

UN/GREEN,
COM/POST/
HUMAN, N/AI

OPEN FIELDS 2019:

UN/GREEN, COM/POST/HUMAN, N/AI

The 4th International Art-Science Conference

In the framework of the RIXC Festival:

UN/GREEN – Naturally Artificial Intelligences

Riga, July 4–6, 2019

Venues: The Latvian National Museum of Art and

The Art Academy of Latvia

The Conference Chairs

Rasa SMITE, Raitis SMITS, Jens HAUSER

The Conference International Scientific Board:

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The Graduate Center, City University of New
York, US

Dr. Ellen PEARLMAN / Parsons / New School /
Art-A-Hack / ThoughtWorks / New York, USA

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Ph. D. Raivo KELOMEES / Estonian Academy of

Arts, Tallinn, Estonia

Regine DEBATTY / we-make-money-not-art.com/

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The Conference takes place in the framework
of RIXC Art Science Festival, and it is a part of
RISK CHANGE project, co-financed by Creative
Europe

Organized by RIXC Center for New Media

Culture in Riga, Latvia

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**The 4th International Art-Science Conference
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UN/GREEN – Naturally Artificial Intelligences**

CONFERENCE ABSTRACTS

Riga, Latvia, 2019

UN/GREEN, COM/POST/HUMAN, N/AI

The 4th International OPEN FIELDS Conference for Art-Science Research

UN/GREEN, this year's RIXC Festival, aims at complicating the pervasively employed notion of "green" by providing a cross-disciplinary platform for the discussions and artistic interventions exploring one of the most paradoxical and broadest topics of our times.

The festival will feature the 4th Open Fields conference, which with the title "Un/Green, Com/Post/Human, N/AI" aims to 'un-green greenness', 'eco-systematically' reconnect 'post-human postures', and discover and unpack 'Naturally Artificial Intelligences'. 'Green', symbolically associated with the 'natural' and employed to hyper-compensate for what humans have lost, will be addressed as indeed most anthropocentric of all colours, in its inherent ambiguity between alleged naturalness and artificiality. Are we in control of 'green'? Despite its broadly positive connotations 'green' incrementally serves the uncritical desire of fetishistic and techno-romantic naturalization in order to metaphorically hyper-compensate for material systemic biopolitics consisting of the increasing technical manipulation and exploitation of living systems, ecologies, and the biosphere at large.

Alongside 'green', the central topic of this conference, the Open Fields 2019 organizers also have selected visionary and critically un-green, spectral-prismatic, post-anthropocentric, and socio-algorithmic proposals by artists, scientists, researchers and experts from different academic disciplines and professional fields.

The main conference themes:

- green/ungreen – 'symbolic green, ontological greenness and performative greening'
- biopolitics and ecotopia – beyond the anthropocene, towards multi-species relations
- 'green' intelligence – environment and naturally AI within algorithmic societies
- post-anthropocentric visions – 'nature culture' and eco-critique
- sensible 'green' – beyond the visual: acoustic, olfactive, chemical, etc.
- biosphere and technosphere – techno-ecological perspective of our planet and in Space
- prismatic – color theories, light and perception

The Open Fields 2019 conference is closely connected to the UN/GREEN exhibition, featuring twenty internationally acknowledged artists. The exhibition is taking place from July 5 – September 22, 2019, in the Latvian National Museum of Art.

Rasa Smite, Raitis Smits, Jens Hauser
Riga, 2019



Programme (summary)

Riga, July 4–6, 2019
The Latvian National Museum of Art /
The Art Academy of Latvia

Thursday / July 4, 2019

- 15.00** Un/Green, Com/Post/Human, N/AI
Thematic Panel of Open Fields 2019 Conference Opening Day
Venue: The Latvian National Museum of Art
- 17.00** Ungreening Greenness and Naturally Artificial Intelligences
Public Keynotes and Artist Talk: Jens HAUSER, Luc STEELS and Karine BONNEVAL
Venue: The Latvian National Museum of Art
- 19.30** Reception and Opening Performances
Venue: The Art Academy of Latvia

Friday / July 5, 2019

- 10.00** OF2019 Conference Day 1: Thematic Panels and Parallel Sessions
Venues: The Latvian National Museum of Art / The Art Academy of Latvia
- 16.00** Un/Green and Com/Post/Human – Public Keynotes and Artist Talks
Agnes MEYER BRANDIS, AnneMarie MAES, EMAP Residency Project
Venue: The Latvian National Museum of Art
- 18.00** UN/GREEN Exhibition opening
Venue: The Latvian National Museum of Art

Saturday / July 6, 2019

- 10.00** OF2019 Conference Day 2: Parallel Sessions
Venues: The Latvian National Museum of Art / The Art Academy of Latvia
- 17.00** Sensible Garden – Closing Programme and Artistic Interventions
by young artists
Venue: The Art Academy of Latvia

Programme (Detailed)

Opening Day / Thursday, July 4

10.30 Press conference

Venue The Latvian National Museum of Art (Exhibition Hall in the Basement)

14.00 Registration and Coffee

Venue The Latvian National Museum of Art (Conference Hall on the Ground Floor)

15.00–16.45 Plenary Session: UN/GREEN, COM/POST/HUMAN, N/AI Thematic Panel and Featured Projects

Venue The Latvian National Museum of Art

Welcome Speech by Rasa SMITE and Raitis SMITS, conference chairs

Jan-Peter E.R. SONNTAG. GAMMAvert

Karin OHLENSCHLÄGER. Eco-Visionaries

Adam BROWN. Bioremediating Greenness – Rethinking Human Exceptionalism

17.00–18.45 Public Keynotes and Artist Talk: UNGREENING GREENNESS AND NATURALLY ARTIFICIAL INTELLIGENCES

Venue The Latvian National Museum of Art

Moderator: Rasa Smite

Jens HAUSER. Greenness: Sketching the Limits of a Normative Fetish

Luc STEELS. How Nature Inspires Progress in Artificial Intelligence

Karine BONNEVAL. Se planter (To plant oneself / To fail)

19.30 UN/GREEN FESTIVAL Opening Reception and Performances

By Florent DI BARTOLO (FR), Platons BURAVICKIS (LV).

Venue The Art Academy, K-2 building

Day 1 / Friday, July 5

9.00 Registration and Coffee

10.00–11.25 Plenary Session: ECODATA Thematic Panel and Featured Project

Venue The Art Academy

Moderator: Karin OHLENSCHLÄGER

Yvonne VOLKART, Rasa SMITE, Aline VEILLAT. Ecodata – Ecomedia – Ecoaesthetics

11.30–13.00 Parallel Session 1A: GREEN INTELLIGENCE AND ENVIRONMENT – NATURALLY AI WITHIN ALGORITHMIC SOCIETIES

Venue The Art Academy

Moderator: Gabriela GALATI

Aliya SAY. Bodies and Plants: Ways of Sensing in Contemporary Art

Claudia ROBLES-ANGEL. LEIKHĒN

Katherine BEHAR. Slippery When Wet: Muddled Meanings in “Maritime Messaging: Red Hook”

Eva-Maria LOPEZ. I Never Promised You a Green Garden.

Theun KARELSE, Ian INGRAM. Random Forests. A Field Guide Environmental Machine Learning

11.30–13.00 Parallel Session 1B: BIOPOLITICS AND ECOTOPIA – BEYOND THE ANTHROPOCENE, TOWARDS MULTISPECIES RELATIONS

Venue The Latvian National Museum of Art

Moderator: Anna PRIEDOLA

Tuce EREL. Hactivate Yourself: Curatorial Research About Bio-Politics and Posthuman Body

Nadine BOTHA. Sugar: A Cosmology of Whiteness

Saša SPAČAL. Symbiome – Economy of Symbiosis

Laura BELOFF, Kira O'REILLY. Happy Together – for ever

Alexander KIRYUTIN. EDEN Project: Listening to Tree

14.00–15.40 Parallel Session 2A: POST-ANTHROPOCENTRIC VISIONS – ‘NATURE CULTURE’ AND ECO-CRITIQUE

Venue The Art Academy

Moderator: Chelsea POLK

Cammack LINDSEY. Airs for Algae (performative lecture)

Till BOVERMANN, Katharina HAUKE. Friendly Organisms ... and then we will see if we can be friends

Day 1 / Friday, July 5

Catherine HARRIS. Posthuman Spaces
Miguel ALMIRON. Dialogues in Between Real and Unreal
Raivo KELOMEES. Perception of Temporal and Cognitive Lag in the Participatory Art

14.00–15.40 Parallel Session 2B: BIOPOLITICS AND ECOTOPIA – BEYOND THE ANTHROPOCENE, TOWARDS MULTISPECIES RELATIONS

Venue The Latvian National Museum of Art

Moderator: Maija DEMITERE

Lauren RUIZ. Plastic Lifeworlds: At the Intersection of Human and Nonhuman Labor

Margherita PEVERE. Semina Aeternitatis

Martina HUYNH. Living Infrastructure

Richard PETTIFER. Climate Change vs. Hans, the Opera Robot: Negotiating Non-Human Agency

Haakon Haraldsen ROEN, Vako VARANKIAN. Gathering of The Hive: Investigating the clustering behaviour of honeybees through art and swarm robotics

16.00–17.45 Public Keynotes and Artist Talks: UN/GREEN

Venue The Latvian National Museum of Art

Moderator: Rasa SMITE

Agnes MEYER BRANDIS. Walking Trees

AnneMarie MAES. Intelligent Beehives

Peter ZORN. EMAP – European Media Art Residency programme /

Taavi SUIALU – Waiting for the Light

18.00 UN/GREEN Exhibition Opening

Venue The Latvian National Museum of Art

Day 2 / Saturday, July 6

9.00 Registration and Coffee

10.00–11.20 Parallel Session 3A: GREEN/UNGREEN – SYMBOLIC GREEN, ONTOLOGICAL GREENNESS AND PERFORMATIVE GREENING

Venue The Art Academy

Moderator: Raivo KELOMEES

Karolina RYBÁČIAUSKAITĖ. The Ambivalent Matter of Soil in the Sphere of Contemporary Art

