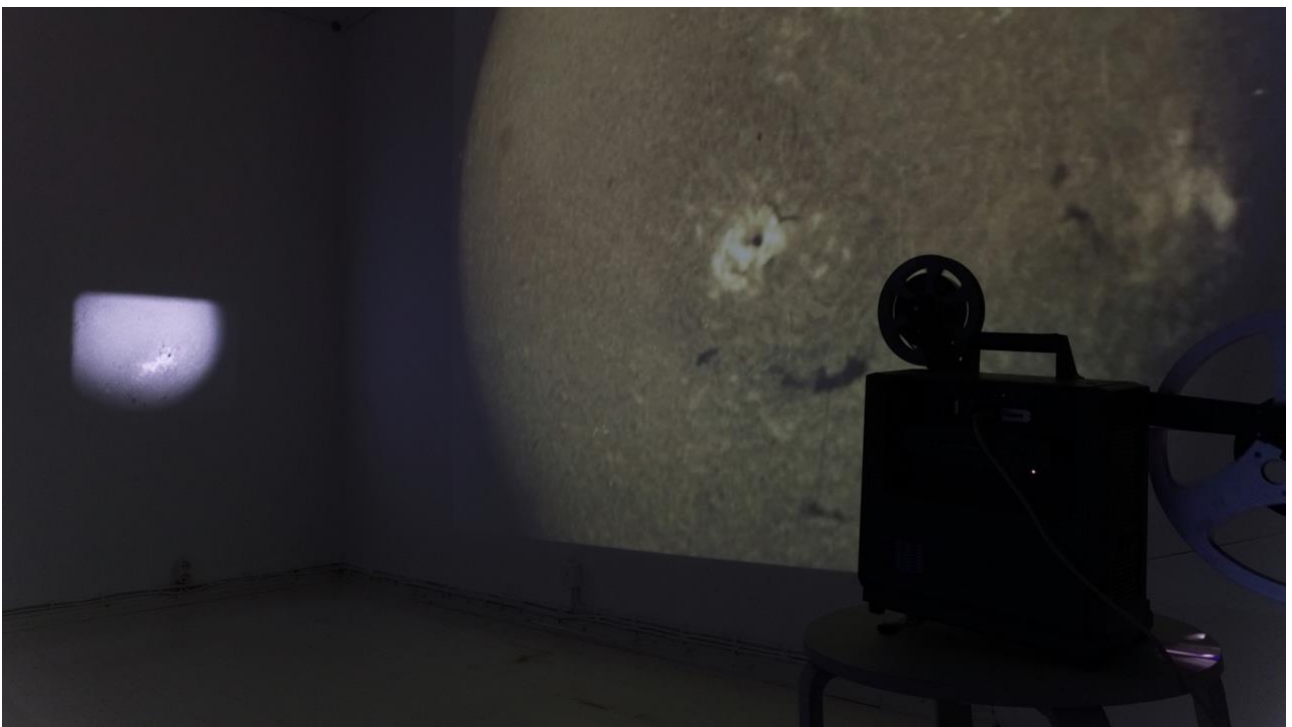
Minna Långström & Leah Beeferman:
PHOTOSONIC LANDSCAPES IN COLOR

16 October – 21 November 2020 at SOLU Space.

120 visitors.

Part of the > **Biofriction** project.

In their *Photosonic Landscapes in Color* exhibition, the artists **Minna Långström** and **Leah Beeferman** presented new experimental works, exploring images as scientific tools, or as other forms of information, and as physical entities consisting of pixels or pigment grains correlating to a physical object sensitive to light.



Minna Långström, *Photosphere*, 2020. Installation view (detail). Photo: Mari Keski-Korsu.

Minna Långström's video installation *Photosphere* is a meditation on the materiality and other aspects of the work of a solar astronomer, **Sara Martin**, who records films and timelapse videos with a telescope during sunlight hours. *Photosphere* aims to reflect on, specifically, the usage of film within this type of research, the images of the sun that Martin has recorded, and the principles involved behind these kinds of scientific images in relation to other usages of film. The installation plays with the notion of colour as an aesthetic, phenomenological, and scientific value. The concept of true colour isn't of much use for astronomers, geologists, or astrobiologists, while the notion of false colour will deliver new knowledge. This manipulation of photographic material extends the human vision beyond what is possible to observe with the unaided eye.