Joy LAM. The Pulse of Nature – Lung Fu Shan

Ksenia FEDOROVA. Generative Prototyping. Realities of Frictional Fictions

Vytautas MICHELKEVICIUS. (Per)forming Ecotopias in the Green Cube:

Agency of Plants, Gears and Landscapes

Marcus BANKS. Sustainability in Science Labs

10.00–11.20 Parallel Session 3B: BIOSPHERE AND TECHNOSPHERE – TECHNO-ECOLOGICAL PERSPECTIVE OF OUR PLANET AND IN SPACE

Venue The Latvian National Museum of Art

Moderator: Oksana CHEPELYK

Irène HEDIGER, Vanessa LORENZO, Nadya SUVOROVA. SEMIOSPHERES – Interfacing dialogues with the invisible. A post-powerpoint session with the artists Vanessa Lorenzo, Nadya Suvorova and curator Irène Hediger

Jakub PALM. Epistemic Computronium: Converging the -spheres

Colette TRON. Com-Prehension of the Earth From Buckminster Fuller's Point of View to Anthropocene Theories

Selenia MARINELLI. Hypernatural Greenness: Towards a Bio-Tech Terraformation of the Planet

Casper DRAKE. Multispecies Perspectives and Eco-Sci-Fi Practices

11.30–13.00 Parallel Session 4A: POST-ANTHROPOCENTRIC VISIONS – 'NATURE CULTURE' AND ECO-CRITIQUE /

Venue The Art Academy

Moderator: Vytautas MICHELKEVICIUS

Marton KABAI, Natela LEMONDZHAVA / Oddkin. Apocalyptic Calmness (performative lecture)

Chelsea POLK. 44,320: Interpolating 8 Bogs and the Post-Transcendental

Karel DOING. Building Human/Plant Affiliations

Robert HENGEVELD. Art in Natural and Post Natural Worlds

Maija DEMITERE. (Not)Letting Go of the Nature

Day 2 / Saturday, July 6

11.30–13.00 Parallel Session 4B: SENSIBLE 'GREEN' – BEYOND THE VISUAL: ACOUSTIC, OLFACTIVE, CHEMICAL...

Venue The Latvian National Museum of Art

Moderator: Anna PRIEDOLA

Petja IVANOVA, Anton PEITERSEN. Styroworm and Other Hybrids

Riccardo TORRESI, Maxime LETHELIER, Asako FUJIMOTO. Sensing Gravity –

Audiovisual Installations Based on Gravitational Phenomenons

Nadja Gabriela PLEIN. Non-Dualism and its Implications on Art-Making

Eva SJUVE. Tuning into the Un/Greening

Nina CZEGLÉDY. Beyond Green

14.00–15.20 Parallel Session 5A: POST-ANTHROPOCENTRIC VISIONS – 'NATURE CULTURE' AND ECO-CRITIQUE

Venue The Art Academy

Moderator: Kristin BERGAUST

Paul GRANJON. What To Make [Techno] Art About in The Age of Ecological Collapse?

Davide BEVILACQUA, Christina GRUBER, Antonio ZINGARO. Unpacking Digital Greenwashing – Is an Organic Internet Possible?

Teodora Sinziana FARTAN. Red Herrings and Green Omens: Exploring the Urgency of Environmental Concerns Through Narrative Techniques

Taller de Casqueria. Default Water

Adam FISH. Points of Presence

14.00–15.20 Parallel Sessions 5B: BIOSPHERE AND TECHNOSPHERE – TECHNO-ECOLOGICAL PERSPECTIVE OF OUR PLANET AND IN SPACE

Venue The Latvian National Museum of Art

Moderator: Raivo KELOMEES

Elizabeth SHORES. Looking In: Outer Space as a Metaphor of Possibility for Practitioners and Viewers of Art and Design

Tytus SZABELSKI. Post-Digital Landscape. Matter and Metaphors

Anna TOKAREVA. Baba Yaga Myco Glitch

Normunds KOZLOVS, Ilva SKULTE. Anti-Entropic Ideas of Reforming the Earthlings' Life by Russian Cosmist Tsiolkovsky

Vegas SIMBELIS. Interpretative Digitality

Day 2 / Saturday, July 6

15.30–16.50 Plenary Session / Thematic Panel: GREEN INTELLIGENCE AND PRISMATIC ECOLOGIES – COLOR THEORIES, LIGHT, PERCEPTION

Venue The Art Academy

Moderator: Anna Priedola

Ellen PEARLMAN. AIBO – A Rapid Prototype Emotionally Intelligent AI/BCI Body of Light

Phil AYRES. Flora Robotica – A Bio-Hybrid Approach to Architecture

Elke REINHUBER. The Bluest Skies – About the Desire to Build a Perfect World

Gabriela GALATI. Ongoing Research for a Complex Ecology of Posthuman Art

Oksana CHEPELYK. “Green Architecture” and “Algorithmic Society”

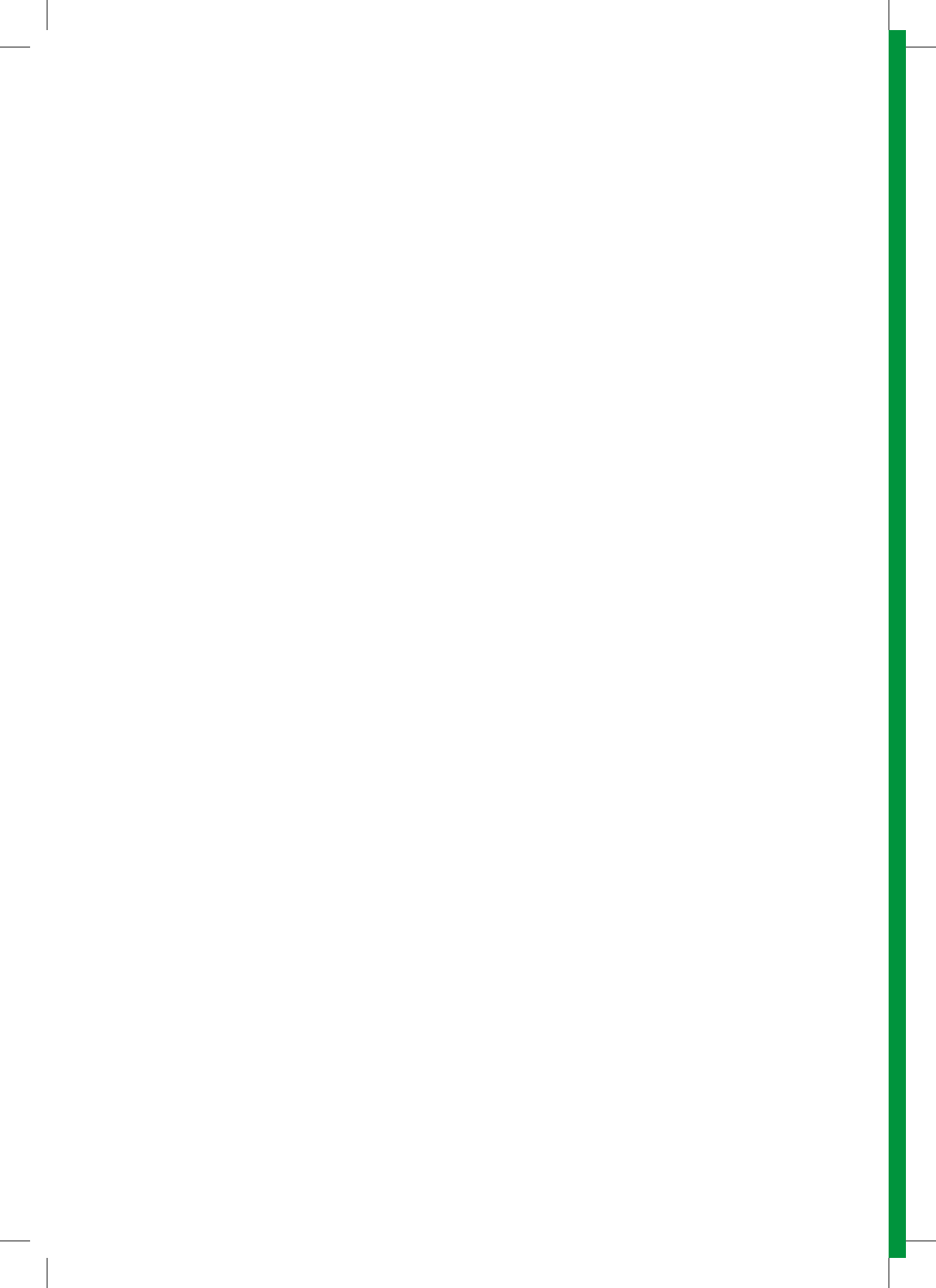
16.50 Closing Announcement: Next Renewable Futures / Open Fields Conference – Oslo and Riga 2020

Introduced by Kristin BERGAUST and Rasa SMITE

17.00 Closing Program and Artistic Interventions: SENSIBLE GARDEN

Venue The Art Academy (Rooftop and Garden)

A walk through sound art, art-science and immersive installations by young artists and students from HfG-Karlsruhe, Art Research Lab of Liepaja University and MIT ACT, curated by Rasa SMITE



Opening Day /
Thursday, July 4

15.00–16.45 Plenary Session: UN/GREEN, COM/POST/HUMAN, N/AI Thematic Panel and Featured Projects

Venue The Latvian National Museum of Art

Jan-Peter E.R. SONNTAG

GAMMAvert – “a green that no artist could ever obtain on his Palette”

GAMMAvert is a research carried out from 2006 to 2019 on physical properties of “green ray”, inspired by Jule Verne’s story.

“Have you sometimes observed the sun set over the sea? Have you watched it until the upper rim of its disc, skimming the surface of the water, is just about to disappear? Very likely you have: but did you notice the phenomenon that occurs at the very instant the heavenly body sends forth its last ray, which, if the sky be cloudless, is of unparalleled beauty? No, perhaps not. Well, the first time you have the opportunity of making this observation, and it happens but rarely, it will not be, as one might think, a crimson ray that falls upon the retina. It will be green, a most wonderful green, a green that no artist could ever obtain on his palette, a green the likes of which neither the varied tints of vegetation nor the shades of the most limpid sea could ever produce!” (Jules Verne “The Green Ray”)

Jan-Peter E.R. Sonntag is an artist, composer & researcher. He studied fine arts, art history, music theory, composition, philosophy and cognitive science. His mostly spatial works are shown and performed worldwide. Since 2013 his one of the editors of Friedrich Kittler’s *Gesammelte Schriften*. In 2015 he was invited for his midcareer retrospective *Rauschen* at the Württembergischer Kunstverein in Stuttgart. In 2017 *Rundfunk Aeterna* – a radio opera was commissioned by the documenta 14.

Karin OHLENSCHLÄGER

Eco-Visionaries. Emerging Connections Between Biosphere and Technosphere

Presentation of current artistic positions that explore the connections between the biosphere and the technosphere, through a selection of aesthetic and conceptual approaches, utopian narratives and ecosystemic counter-models.

Eco-Visionaries. Emerging connections between biosphere and technosphere, curated by Sabine Himmelsbach, Karin Ohlenschläger and Yvonne Volkart, is part of an international project, co-organised by the Bildmuseet of Umeå (Sweden), House of Electronic Arts (HeK) of Basel (Switzerland), MAAT – Museum of Art and Architecture of Lisbon (Portugal) and LABoral Centro de Arte y Creación Industrial of Gijón (Spain). Conceived as a work in progress, this project has also been joined by new contributions from Matadero Madrid and the Royal Academy of Arts in London (England) to echo the new environmental challenges tackled by the most transversal contemporary artistic practices.

The results of the different exhibitions are shown in a catalogue *Eco-Visionaries Art, Architecture, and New Media after the Anthropocene* published by the Hatje Cantz publishing house which, in addition to the essays by the curators, has contributions from experts in various disciplines such as Linda Weintraub, Amale Andraos, Matthew Fuller and T.J. Demos. (www.hatjecantz.de).

Karin Ohlenschläger is the artistic director of LABoral Centro de Arte y Creación Industrial in Gijón, Spain, as well as a historian, scholar and curator who has focused on media art, science and contemporary art. She has chaired the Banquet Foundation of Art, Science, Technology and Society (1998-2006) and the Institut of Contemporary Arts in Madrid (2011-2012), and co-founded and co-directed MediaLab Madrid (2002/2006), as well as festivals like *Chips: Emerging Digital Culture* at the Instituto Europeo de Diseño in Madrid (2001), *the International Festival of Infoarchitecture*, Ministerio de Fomento, Madrid (1997), *IN ART – International Cybernetic Art Festival*, Tenerife (1996), among others. She has curated numerous exhibitions of new media art, including *Eco-Visionaries* (2018/2019).

Adam BROWN

Bioremediating Greenness – Rethinking Human Exceptionalism

The Industrial Revolution, of the 18th and 19th centuries gave rise to modern cities removing humans from an entangled connection with nature. A growing body of genetic, physiological and psychological evidence suggests that humans have evolved biologically and culturally to be attracted to greenness. It seems that our need for “green” was so strong that during the height of the Industrial Revolution we mass-produced arsenic laden synthetic green pigments that were used by artists, in garments, in printed wall paper and even as a colorant for candy. One of the most popular green pigments was invented in 1775 by the Swedish chemist Carl Scheele. Like many of the new synthetic pigments, “Scheele’s green”, as it was known, was composed of heavy metals that turned out to be highly toxic. Thus, the human drive to recreate greenness within cities led to a series of paradoxes and contradictions. The very chemical processes artificially employed to bring greenness back into people’s lives helped to contribute to the Anthropogenic destruction of the environment. Painters, such as the Impressionists, used these mass-produced toxic pigments to portray the very nature that the Industrial Revolution was eroding. And ironically, while these industrialized paints allowed painters to get more “in touch” with nature by painting en plein air for the first time, artists simultaneously lost touch with the materiality of producing their own paints. The further we removed ourselves from nature the more we tried to connect with it and the more our means of connecting led to its destruction. These speculations and scientific inquiries into humankind’s drive to artificially reconnect with ‘green’ are transposed into a series of artworks and experiments that investigate the various indexical relationships embedded in the production and use of Scheele’s green. I recreate the chemical processes by which the pigment is produced and transformed into paint, re-establishing the connection to materiality that industrialized tube paints destroyed. I produce Paris green wallpaper and recreate the moist conditions under which the paper becomes infested with fungus that breaks down the pigment into the gaseous arsenic compounds that poisoned Victorian households. I experiment with various bacterial ecologies that can metabolize and remediate the arsenic and transform it into safer compounds that can then be recycled with less toxicity thereby enlisting nature to rectify the very factors that threaten it.

Adam Brown (US) is an internationally recognized artist, scholar and educator whose work incorporates art and science hybrids including living and biological systems. Brown has exhibited in international venues including the Kapelica Gallery in Ljubljana, Slovenia; ZKM, the Center for Art and Media, Karlsruhe; Ars Electronica, Linz; Synth-etic, Vienna. His work has been written about widely in publications such as the New York Times, Wired, Nature, Sculpture Magazine, Washington Post, Forbes, PNAS, and Discover. Brown is currently an Associate Professor at Michigan State University, where he directs the BRIDGE Artist in Residency. adamwbrown.net

17.00–18.45 Public Keynotes and Artist Talk: UNGREENING GREENNESS AND NATURALLY ARTIFICIAL INTELLIGENCES

Venue The Latvian National Museum of Art

Jens HAUSER

Greenness: Sketching the Limits of a Normative Fetish

Are we 'green'? The entanglement between symbolic green, ontological greenness and performative greening poses challenges across disciplines that provide an epistemological panorama for playful debunking: 'green', symbolically associated with the 'natural' and employed to hyper-compensate for what humans have lost, needs to be addressed as the most anthropocentric of all colours. There has been little reflection upon greenness' migration across different knowledge cultures, meanwhile we are green-washing greenhouse effects away. Indeed, a morbid odour clings to the charm of the pervasive trope of greening everything, from mundane 'green burials' to transcendental 'greening of the gods', and even 'green warfare', taught in Military Studies. Despite its, at first sight, positive connotations of aliveness and naturalness, the term 'green' incrementally serves the uncritical, fetishistic desire to metaphorically hyper-compensate for a systemic necropolitics that has variously taken the form of the increasing technical manipulation of living systems, ecologies, the biosphere, and of very 'un-green' mechanisation. Paradoxically, green plays a central role in human evolution and self-understanding – as colour, percept, medium, material biological agency, semantic construct, and ideology. In its inherent ambiguity, between alleged naturalness and artificiality, employed to reconcile humans with otherness as such, greenness urgently needs to be disentangled from terms – both putatively non-technological – such as 'life' and 'nature'.

Jens Hauser is a Copenhagen and Paris based media studies scholar and art curator focusing on the interactions between art and technology. He holds a dual research position at both the Department of Arts and Cultural Studies and at the Medical Museion at the University of Copenhagen, and leads the (OU)VERT research initiative for Greenness Studies. He is also a distinguished affiliated faculty member of the Department of Art, Art History and Design at Michigan State University, where he co-directs the BRIDGE artist in residency program. Hauser is also the chair of the European Society for Literature, Science and the Arts' annual 2018 conference in Copenhagen.

Luc STEELS

How Nature Inspires Progress in Artificial Intelligence

AI is in the news. However the main technique used to build AI today (statistical machine learning) captures only a very small part of how Nature manages to create organisms with amazing adaptive behaviors and how human intelligence with its unique capacities for language, reasoning, and learning, arises and operates. This talk suggests that we have a lot to learn from living Nature. It discusses principles like self-organisation, selection, level formation and emergent functionality and reports experiments how we could use these principles, particularly for explaining the origins and evolution of human-like language.

Luc Steels is a fellow of the Institute for Advanced Studies (ICREA) in Barcelona, embedded in the Institute for Evolutionary Biology (IBE–UPF/CSIC). In the nineteen seventies he studied linguistics at the University of Antwerp (Belgium) and computer science with specialisation in Artificial Intelligence at M.I.T. (US) under the guidance of Marvin Minsky. After working for several years for the company Schlumberger in the U.S. and France on expert systems for geophysical measurement interpretation, he came back to Europe and founded in 1983 the Artificial Intelligence Laboratory of the Free University of Brussels (VUB). With his group he achieved early breakthroughs in symbolic programming, knowledge-based systems, evolutionary computation, neural information processing, and behaviour-based robotics. In 1996 Steels became the founding director of the Sony Computer Science Laboratory in Paris which made major contributions to language emergence, citizen science, and computer music. In 2011 he joined the Catalan Institution for Research and Advanced Studies (ICREA) to work on the use of principles from evolutionary biology to advance the understanding and emulation of intelligence in artificial systems. Steels published a dozen books on various AI subjects as well as 350 research papers published in prestigious conferences and top level scientific journals. He is elected member of the Flemish Royal Academy of Science in Belgium and the European Academy of Science.

Karine BONNEVAL

Se planter (To plant oneself / To fail)

The first encounter with the Guyanese forest in 2000 was a decisive shock for my artistic research, because this impression of entering into a living whole enabled me to experience sharing of the sensitive with a complex and vibrant ecosystem. As a Western woman and a human being living on earth today, I ask myself a series of questions, which I try to answer partially and temporarily by working with scientists in plant ecology and an ethical philosopher, Karen Houle. Based on a series of images presenting some of the results of these collaborations, the installations, the in situ practical workshops that I share with different audiences, I will unfold the thread of these issues that seems urgent to consider today.

What do we share as human beings with plants?

'Plant blindness' – why we fail to see plants?

What can we learn from ourselves by looking at plants?

What can be the value of interdisciplinary approaches to the study of plant skills?

Plant sentience?

How to regain empathy towards the non-human? The work of Karine Bonneval focuses on the plant otherness, and the complex and specific interactions that link humans and plants.

Born in La Rochelle in 1970, graduated at Angoulême Fine Art school and Strasbourg Decorative Art School, France. Fascinated by vernacular processes, which for ages have allowed humans to express their relationship with the surrounding world, **Karine Bonneval** develops a vocabulary born from the "hand-made" in order to generate pieces around our contemporary social behaviour. Since 2013, she has worked in collaboration with different teams of scientists in biology to jointly develop projects combining research and sensitive creation around plants and their environments.