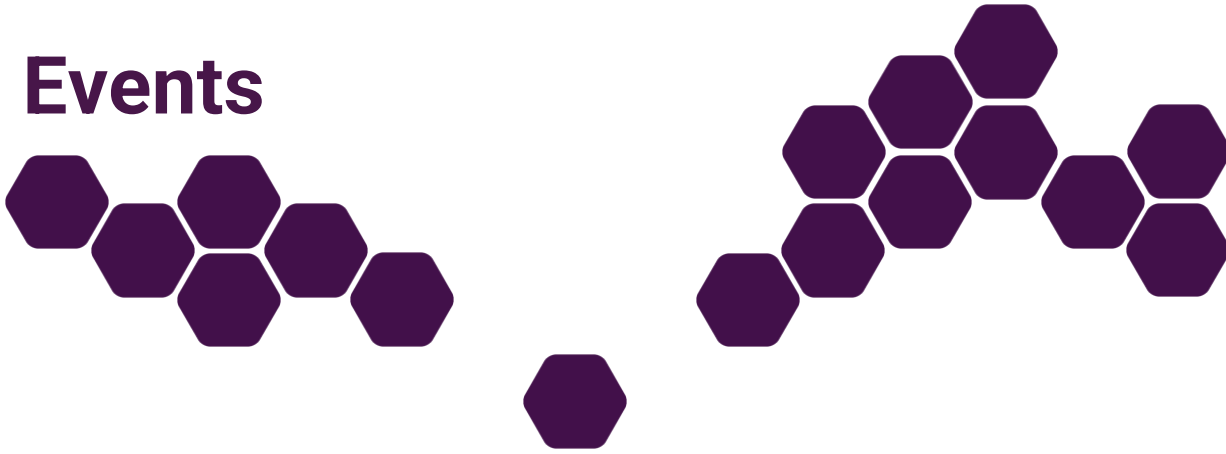


Leah Beeferman, *The Elements*, 2020. Installation view from SOLU Space (detail). Photo: Mari Keski-Korsu.

Leah Beeferman shot *The Elements* during her third visit to Kilpisjärvi, northern Finland, in June 2019 – when the sun doesn't set. The video, with voiceover text she wrote and read, explores what it means to observe and measure a landscape. What is an observation, and what does it mean to measure? *The Elements* builds an experience of Kilpisjärvi from several juxtapositions: layered images, offering multiple views of the landscape at once, contrasting poetic language with numerical/scientific description, and considering Kilpisjärvi's wind and weather alongside data about wind and weather in outer space. How do we express what we measure, in images or in words? What is an image, when all experiences – regardless of their source – end up as pictures in our minds?



Events



IN DIALOGUE: EMILIA TIKKA & MIANNA MESKUS

15 January 2020 at SOLU Space.

21 participants.



Emilia Tikka presenting. Photo: Erich Berger.

The dialogue brought together artist, designer, and researcher **Emilia Tikka** and **Mianna Meskus**, sociologist of science and technology. Tikka talked about her recent stay at [> Tokyo art&science Research Residency](#) in Japan and discussed her work with Meskus. Tikka highlighted her research concept of 'circular genealogies,' a mixture of spiritual and biomedical approaches on the life cycle, drawing from the immortal jellyfish, rituals of kajimaya, the Buddhist concept of reincarnation, and biomedical applications of cellular reprogramming. The research on the non-western concepts of the beginning and the end of life included lab visits such as CiRA – the Yamanaka Laboratories in Kyoto, temple visits and research on Okinawan rituals, and cultural techniques on the thematic. Out of this research, Tikka produces artworks questioning the traditional concepts of evolutionary genealogy aiming to investigate alternative forms of heredity, reproduction, and genetic legacy in the era of advancing biotechnologies.



ART AS WE DON'T KNOW IT BOOK LAUNCH

5 March 2020 at SOLU Space.

70 participants.



Photo: Mari Kaakkola.



Adriana Knouf during her keynote titled "Xenological Life Potential." Photo: Mari Kaakkola.



Lauri Linna and his seed adoption desk. Photo: Mari Kaakkola.

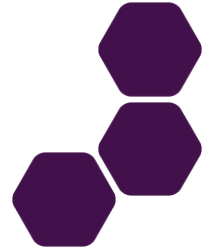


The book launch event was held at SOLU Space on 5 March 2020. The keynote speaker of the event was **Adriana Knouf**, and other speakers included **Mari Keski-Korsu**, **Essi Viitanen**, **Marietta Radomska**, **Erich Berger**, **Kasper Mäki-Reinikka**, **Laura Beloff**, and **Teemu Lehmusruusu**. **Lauri Linna** distributed seeds as part of his *PORK KANA CAR ROT* project, and other performers included **Kira O'Reilly**, **Piritta Puhto**, **Sushant Passi**, and **Helena Sederholm**. The book launch event was also connected to the opening of **Johanna Rotko's** *> Living Images* exhibition.



TALKING ABOUT “LIVING THINGS”

11 March 2020 at SOLU Space.
25 participants.



The bird, the beetle, the chicken, the human, the mushroom, and the aspen tree... We place them in fixed terms, often in singular form, classified and sorted like in museum cabinets or like characters in a spectacle, objectified as living things. Critics argue that organisms and kinds of organisms are never fixed objects. Hence, they focus on agency, interrelation, and meaning. Yet, our encounters, relations, and presences with human and non-human living beings are tangible, and without doubt have a bodily aspect. We encounter embodied living beings not as abstract relations, as actors, not as actions.



Björn Kröger. Photo: Erich Berger.

This opens the question how to represent life-material and bodies of living beings, and at the same time avoiding the pitfalls of objectification. In the open conversation at SOLU Space with artist **Bartaku**, paleantologist **Björn Kröger**, philosopher **Marietta Radomska**, and artist **Mari Keski-Korsu**, the question was raised if this is possible at all or even desirable.



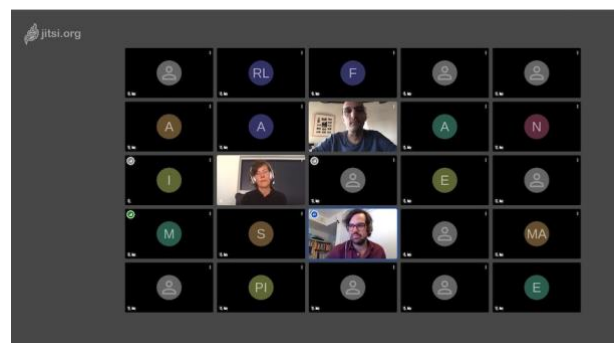
FRAGILE LIFE AND CELESTIAL MATTER(S)

26 & 28 May 2020 online.

Co-organised with and supported by the Arts Promotion Centre Finland.
87 participants.



Fragile Life and Celestial Matter(s) brought together a group of artists and researchers who have worked on space-related issues for many years. Space evokes big questions of where life comes from and where might we go. However, space is also a contested environment where the default politics of colonisation, militarisation, resource exploitation, and pollution are replicated. But what kind of ecologies and politics do we want for Earth and space, and how do we get there?



Online live panel for Fragile Life.