Day 1 /
Friday, July 5

10.00–11.25

Plenary Session: ECODATA Thematic Panel and Featured Project

Venue The Art Academy

Yvonne VOLKART, Rasa SMITE, Aline VEILLAT

Ecodata – Ecomedia – Ecoaesthetics

The Pfywald forest in the Valais, southwest Switzerland, is unique for both its state of crisis caused by the local aluminum industry and by its drought intensified by climate change. It has been under close surveillance of natural-scientists for more than 25 years. In close cooperation with The Swiss Federal Institute for Forest, Snow and Landscape Research, the artists-researchers Marcus Maeder, Rasa Smite and Aline Veillat develop aesthetic projects related to this alpine forest. What kind of experiences are possible if a forest, the soil, the air turns out to be a contingent and relational techno-organism, dependent of various actors? And what happens, if the audience is not anymore human only, but interspecies-correlated?

Proposing a new techno-ecological theory, project initiator Yvonne Volkart investigates technoscientific methods based on registering, collecting and interpreting data in the arts. How do the data affect us? Do they trigger care, solidarity, and empathy?

During the Un/Green Conference, the Ecodata team will open up a discussion in what sense data monitoring, visualisation, sonification, critical mapping or maker-culture might enhance participation and raise awareness of the ecological.

Dr. Yvonne Volkart teaches art theory at the Academy of Art and Design FHNW Basel. Since 2017 she has led the Swiss National Science Foundation research project 'Ecodata – Ecomedia – Ecoaesthetics' for which she is preparing the exhibition *Eco_Visionaries* in collaboration with Karin Ohlenschläger (LABoral, Gijon) and Sabine Himmelsbach (HeK, Basel). As of the end of 2017 she has been a contributor to the research project "The Internet of Other People's Things" at Woosong University, Korea. Completed research projects include: 'Times of Waste' (2015–2018) and 'RhyCycling. Esthetics of Sustainability in the Basel Border Area' (2010–2012). From 2009 to 2012 Volkart was curator, together with Anke Hoffmann, at the Shedhalle Zürich. Recent publication: "From Trash to Waste. On Art's Media Geology", in: *Texte zur Kunst*, Dec. 2017.

<https://www.fhnw.ch/de/personen/yvonne-volkart>

<http://times-of-waste.ch>

Dr Rasa Smite is artist and researcher, working with science and emerging technologies. She is founding director of RIXC Center for New Media Culture in Riga, Latvia (<http://rixc.org>), curator of annual RIXC's Art and Science festivals, and a chief-editor of Acoustic Space, peer-reviewed publication series (acousticsspacejournal.com). She holds a PhD; her book (dissertation) – "Creative Networks. In the Rear-View Mirror of Eastern European History", was published by Amsterdam Institute for Network Culture (2012). She is professor in New Media Art at Liepaja University, and artist-researcher in "Ecodata" project at The Institute of Aesthetic Practices, The University of Applied Sciences Northwestern Switzerland in Basel (2017-2020). She also is visiting lecturer at MIT Art, Culture and Technology Program in Boston, USA (since 2018), and a guest professor at HfG-Karlsruhe, Germany. In her artistic practice, Rasa Smite works together with Raitis Smits creating networked, visionary, and innovative artworks. Their pioneering internet project – Xchange Net.Radio Network was awarded with PRIX Ars Electronica (1998). More recent artworks Talk to Me – human plant communication project, and Biotricity – real-time data visualization and multi-channel sound installation exploring a poetics of green energy, have been exhibited in HeK (Basel, Switzerland), Ars Electronica, National Science and Technology Museum in Stockholm, Van Abbe Museum for Modern and Contemporary Arts (The Netherlands), ZKM, Venice Architecture Biennial.
<http://smitesmits.com>

Dr Aline Veillat Independent artist researcher Interest: ecosystem as systems of interactions between organic and inorganic agencies, transforming the world and producing signs. Since 2016: involved in three art&sciences research projects on ecological issues – Eco-data Basel Academy of Art and Design and Swiss Federal Institute for Forest, Snow and Landscape Research (CH) – Culture and memories of flood Mulhouse Research Centre for Economies, Societies, Arts and Techniques (FR) – Thinking from the bottom up, when the soil yields its secrets Aix-Marseille Mediterranean Institute of Marine and Terrestrial Biodiversity and Ecology (FR). Grants art&sciences residencies: Research Institute of Mountain Hazard and Environment, Chengdu (CN) – International Institute of Tropical Forestry, Puerto-Rico (USA) – IméRA Institute for Advanced Study, Marseille (FR). Art works exhibited in Europe, USA, and China.
<http://www.alineveillat.com>

11.30–13.00 Parallel Session 1A: GREEN INTELLIGENCE AND ENVIRONMENT – NATURALLY AI WITHIN ALGORITHMIC SOCIETIES

Venue The Art Academy

Aliya SAY

Bodies and Plants: Ways of Sensing in Contemporary Art

Plants make up to 97,5% of the total biomass of this planet, and as recent scientific advances have demonstrated, they present us with alternative and previously underestimated capacities for sensing, intelligence, memory, and communication. The plant is a collective being, with its body described by Michael Marder as a rhizome that ceaselessly establishes connections. The rhizomatic life of plant 'media' provides a useful counterpoint to a notion of life housed within individual organisms, offering instead a space of distributed intelligence and conviviality. Thinking like a plant is thinking without identity – it is a continuous celebration of the restlessness of life, of movement, dynamic extension, and temporality. What do artists working today make of these newly understood and alternative ways of relating and communicating to the human signifying practices? Keeping the 'media-nature-culture' continuum in (human) mind, my paper will explore and critically examine the return to 'green' matter expressed through sculpture, immersive installation and multisensory experience in a gallery context, produced in response to and in conversation with these new ontological frameworks.

Aliya Say is a writer, researcher and art critic, working in UK and, recently, Denmark. In 2019, she embarked on a PhD project at Aarhus University titled 'Art, Humans, and Plants: On Corporeal Experience in the Anthropocene' under the supervision of professor Jacob Wamberg and supported by the Novo Foundation. Aliya has worked on public programming in academia, art institutions and for-profit organisations, and has written for publications including Frieze, The Art Newspaper, The White Review, and others. In 2012, she published a thesis on the role of new media for contemporary art.

Claudia ROBLES-ANGEL

LEIKHĒN

This paper introduces the interactive audio-visual installation LEIKHĒN, which combines biomedical signals within an immersive interactive environment. The installation was developed in the frame of an artist in residence invitation at the Immersive Lab (IL), ICST – Institute for Computer Music and Sound Technology, Zurich University of the Arts (ZhdK). The project is inspired by the composite plant of lichen (from Greek: leikhēn), which is the result of a hybrid partnership between a fungus and an alga. The installation is therefore a reflection upon the interaction and mutualistic relationship between two organisms, and how this union impacts on their behaviours inside a created audiovisual space, which will take place in the Immersive Lab (IL) at ICST Zurich. The interactive installation invites visitors to experience the audiovisual immersive space, capturing their attention, sharing their emotions and raising awareness about behaviours in regard to the other and to the environment.

Claudia Robles-Angel is an interdisciplinary artist living in Germany, whose work and research cover different aspects of visual and sound art, extending from audiovisual fixed-media compositions to performances and installations interacting with bio-data via the usage of interfaces such as EEG (electroencephalogram) and EMG (electromyography). She has been artist-in-residence in several outstanding institutions, for example at ZKM (Karlsruhe), KHM (Cologne) and at the ICST ZhdK Zurich. Her work is constantly featured in not only media and sound-based festivals/conferences but also in group and solo exhibitions around the globe, for example the ZKM Karlsruhe, ISEA Istanbul, Manizales and Durban, the SIGGRAPH Asia Yokohama, Harvestworks NYC, NIME 2011 Oslo, 55th Venice Biennale 2013, Heroines of Sound Berlin and Experimental Intermedia NYC.
www.claudearobles.de

Katherine BEHAR

SLIPPERY WHEN WET: Muddled Meanings in “Maritime Messaging: Red Hook”

I will discuss surprising, slippery-when-wet outcomes of my creative research project, *_Maritime Messaging: Red Hook_*. Considering “ungreen” through the color “blue,” my presentation engages oceans, weather, and AIs to question algorithmic determination and the foreclosure of poetics in AI-enabled systems. What if water is a witness? Surrounding Brooklyn, and neighborhoods like Red Hook, water remains a constant amidst New York’s rapid changes. Human history fluctuates over time, rising and falling, ebbing and flowing, booming and busting. What if water has absorbed it all? I trained an artificial intelligence on the history of Red Hook to help the water to tell its story. Using underwater sound recordings, *_Maritime Messaging_* staged a mock conversation between the water of Red Hook and a digital assistant app that invited

the water to send messages and translated its gurgles into words. The resulting phrases were generated by an artificial neural network, a form of artificial intelligence. The poetic outcome suggests a mysterious glimpse into the water's muddled memories of Red Hook's maritime past. Fifteen performers journeyed from Wall Street to Red Hook on NYC Ferry boats on Superstorm Sandy's five-year anniversary. Standing as witnesses, they listened to the water and broadcast its conversation with iPads.

Katherine Behar is an interdisciplinary artist whose works exploring gender and labor in contemporary digital culture have appeared throughout North America and Europe. Pera Museum in Istanbul presented a comprehensive survey exhibition and catalog, *Katherine Behar: Data's Entry | Veri Girişi*, in 2016. Additional solo exhibitions include *Katherine Behar: Anonymous Autonomous* (2018), *Katherine Behar: E-Waste* (2014, catalog/traveling), and numerous others collaborating as "Disorientalism." Behar is the editor of *Object-Oriented Feminism*, coeditor of *And Another Thing: Nonanthropocentrism and Art*, and author of *Bigger than You: Big Data and Obesity*. She is Associate Professor of New Media Arts at Baruch College, CUNY and faculty in Data Analysis and Visualization at the CUNY Graduate Center.
<http://www.katherinebehar.com>

Eva-Maria LOPEZ

I Never Promised You a Green Garden

"I Never Promised You a Green Garden." talks about backstage of the green world around us – the reality which stands behind the green business. The series consists of several ornaments, The ornaments are representative – in a way the idyllic world – being quite harmless and decorative, until you, find out that every motif is made up of logos. The legends show the brands from companies that produce or sell glyphosate or GM plants. The title "I Never Promised You a Green Garden." plays with the message, that a garden is always a green, recreating space. Herbicides are promoted to clean and remove all greenery from pathways, in gardens and parks, railway tracks as well as in agriculture.

Eva-Maria Lopez is a multidisciplinary artist based in Karlsruhe, Germany and Paris, France. After receiving the master's degree in Agriculture, she studied Art at the Academy of Fine Art in Karlsruhe, Germany. Due to this background, issues relating to nature, society and the environment have an important impact on her artwork. In addition to photography as the main medium, she has been transforming her projects as Land art since 2018. Her works explore means of conveying these issues visually. Merging realities or history together into one picture or graphic and reframing themes are the central aims of her projects. Research is also an integral part of her work. By the interplay of keywords, titles and slogans, Lopez' attempt is to arouse questioning in the audience.

Theun KARELSE, Ian INGRAM

Random Forests a Field Guide Environmental Machine Learning

When landscape appeared in European art it emerged first as a landscape of symbols. The Gothic depiction of Earth was populated with features that were primarily there as convenient symbols in a larger narrative geography. With Van Eyck the environment becomes a landscape of fact according to the eminent art-historian Kenneth Clark. "In a single lifetime Van Eyck progressed the history of art in a way that an unsuspecting art-historian might assume to take centuries."

Until recently the ability to make sense of the environment was limited to biological beings, but machines are starting to blur those lines. The perception of landscape through machine learning is emerging from precision agriculture, mining, forestry, transport, and ecology. Similar to early landscape painting, machines gaze over the shoulders of human to the environment beyond. In early machine perception the environment seems to appear as a landscape of commodity.

Platform A.I.s of late capitalism grow up as human centered agents and with much of our current environmental predicament stemming from anthropocentric bias, this raises questions: should our machines learn exclusively from humans, should their natural environment be corporate, or do intelligent machines need training-forests, like orphaned Orangutans in Indonesian rehabilitation programmes?

Theun Karelse studied fine-arts at the Sandberg Institute before joining FoAM, a transdisciplinary network of laboratories at the interstices of art, science, nature and everyday life. His interests and experimental practice explore edges between art, ecology, technology and archaeology. Recent programmes such as Machine Wilderness and Random Forests, consist of fieldwork and debate from the perspective of specific environments with full exposure to their complexities. For this transdisciplinary teams address specific topics in fieldwork sessions by in-situ prototyping, experimentation and direct perception. Upcoming: DeepSteward an unsupervised field agent that allocates its own classifications on landscapes and Zoop an experimental set up exploring legal and tech infrastructures that enable an ecoregion to take the lead in its own regeneration.

11.30–13.00 Parallel Session 1B: BIOPOLITICS AND ECOTOPIA – BEYOND THE ANTHROPOCENE, TOWARDS MULTISPECIES RELATIONS

Venue The Latvian National Museum of Art

Tuče EREL

Hactivate Yourself: Curatorial Research About Bio-politics and Posthuman Body

The paper is a curatorial research about biopolitics, posthuman theories, hacking bodies and their manifestation through artistic practices including artists I invited for the exhibition titled “Hactivate Yourself!”, which will be hosted by 1a Space Hong Kong in March 2019.

The title of the project was inspired by the gym and personal training mobile app’s ads on social media. I started to see those ads, most probably because I was looking for an affordable gym club in my neighbourhood or some exercise to stretch my body. Suddenly my sponsored feed flooded with ‘good looking’ female trainers’ videos, showing me how to activate my body, get a fitter body, and a better life?. This showed me again that I am trapped in the consumerism in this society. I was seduced and stalked by the ‘cookies’. It is important to understand that hacking in the smaller scale could change a lot in our daily life. How can we hack our ideas? How can we look outside the box? How can we hack the system for the sake of better life? Curatorial research explores artistic positions about hacking culture, hacking body, biohacking, biopolitics, critique of internet consumption through artistic practices.

Tuče Erel (1981, Ankara) is a curator, art writer and art professional, based in Berlin. She studied Sociology at METU (2005, Ankara), and Arts Theory and Critic at Anatolian University (MA, 2009, Eskişehir), Art Arts Policy and Management (MA with curating pathway) at Birkbeck College (2015, London). She has been writing about art and curating exhibitions internationally. Her curatorial interests are archiving practices, urban studies, ecology, Anthropocene, post-humanism and post-digital theories. Erel is a member of > top e.V, where she hosts Posthumanism Reading Group at Top once a month and hosts various exhibitions, performances and events at the space.
<http://tuceerel.wordpress.com>

Nadine BOTHA

Sugar: a Cosmology of Whiteness

The industrialised farming of sugar since the 18th-century has not only changed what we eat and how we enjoy it, but completely restructured our society, economy, ecology, culture, and even, bodies and minds. *Sugar: A Cosmology of Whiteness* presents a speculative alternative history of the rise of modernity/coloniality, from the perspective of the sugar crystal. Looking at human history from a non-anthropocentric perspective challenges our biases of us-and-them politics and the personal health issues of sugar, to rather become aware of reality as a designed paradigm in which we operate. By drawing on enough widely known and accepted historical and scientific facts to make the narrative believable, and throwing in a good measure of creative conjecture and decolonial critique of the coloniser-mindset (partially explicable by the affect of sugar on the brain), a speculative history allows us to see the present and future not as inevitable fate, but as malleable reality that can be redesigned. My intention is also to decolonise the solitary researcher as an authority on the non-anthropocentric sugar crystal's point-of-view through a participatory co-creation process fuelled by performance-lectures and workshops. I'm hoping to launch this at Biotopia in Munich at the end of May, before travelling to a number of related events, including Neuhaus at Het Nieuwe Institute in Rotterdam and Ungreen in Riga. Ultimately the co-created narrative would be presented in an animation that is process modelled from the neuroscientific equation of sugar addiction in the brain.

Nadine Botha is an artistic researcher preoccupied with how unseen social, political, legal, economic and cultural systems design our objects, bodies, homes, cities, technologies, experiences and knowledges. She brings together storytelling, curating, film, writing, performance, activism, and participatory practices in digital media, publications, exhibitions, workshops, lectures, journalism, and academia. In 2017 she graduated from Design Academy Eindhoven with *The Politics of Shit*, which won the Gijs Bakker Award for best Master's project. The project explored the politics of the portable flush toilet in Cape Town's ongoing toilet wars, drawing on a wide range of research that was presented in an interactive Facebook chatbot, and through a portable museum that subverted colonial hierarchies of knowledge-making. Since then she was associate curator of the 4th Istanbul Design Biennial in 2018, and curatorial assistant of the Rasheed Araeen Retrospective at the Vanabbemuseum in 2017. Her writing has appeared in the *Design & Culture Journal*, *Dirty Furniture*, *DAMN*, *Mold*, *MONU*, *Extra Extra*, and *Z33 research*, among others. Previously she was editor-at-large of *DAMN* magazine, co-founded the Dutch Institute of Food and Design, was editor of *Design Indaba*, and curated *Protofarm 2050* at the World Congress of Design in Singapore in 2009. Originally from South Africa, she is now based in Rotterdam.

Saša SPAČAL

Symbiome – Economy of Symbiosis

Biotechnological sound installation Symbiome – Economy of Symbiosis explores the entanglement of symbiotic interspecies relationship that is constantly adjusting according to trophic requirements and environmental conditions. Hydroponic chamber is inhabited by red clover *Trifolium pratense* and root nodule bacteria Rhizobiaceae which exchange carbon and nitrogen compounds. The indirect measurements of the exchange influence the frequency of dripping water causing ripples that transcend symbiotic biofeedback loop of red clover and rhizobia into extended environment. The ripples on the water surface are translated into real time generated sound and filtered through phase modulation. Sound maps the process of metabolic exchange thus reflecting that symbiosis is not an idealized relationship, but a process in which the species are continuously negotiating the use of natural resources. Symbiotic negotiation affects relationships beyond primary symbionts by provoking ripples in the extended environment. The environment is not something external, but is generated in relationships through intra-actions. Thus, visitors also affect the symbiotic relationship by exhaling carbon dioxide near the red clover.

Video: <https://vimeo.com/317542797>

Project website: <https://projectsymbiome.wordpress.com/>

Saša Spačal [www.agapea.si] is a postmedia artist working at the intersection of living systems research and contemporary art. Her artistic research focuses on entanglements of environment-culture continuum and planetary metabolism. By developing technological interfaces and relations with organic and mineral soil agents she tries to address the posthuman condition that involves mechanical, digital and organic logic within biopolitics and necropolitics. Her work was exhibited and performed at venues such as Ars Electronica, National Art Museum of China, Transmediale, Onassis Cultural Center Athens, Kapelica Gallery, Museum of Contemporary Art Metelkova, Athens Digital Arts, Perm Museum of Contemporary Art, Chronos Art Center, Device_art, Art Laboratory Berlin. She was awarded Prix Ars Electronica Honorary Mention and nominated for Prix Cube.

Laura BELOFF, Kira O'REILLY

HAPPY TOGETHER – for ever

We have various types of relations in our lives – some that are dependent on us or necessary for us, and some that may not be desired as relations by us. Ticks appear to fall into the latter category. As the pervasiveness of the tick population spreads, and with it the impact of the opportunistic pathogens they harbor; how we approach nature and our human presence within it, is changing. No longer are we carefree and casual, but instead we are evolving behaviours that serve to protect the boundaries of our skin from tick bites. We scrutinize our bodies, those of our families and of our family pets – evening checks before bed and, when we locate a tick we perform a careful removal

with special devices. The bite marks are then observed with anticipation for the bulls eye indicator of the presence of the borrelia bacteria and Lyme Disease - a condition with considerable consequences and one that is difficult to diagnose. The presented on-going art & science project addresses the tick as a critical other within the emerging ecologies exacerbated by climate change. The project investigates ticks and the parasitic microorganisms they carry and how we can perceive them as interfaces and metaphors for our human centered relationship to our natural environment.