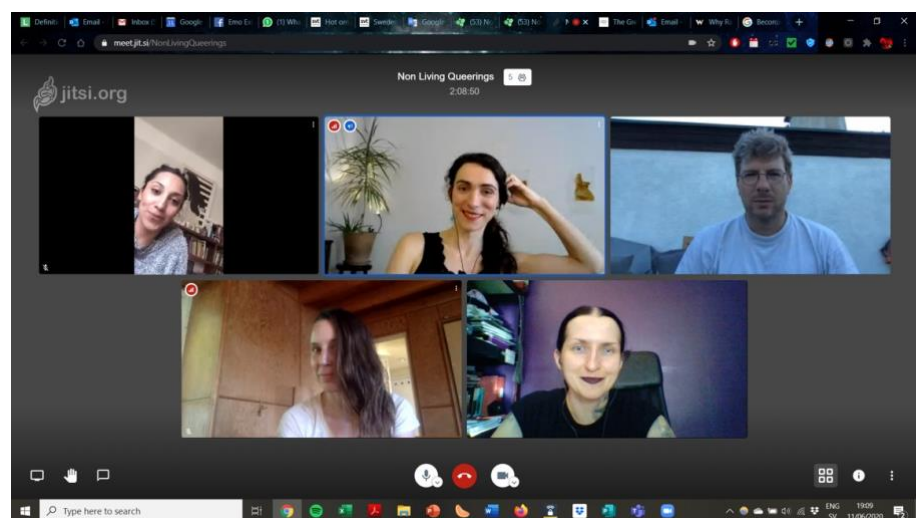
During the two online panels, a group of eight artists, working on matters related to space and politics, biology, complexity of otherness, depression, and space travel, discussed their point of view and the potential of art in space. In the first, *Fragile Life* event on 26 May, **Andy Gracie**, **Flis Holland**, and **Adriana Knouf** discussed the themes of agency and

embodiment of life in space, what it is like to be in space, and resilient beings, and it was moderated by **Antti Tenetz**. The second event on 28 May, titled *Celestial Matter(s)* and moderated by **Miha Turšič**, featured **Ewen Chardronnet**, **Ivan Henriques**, **Minna Långström**, and **Axel Straschnoy** discussing the themes of environment and ecologies on the move, politics of space, and Earth as a model alien world.



What does it mean to be acting in accordance with the goal to “flatten” the mathematically constructed curve? Speculatively, it seems a little reminiscent of aspiring for the best possible version of the present. What is the role of art in the unpacking/understanding of the now? How can art mobilise a better understanding of possible futures? How can art spaces be prepared to respond to this possible pendulum of cyclical outbreaks? What alliances can be woven in this context of precariousness, life, death, and malaise?

Each > **Biofriction** partner – Hangar (ES), Cultivamos Cultura (PT), Kersnikova Institute (SI), and Bioart Society – has called together a group of artists and scientists that, during one month, will work on questions concerning art, science, and politics of the pandemic.



Online live panel for Biofriction.

The group invited by Bioart Society is titled **Non/Living Queerings**, and it is formed by **Marietta Radomska**, **Terike Haapoja**, **Margherita Peveri**, **Markus Schmidt**, and **Mayra Citlalli Rojo Gómez**. Bringing together perspectives and toolboxes from across art, science, and theory, this group examines the story of the seeming agency of SARS-CoV-2 virus critically, as it tends to hide the issues of the destruction of biodiversity, climate change, socio-economic inequalities, neocolonialism, overconsumption, and the anthropogenic degradation of nature, and searches for appropriate ethico-political responses.

PHOTOSONIC LANDSCAPES PANEL

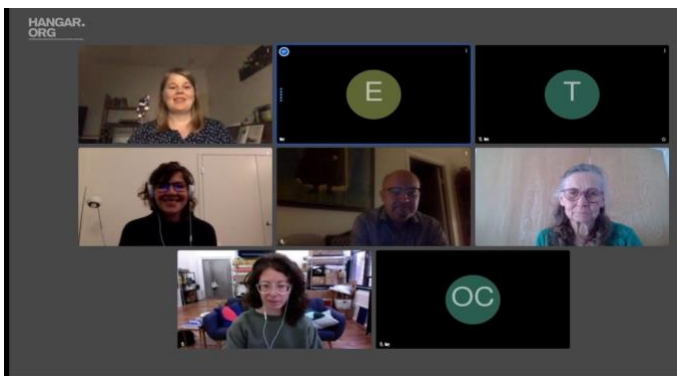
12 November 2020 online.

Audience: 162.

Part of the > Biofriction project.



In the panel discussion related to the > *Photosonic Landscapes in Color* exhibition, artists **Minna Långström**, **Leah Beeferman**, and **Mika Taanila** discussed with solar astronomer **Sara Martin** on the poetic and pragmatic uses of scientific images. The discussed imagery extends from astronomy to arctic landscapes and underwater visions. How does a scientist approach images? How does an artist approach natural sciences? Could artists' moving image based on scientific images expand our understanding on science – or on art? How have the paths of film industry and astronomy crossed in history? The panel discussion was moderated by **Tytti Rantanen**, programme coordinator from AV-arkki.