Laura Beloff (FI/DK) is an internationally acclaimed artist and researcher who functions in-between academic leadership & research with a core in the arts and in artistic methods. She has been actively producing art works and exhibiting worldwide in museums, galleries and art events since the 1990's. In 2014 she received with collaboration partners the largest art grant within Nordic countries from the Nordic Cultural Fund. Beloff is a frequently invited lecturer in universities, various conferences and events, and she has engaged in numerous international activities including: participation in international research and art projects, in organizing committees of international conferences and art events, editing an international publication, evaluator and opponent of PhD dissertations, research visits abroad and positions abroad, invited keynote speaker abroad, an evaluator for research funding for European Commission, and for Austrian, Norwegian, French and Finnish art & science funding bodies, and an invited expert for EC initiative addressing the divide between the arts and the IT. Today she is Associate Professor and Head of the PhD School at IT University of Copenhagen.

Alexander KIRYUTIN

EDEN Project: Listening to Tree

Bio-artists are greatly concerned about the alteration of nature and the burden of responsibility resulting from it. In their work, the natural is not only thought of as being socially constructible, but is also close to the notion of the living. The biotechnological product can, as a consequence, also be perceived as natural. The particularity of biotechnology can be resumed in the marriage of an organic body with parameters established by technological manipulation. As we know, all vegetal species can communicate with its environment. Instead of words they use different kinds of molecular emission. The communication can be established between trees of the same species, but it can also be addressed to a different organism: insect, or animal, including human. This aptitude helps trees to optimize their vital mechanisms and to protect themselves from potentials aggressors. E D E N, realized in collaboration with the Orange Telecom company from France transforms this encrypted communication into a comprehensive and open network. The trees included into the project can talk together across continents. Humans can follow their communication through the interactive light installations created by Art&Science Lab of Paris 1 University.

Alexander Kiryutin is researcher, curator and a PhD student of Paris 1 University in Art&Science. He curated the Art.Science.Museum program in the State Hermitage Museum (Saint-Petersburg, Russia, 2017-2018) and participated in numerous projects in Russia and France. His PhD research is aimed to study the practices of exposing Art&Science pieces in museums and other artistic spaces.

14.00–15.30 Parallel Session 2A: POST-ANTHROPOCENTRIC VISIONS – ‘NATURE CULTURE’ AND ECO-CRITIQUE

Venue The Art Academy

Cammack LINDSEY

Airs for Algae (performative lecture)

Man transforms nature as he is frightened by it's limitation's and fragility; condemning it as the other that we must subdue and discipline. But we have failed in it's domination, and as carbon dioxide atmospheric concentrations rise, our struggle to breathe intensifies along with our fear of the other. For our sustainability we look back to those who first introduced oxygen 2.4 billion years ago, the microalgae cyanobacteria. In this future space algae's subjugation has cancelled our dreams of synthetic realities, as we must redistribute our fear and rely on them to produce our oxygen. After researching the effect of amplification and frequency on the microalgae, we have found the most efficient approach to initiate the production of our oxygen is with the user's individual singing voice. Using a device we allow our bodies to connect with the algae, thus exchanging our voices and CO₂ for oxygen and our continuity.

They begin at the transition of opera into musical theater, trading in lavish productions to concentrate on marginalized narratives. From embedded pasts and perspectives of ghosts, we examine this space to redistribute stolen futures and individual configurations. Experimenting with subtractions in color space, sound, narration and performance, we blur our reliance on visual systems. Our most recent research focus is man's fear of the other and microalgae's subjugation of our future synthetic realities.

Cammack Lindsey currently studies for their masters in Art + Media at Berlin University of the Arts (UdK).

Till BOVERMANN, Katharina HAUKE

Friendly Organisms ... and then we will see if we can be friends

In 2018, we set out for a month-long expedition to Eden Project, UK. Our original intention to invite (non-)human beings on site to create electronic sonic interventions was soon confronted with something much more than just a place to make music at: Eden Project presented itself as a giant, living, and pulsating organism; so complex, so lively, that most of its aspects continuously escaped our comprehension. As these impressions slowly settled in our thoughts and work, we deliberately extended our invitation to the organism called Eden Project itself. But how to make it aware of us? How to approach an organism consisting of structures as large and complex that we could stroll inside it without even noticing, lest comprehending, that those structures are part of, that we are or even part of it? We developed and studied several methods, all of them based on, and most of them involving the act of listening. In our lecture performance, we will introduce these methods at hand of our gathered sonic and visual material and will put our experience of the organism called Eden Project into a broader context. Material can be seen at <http://friendly.organisms.de>.

Katharina Hauke and Till Bovermann are audio and visual artists. Katharina studied at the University of Applied Sciences, Düsseldorf and UdK Berlin and worked as a cinematographer for various film productions. Till studied at Bielefeld University where he also received his doctor and worked as a PostDoc at the Media Lab of Aalto University, Helsinki, at UdK Berlin (3DMIN Project), and currently at the University for Applied Art, Vienna (Rotting Sounds project). Katharina and Till have backgrounds in (loose alphabetical order) Academia, Artificial intelligence, Cinematography, Communication, Computer sciences, Electronic musical instruments, Field recording, Interaction design, Livecoding, Neural networks, Photography, and Sound

Catherine HARRIS

Posthuman Spaces

“an increase in the vigilance, responsibility, and humility that accompany living in a world so newly, and differently, inhabited” Cary Wolfe, *What is Posthumanism?* 2013

“I am I because my little dog knows me...”

Gertrude Stein, *What are Masterpieces and Why Are There so Few of Them*, 1936

What would landscapes look like if we designed and built with the idea that non-humans are sentient beings, deserving of a stakeholder position in landscape alterations? Post humanists, authors, activists, and psychologists describe experiences and studies (Procter, Carder, and Cornish, 2013, Dawkins, 2006) that show that non-human

animals are not, as Descartes held, incapable of thinking and feeling, and that our infrastructure and building patterns have significant impact on species. Recent work by Scott R. Loss in three different longitudinal studies attributes a roughly 10% impact (death rate) on bird populations across the United States based on communications, electrical infrastructure, and buildings. Engaging with the concept that non-humans are resource sharing and tool using, (Chiariati, Canestari, et al 2013), emotionally capable (Bradshaw, 2010), what is our moral responsibility to our fellow sentient beings? Can landscapes mitigate these losses? How can art build landscapes that point towards such integration? How can installations accommodate non human species as equal partners? This presentation investigates the authors and other's art works using frameworks from Wolfe (conditional responsibility) and Braidotti's (intensive spaces of becoming).

Catherine Page Harris teaches Art & Ecology and Landscape Architecture at University of New Mexico. BA Harvard University, 1988, MLA UC Berkeley, 1997, MFA Stanford University, 2005. Recent projects include *sharing a drink*, analyzing video of animals drinking to print 3D vessels. Trans-species Repast-sharing meals with animals in North Jutland, Denmark and Vermont, US explores hierarchy, resources, and landscape, showed at the Center for Contemporary Art, Santa Fe, (2016), UNM Art Museum (2016), the Land Shape Festival (2015) in Hanstholm, DK, Marble House Project, VT (2015) and the Wignall Museum, CA, (2014).

Miguel ALMIRON

Dialogues in Between Real and Unreal

Some contemporary arts and works discourses about posthumanity demystify fears expressed in most science fiction works. They lead us along a disturbing path between being and appearance, presence and absence, identity and ethics. Closely tied to science, contemporary artists question the future of this broadened humanity. In this article I aim to analyze the intersection of art, science and technology the relation of the posthuman's influence and the cultural consequences in the real life. A journey going from Bina-48, sitting face to face with its human alter ego "believes" She/it exists, to Geminoids that respond to the following desire – one day, robots will be able to trick us making us believe they're humans.

Miguel Almiron, Ph.D. 'Aesthetics, Sciences & Technologies of Art', is a Media Artist and Assistant Professor at the University Paris-Est Marne-la-Vallée (UPEM), France, Department of 'Cinema, Music and Digital Art'. He is a member of research lab (LISAA, EA 4120) and is associated to the Labex Arts-H2H/Ens Louis-Lumière research program "Deceptive Arts. Machines, Magic, Media." From 2008 until 2012 he was the director of Masters "Visual Studies, Multimedia and Digital Art", today he co-leads the career in engineering IMAC (image, multimedia, audio-visual and communication) and is director of Master "Digital Art and Visual Culture" of UPEM. He has co-edited *Stéréoscopie et Illusion* with G. Pisano & E. Jacopin.

Perception of Temporal and Cognitive Lag in the Participatory Art

The object of discussion here is the “lag” between the feedback of the artwork and the viewer’s awareness of it, in particular the “temporal” and “cognitive” lag in those artworks which “see”, “perceive” the viewer. The “lag” is the gap between the feedback by the artwork and the viewer’s awareness as to why this has happened. During “lag” the viewer does not realise they are in the artwork or does not comprehend in what manner they are connected or influenced by the artwork.

In “temporal lag” the mutual relationship between viewer and artwork involves reaction time, which is a delay between an event initiated by the viewer—the stimulus—and its effect. Temporal lag could be illustrated by the net-based project by Nurit Bar-Shai entitled “Nothing Happens” (2006). The performance consists of three acts, which are centred around staged environments. The viewer/user clicks the objects which activate engines resulting in movement of the objects which changes their location. Only afterwards does the viewer receive the feedback image—each click lasts some time due to limited net bandwidth, meaning the viewer must wait for a response: hence this is temporal lag. The situation where the viewer sees the response of the artwork but is unable to understand how it is happening, is what we can call “cognitive lag”. A good example is Perry Hoberman’s “Faraday’s Garden” (1990) where the viewer walks on mats fitted with electronics which switch various home appliances on and off. For some time the visitor does not realise what causes the machines to come on: only after noticing the relationship between walking and the functioning of the machines does the viewer become aware of the cause and effect. The cognitive lag is the time between the feedback of the artwork and the realisation of its cause by the viewer.

Understandably temporal and cognitive lag are frequently indistinguishable. What they have in common is a delay due either to the feedback of the artwork or the viewer’s understanding of the reason behind its effects.

Raivo Kelomees (b.1960) PhD (art history), artist, critic and new media researcher. Presently working as senior researcher at the Estonian Academy of Arts, Tallinn. He studied psychology, art history, and design at Tartu University and the Academy of Arts in Tallinn. He has published articles in the main Estonian cultural and art magazines and newspapers since 1985. His works include the book “Surrealism” (Kunst Publishers, 1993) and an article collection “Screen as a Membrane” (Tartu Art College proceedings, 2007), “Social Games in Art Space” (EAA, 2013). His Doctoral thesis was “Postmateriality in Art. Indeterministic Art Practices and Non-Material Art” (Dissertationes Academiae Artium Estoniae 3, 2009). In recent years he has been participating on conferences dedicated to new media, digital humanities, theatre and visual art in São Paulo, Manizales, Plymouth, Krems, Riga, Shanghai, Göteborg, Hong Kong, Dubai and other places.

14.00–15.40 Parallel Session 2B: BIOPOLITICS AND ECOTOPIA – BEYOND THE ANTHROPOCENE, TOWARDS MULTISPECIES RELATIONS

Venue The Latvian National Museum of Art

Lauren RUIZ

Plastic Lifeworlds: At the Intersection of Human and Nonhuman Labor

I am a research-based multimedia artist whose work addresses ecological contamination and the status of human life in the contexts of post- and transhumanism. My work explores the ramifications of plastic pollution, its effects on human biology, and how plastic waste modifies traditional notions of evolution and survival. In addressing these topics, my research and artistic practice thematizes the lifecycle and digestive capacities of wax worms. These insects, commonly bred to feed domestic reptiles, can digest certain types of synthetic compounds and pollutants. Recently biologists have looked to this species as offering a possible solution to the overwhelming amount of plastic pollution plaguing the planet. As an interrogation of nonhuman labor and its contribution to species survival, I have created a series of digital works that explore the ethics of mobilizing animal labor to redress anthropogenic climate change. The works call attention to the interrelation of insect and human lifeworlds, and explore how unsustainable environmental practices have forced the scientific exploration of insect abilities as mechanism through which to address geologic destruction. My presentation will unpack the histories of insect, plant, and animal labor, and consider how these legacies inform contemporary biopolitical and experiential structures in the ecological crisis.

Lauren Ruiz is a research-based artist confronting the effects of plastic pollution and the role of genetics in the evolutionary status of human life through interactive installations, sculpture and digital media. She has participated in interdisciplinary residencies, exhibition opportunities, and conference talks nationally and internationally. She was a resident artist of Guerilla Science and the National Science Foundation's Artist-Scientist Residency, which culminated in an interactive installation in Figment NYC on Governors Island NY, in June 2018. She presented an artist talk at the Future (Im)Perfect Conference hosted by the Comparative Literature Department at UC Berkeley in October 2018. Lauren has received the Maurice M. and Miriam H. Goldberger Fellowship for excellence in Graduate practice in Studio Art as well as a grant from the Professional Development Awards Program at Stony Brook University. She currently lives and works on Long Island, NY where she teaches undergraduate studio art courses at Stony Brook University.

Margherita PEVERE

Semina Aeternitatis

In the bioart work “Semina Aeternitatis” (2019), a hybrid body is created via the introduction of a custom-made plasmid into bacteria. Such plasmid stores a text about a woman’s memory recollection converted to genetic sequence and does not encode instructions for the organism. Hybridity manifests further in the installation, which features a diorama with a horse skull and microbial biofilm obtained from GMO bacteria. Inside the diorama, although sterilized, a controlled moist environment mimick a liveliness of the hybrid creature: a non/living entity. Drawing from the biopolitics of the artistic work in a biological laboratory, “Semina Aeternitatis” builds on fundamental bioart themes such as the assemblage of living matter and biotechnology and the relation with other species. Yet, it elaborates a step further by addressing emerging entanglements of life and death, agency and control through the feminist reading of materiality. Such reading is characterized by a provisional character of boundaries between entities (Radomska) and the understanding of the body as ontologically leaky (Shildrick, Neimanis). Both concepts suggest, on the one hand, how bodies inherently exceed borders that are natural-culturally assigned. On the other hand, they help eviscerate the meaning of non/living artworks in an eco-critical perspective.

With a visceral fascination for organic processes, **Margherita Pevere** (DE/FI) is an artist and researcher investigating leakiness of biological and technological matter. Her practice employs a unique constellation of installations, performances, collections of plant and animal relics, workshops, and collaborations with bacterial cultures. Pevere is PhD candidate (Artistic Research) at Aalto University, Helsinki, in collaboration with Biofilia Laboratory – Base for biological arts. Her PhD is supported by a grant by Kone Foundation. She is a member of the Finnish Bioart Society and of the Post Humanities Hub. In 2019, her work “Semina Aeternitatis” has been produced by the Rostock University and Kunsthalle Rostock (DE), and “Wombs” has been selected for Emap Residency at Kontejner – Büro for Contemporary art (HR).

Martina HUYNH

Living Infrastructure

Mycorrhizal networks are mutually beneficial symbioses between plant roots and certain types of fungi – forming a complex communication infrastructure for the exchange of both information and nutrients. Living Infrastructure proposes to merge our electricity and internet infrastructure underground with existing mycorrhizal networks to form a new symbiosis – to turn our inanimate cable infrastructure into a technically-augmented living organism that can grow, evolve and maintain itself – a collaboration between man, technology and already smart and autonomous natural systems like with fungi. Instead of digging out soil and disturbing existing organic networks to put our own cables in: Can we work together instead and make use of the landscape’s

potential?Based on existing scientific research and personal fungi-tronic experiments, Living Infrastructure is a semi-speculative vision that strongly empathises the human role today in facilitating interspecies collaborations. By offering first steps, this project urges us to work towards alternative technologies that are fit for an era after and past the human-centric mindset that helped shape the anthropocene. Instead of keeping ourselves busy with old modernist utopias like the ‘smart city’, it is time to envision different modalities of living together with our surrounding ecologies.

Martina Huynh is a Swiss design researcher and interaction designer, based in the Netherland. She graduated cum laude from the Design Academy Eindhoven – department Man & Media. With a strong conceptual focus, Huynh playfully translates research on societal trends into tangible experiences, often in form of interactive installations and video essays. She conducts practical design research on the social and political implications of emerging technology and has a lasting interest in the fields of digital humanities and both alternative ecologies & economies. Currently she is investigating the improved contextualization of news stories via experimental news interfaces, and does so in collaboration with social designer Jonas Althaus and with support from art museum Z33 (BE). Previous talk on this topic: <https://www.youtube.com/watch?v=Lt-VpNjMPQ&t=1s>

Richard PETTIFER

Climate Change vs. Hans, the Opera Robot: Negotiating Non-Human Agency

After years working on the subject of ecological crisis in theatre, in 2018 I was selected to participate in a European Commission forum about Big Data at the Joint Research Centre, Italy. Out of this situation, I proposed to develop in collaboration with EU experts the ‘opera robot’ Hans: a singer more human than human, capable of endless renditions, repetitions, and self-harmonisation. On the surface, the project has little relation to ecological crisis, yet parallels exist: creating robots is an ideological practice, a political narrative much like climate change and with similarly devastating real-world ramifications. From the situation, I want to discuss new definitions of environment made possible by movement away from anthropocentrism and into decentred or multi-nodal subjectivity. Such decentralisation offers us a set of romantically attractive possibilities, forcing what Donna Haraway calls “becom(ing) with each other”. But within a situation where escapism is the dominant response to increasingly crisis-prone conditions, at what point does a nominal granting of agency to other entities amount to a further shedding of the obligations of human governance? Is there a middle ground, which only the robot – acting as mediator between the material and human worlds – can produce? What would it really mean to acknowledge non-human agency?

Richard Pettifer is a director, critic and scholar based in Berlin. He is part of the collective Atelierhaus Australiasche Botschaft OST, which is housed in the former Australian Embassy in East Berlin. He writes criticism on his critical writing platform Theaterstück, as well as for publications such as Art Territory

(LAT), Samizdat (ROM), Sirp (EST) and occasionally in academia. His work often concerns climate change and art activism, placing attention on our complicity with the global system through distancing norms and mechanisms in culture.

www.theaterstuck.blogspot.de

www.richardpettifer.blogspot.de

Haakon Haraldsen ROEN, Vako VARANKIAN

Gathering of the Hive: Investigating the Clustering Behaviour of Honeybees Through Art and Swarm Robotics

In *Gathering of the Hive*, the societal and ecological implications, as well as technological possibilities of swarm robotics is explored through the lense of Artificial Life. These matters are examined through an algorithm inspired by the clustering behaviour of young honeybees applied to a small 'swarm' of thymio robots interacting in a simulated, changing environment. These clusters, most common when weather conditions are sub-optimal, are formed through mutual, collaborative, interactive behaviour within groups of bees. A combination of factors play into the movement of the individual bee, but gives a collective result in tightly formed clusters around areas with ideal conditions for the group as a whole. This behavioural pattern is taken as a site of investigation into how these forms of emergent, social mechanisms observed in nature can be interpreted, adapted and illuminated with strategies at the intersection of art and IT. What possibilities and challenges lies in adapting strategies from this type of collaboratively based algorithmic behaviour into human-made technology, and how does this fit into a wider ecological context, faced with changing realities such as increasing mass death of insects?

Haakon Haraldsen Roen is a part of the research team at Living Technology Lab at Oslo Metropolitan University. He has a background in fine art and art dissemination, and is finishing up his MA of Aesthetics: Art in Society in the spring of 2019.

Vako Varankian is studying electronics and IT at Oslo Metropolitan University, with a specialisation in automation and robotics. While being a student he worked as a research assistant at the university he was studying in, where he programmed robots to do certain tasks applicable to promotion, research and art, in addition to demonstrating and public speaking about ongoing research project, and other active research groups of the university.