Online live panel for Photosonic Landscapes in Color.

The evening began with a talk by Sara Martin where she highlighted a selection of studies from her career in solar astronomy. Martin discussed, among other things, her finding a way to forecast some eruptive solar events and her surprising discoveries of canceling magnetic fields and chirality in solar features as well as establishing the nonprofit corporation, Helio Research in 1995.

/DATA CENTRE READING CIRCLES

3 & 17 December 2020, 14 & 28 January 2021
online.

79 participants.

Starting in December 2020 and over the course of artist **Maija Annikki Savolainen's** */data centre* exhibition in the beginning of 2021, a sequence of reading circles were held in SOLU to generate collective energy, knowledge transmission, and speculative enquiry around the work. In an exhibition that is shifting over time, the reading circles repeat throughout to create moments of articulation in Savolainen's ongoing artistic process. These miniature rituals invited a series of guests from a range of disciplines to present texts which can be collectively read and discussed. The series consisted of four reading circles.

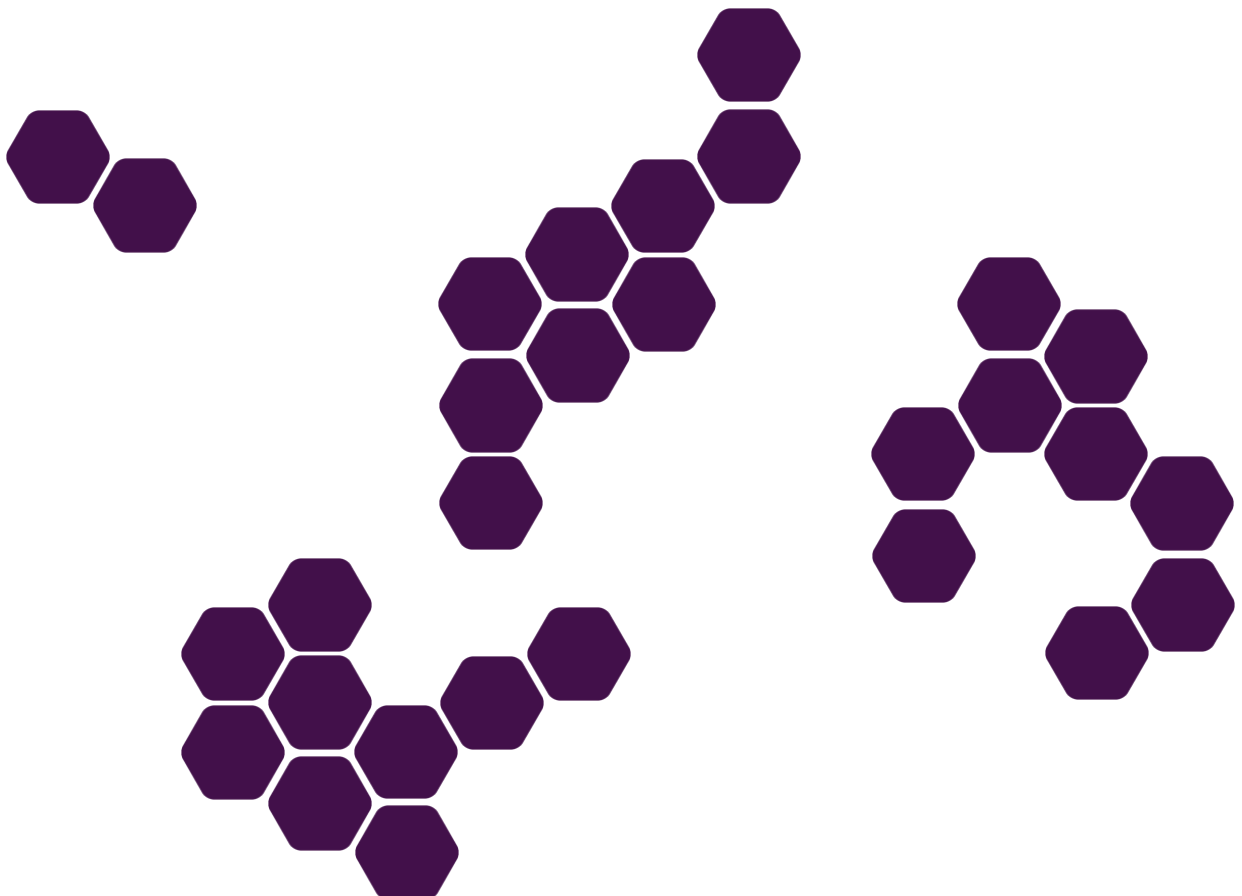


*Online reading circle setup at SOLU Space.
Photo: Maija Annikki Savolainen.*

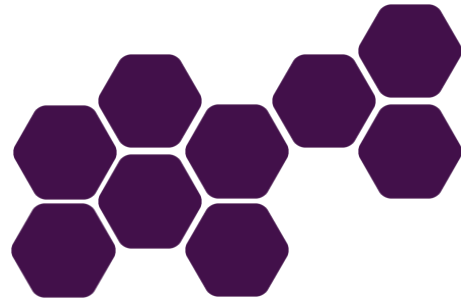
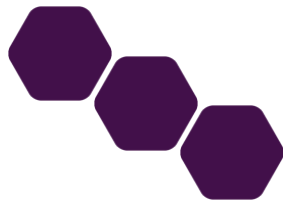


Maija Annikki Savolainen and Yvonne Billimore during the exhibition setup at SOLU Space.
Photo: Maija Annikki Savolainen.

Each reading circle brought attention to a different aspect of Savolainen's work and invited a guest host, with a particular frame of knowledge, to guide the reading and discussion. Reading Circle I with curator **Yvonne Billimore** opened with a short excerpt from *Dub: Finding Ceremony* by **Alexis Pauline Gumbs**, followed by the text *Crystals (in Time and the Hunter)* by **Italo Calvino**. In Reading Circle II, data centre architect **Tapani Virkkala** joined Maija Annikki Savolainen for a presentation and discussion, and together they shared "readings" and reflections on data centres. In Reading Circle III, radio astronomer **Anne Lähteenmäki** centered on the subject of archaeoastronomy and ancient stone circles, and **E. C. Krupp's** text *Echoes of the Ancient Skies: The Astronomy of Lost Civilizations*. The final reading in this series, Reading Circle IV with Savolainen saw the artist perform a reading of her text */data centre*.



Workshops



FIELD RECORDING WORKSHOP WITH ALAN COURTIS

16 February 2020 at SOLU Space.

19 participants.



Alan Courtis workshop introduction at SOLU Space. Photo: Erich Berger.

The same way photography is now part of the daily life of millions around the world, sound recording has been also expanding its role in modern societies. In this context, the field recording workshop's main aim was to show and discuss field recording from various perspectives. The workshop was open for anyone to join – musicians, non-musicians, artists, professionals, students, and anybody interested – and it was conducted by **Alan Courtis**, a Buenos Aires -based musician and artist.

The topics included diverse phonographic tendencies, sound possibilities, creative listening, and expressive uses of sound recording. The focus was practical, requiring involvement by participants, whose interests and skills provided a central starting point. The specific goals of the workshop were to introduce participants to field recording, to improve creative ways of listening, to explore the possibilities of sound recording, to get to know the main tendencies and composers on this field, to try diverse techniques and exercises, to reflect on the artistic implications of these topics, and to encourage the creative process.

MATERIALEX WORKSHOP WITH CHAN'NEL VESTERGAARD

26–27 February 2020 at SOLU Space.

12 participants.

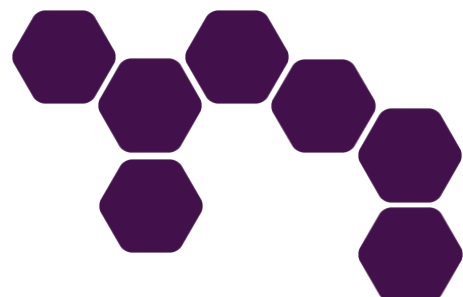
Part of the > BioFacts project.



Photos: Johanna Salmela.

Materials are ubiquitous in our life, and we are increasingly interested in where they come from and the circumstances of their production as well as their afterlife. The search for materials that are easier on the environment and reduce pressure on our ecologies, in comparison to products based on fossil fuel or minerals, is evident.

MaterialeX was a two-day deep-dive workshop about exploring how to make materials from local waste streams. It was held by **Chan'nel Vestergaard**, also known as **Littlepinkmaker**. Following Vestergaard's concepts of "designing for disaster" or "designing the disaster," the workshop introduced the MaterialeX Kit, a selection of tried and tested recipes to learn about terminology, sustainability, material ecosystems, and material production. During the workshop, these recipes were tested and expanded with the matter at hand to create new materials and challenge oneself with questions related to material futures.



YEASTOGRAM WORKSHOP WITH JOHANNA ROTKO

24–25 & 27 August 2020

at SOLU Space and Cultivamos Cultura in Lisbon, Portugal via remote connection.

18 participants.

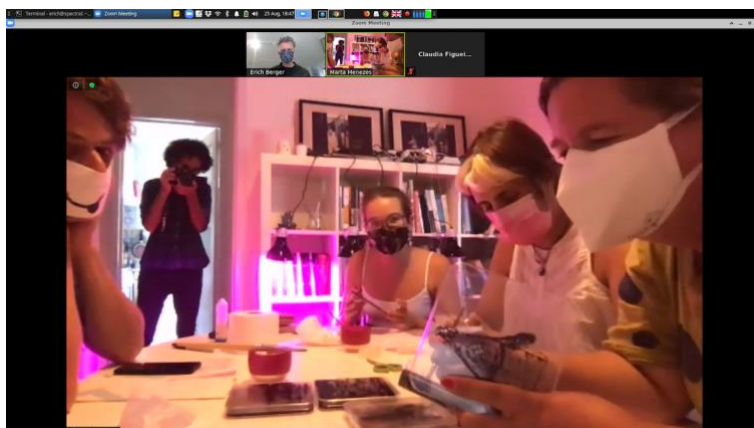
Part of the > BioFacts project.



Photos: Johanna Rotko.

Yeastograms are living images made with yeast, growth media, UV light, and rasterised images. During the three-evening workshop, participants learned how to make them: to rasterise images, to make a suitable growth medium for yeast, and to expose the images with UV light. The workshop was hosted by visual artist **Johanna Rotko**.

Yeastograms are formed by cultivating yeast on a biological growth media to create images out of conventional photographs. Raster images printed on film are exposed with Ultraviolet LED lamps onto cultivated yeast in petri dishes. After approximately 48 hours, the yeast cells exposed to UV are killed or injured, the ones sheltered by the black parts survive, and the yeasts form the image on the growth medium.



Remote workshop at Cultivamos Cultura.

Participations



HELSINKI BOOK FAIR: UNPRECEDENTED ART – BIOART CHALLENGES THE LIMITS OF SCIENCE

23 October 2020 online.

The Unprecedented Art – Bioart Challenges the Limits of Science discussion featured **Helena Sederholm**, **Laura Beloff**, and **Teemu Lehmusruusu**, authors of *> Art as We Don't Know It*, discussing the book. The discussion was organised by Aalto ARTS Books, and it is part of the Science Center's science-focused entity.

THE NIGHT OF SCIENCE: ART, SCIENCE & CURATING

16 January 2020 at Sofia Future Farm's Tearoom, Helsinki.

How can art mediate the complex themes dealing with ecological questions like climate change, and what new can art bring into the field of science? What kind of projects between art and science have there been already, and what might we expect in the future? Executive director **Paula Toppila** (IHME), Executive director **Erich Berger** (Bioart Society), and Curator **Ulla Taipale** (Climate Whirl arts program at INAR, University of Helsinki) shared their thoughts in the discussion during the Night of Science.



A participant at Alan Curtis's field recording workshop. Photos: Tuukka Asplund.