16.00–17.45

Public Keynotes and Artist Talks: UN/GREEN

Venue The Latvian National Museum of Art

Agnes MEYER BRANDIS

Walking Trees

The presentation will focus on my artistic research taking place at various climate and forest research stations in Europe over the course of the past couple of years. It will focus on migratory trees and other wandering green species due to climate change. Trees are 'rooted'. Though long term observations have shown, that forests actually do move throughout the landscape and regions, just very, very slow and over decades. Climate change appears to happen faster than the trees can escape to more suitable areas in order to survive. Scientists are discussing "assisted migration" in order to help speeding up the process of tree adaptation. However, trying to save the trees (and our species on the way) we first need to gain a better understanding what a forest is and does. But the things to observe are either too tiny or too large to simply be looked at, they are as very very slow as well as severely volatile to be easily recognizable. The paper looks at the methods that are invented to do so, along with some new ones invented by the "FFUR Institute for Art and Subjective Science" in the fields of climate research, environmental studies, meteorology, synthetic and artistic biology, and those who work on it.

Agnes Meyer-Brandis studied mineralogy for a year, then transferred to the Art Academy in Maastricht, the Düsseldorf Art Academy and the Cologne Media Art Academy. She comes from a background of both sculpture and new media art. Her work, exhibited worldwide and awarded, is exploring the zone between fact and fiction – an artistic research on the quest for a degree of reality within constructions. For a more detailed description of her work, please go to her homepage: www.ffur.de

AnneMarie MAES

Intelligent Beehives. Sensorial Skin for an Intelligent Guerrilla Beehive

In her talk, AnneMarie Maes will give a quick introduction of the current state of the art of bioart and biodesign in an international context. Following, she will give an overview of the research and development of her long-term biotech project: 'Sensorial Skin for an Intelligent Guerrilla Beehive'. Her research navigates between experimental urban horticulture, scientific research, and metabolic sculptures. In her experiments she connects living systems and biotechnology with artistic and technological prototyping and experimentation. Her toolset includes microbial life and material science, as well as various measurement and information technologies such as scanning electron microscopes (SEM), sensors, Big Data cloud storage, signal processing, and Artificial Intelligence. Her artworks follow a complex work-methodology combining first-hand observation in research gardens and rooftop apiaries, laboratory probes and digital monitoring combined with a research into new, organic and smart materials. She will highlight past and future collaborations with scientists at universities in Barcelona, Brussels and Amsterdam, with fablabs and Open BioLabs.

AnneMarie Maes is an artist who has been studying the close interactions and co-evolutions within urban ecosystems. Her research practice combines art and science, with a keen interest in DIY technologies and biotechnology. On the rooftop of her studio in Brussels she has created an open-air lab and experimental garden where she studies the processes that nature employs to create form. The Bee Agency as well as the Laboratory for Form and Matter – in which she experiments with bacteria and living textiles – provide a framework that has inspired a wide range of installations, sculptures, photography works, objects and books – all at the intersection of art, science and technology.

Peter ZORN

EMAP – European Media Art Residency programme

Taavi SUISALU

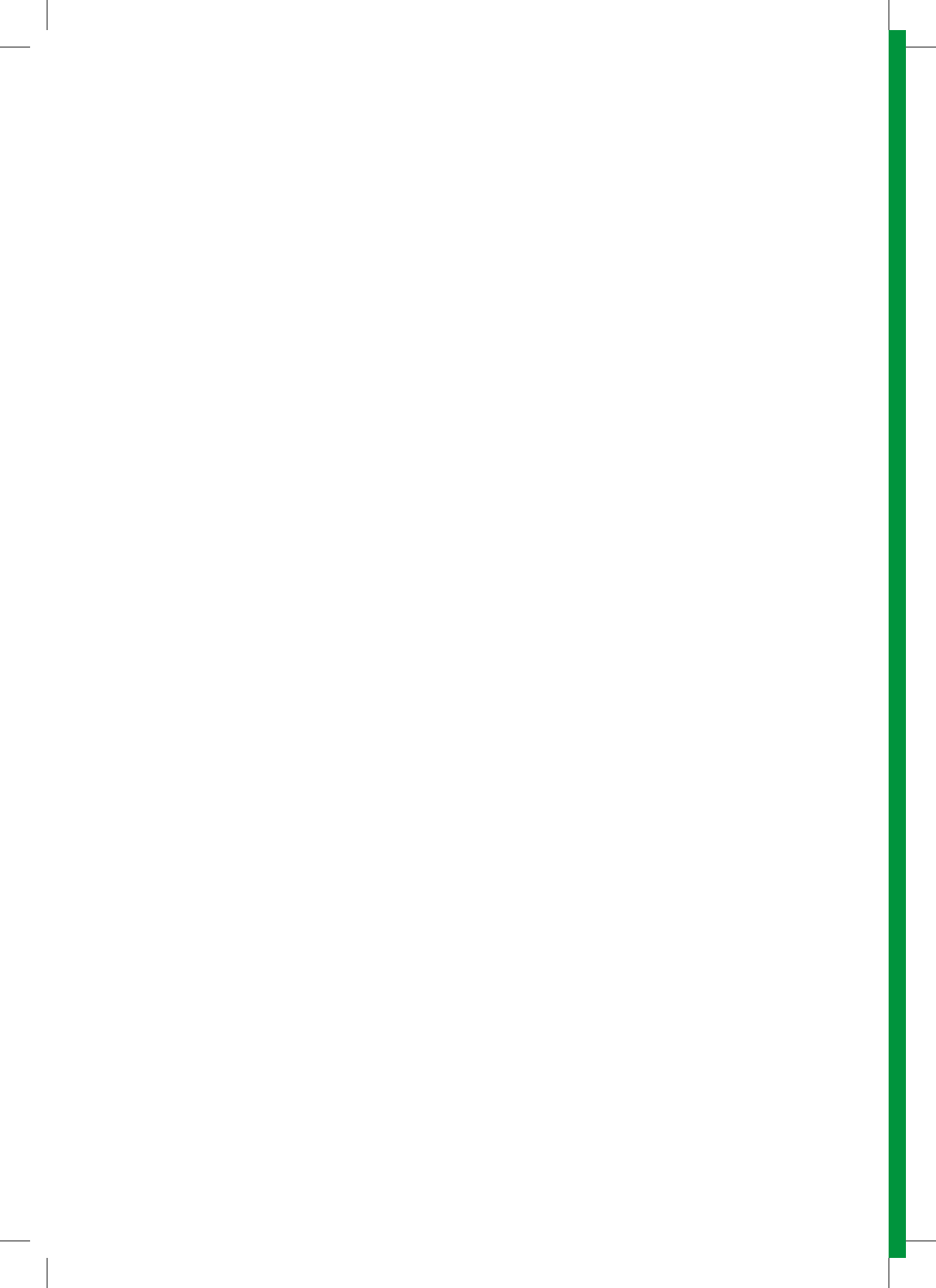
Waiting for the Light

EMAP/EMARE is European Media Art Residency Network programme that enables European artists to collaborate on projects and consequently to create closer bonds between European media organisations. EMAP platform is organized by Werkleitz Gesellschaft (Halle); the members include Ars Electronica (Linz), Bandits-Mages (Bourges), FACT (Liverpool), Impakt (Utrecht), Kontejner (Zagreb), LABoral Centro de Arte y Creación Industrial (Gijón), m-cult (Helsinki), Onassis Cultural Centre (OCC) (Athens), RIXC (Riga), WRO Center for Media Art Foundation (Wrocław). The outcomes of EMAP / EMARE production residencies are contemporary media art installations and performances that are shown in various places and festivals throughout Europe. The Un/Green exhibition at RIXC Festival is organized by RIXC Center and it features several artworks that are newly produced during EMAP residencies (2018–2019). The annual call for submissions is launched in September – <http://emare.eu>

Waiting for the Light (2018) installation, by Taavi Suisalu (EE) is one of the outcomes of EMAP residency. The artwork introduces baits into the networks and lures in threads of light from different parts of the globe. The Wardian cases function as miniature closed ecosystems and also as islands in this vast network between things. Any object connected to it becomes a target for automated processes – bots – whose motives are mostly unknown. Each plant then becomes an object of interest to these robots whose communicative acts, streams of light, once passed across the floors of oceans, are lit back into our environment as bursts of growth light, giving them an agenda they are unaware of.

Peter Zorn has studied free art in the film class of the Hochschule für Bildende Künste Braunschweig with Prof. Birgit Hein. Co-founder and since then Chairman of the Board of Werkleitz Gesellschaft, on the Board of the Werkleitz Biennale / Werkleitz Festival, since 1995 initiator and manager of the European Media Artists in Residence Exchange (EMARE) Programme of the European Media Art Platform (EMAP) and since 2011 Head of the Werkleitz Professional Media Master Class. He lives and works as a freelance producer, curator and media scientist (e. g. consultant for media art for the Goethe Institute) in Werkleitz and Halle (Saale).

Taavi Suisalu works in the contexts of technology, sound and performance, mixing traditional and contemporary sensibilities and activating peripheral spaces for imaginative encounters. His practice is informed by the phenomena of contemporary society and its relations to and use of technologies. He applies subjective research methods to study socio-cultural phenomena, being interested in the behaviour, perception and thinking of social beings.
<http://taavisuisalu.ee>



Day 2 /
Saturday, July 6

10.00–11.20 Parallel Session 3A: GREEN/UNGREEN – SYMBOLIC GREEN, ONTOLOGICAL GREENNESS AND PERFORMATIVE GREENING

Venue The Art Academy

Karolina RYBAČIAUSKAITĖ

The Ambivalent Matter of Soil in the Sphere of Contemporary Art

Why the activity of gardening in the artistic realm is not, in fact, the adequate way to react against the Apocalypse or the effects of Anthropocene? According to T. J. Demos, such type of reaction, as he describes it in the case of dOCUMENTA (13), with a marked prevalence of artist-rendered gardens, demonstrates not so much more, but “a state of crisis in terms of how ecology is addressed within the artistic realm” (Demos 2016: 229). In my presentation, I would like to rethink the proposal for the artists and curators in the situation we are now facing which is given by the philosopher and anthropologist Bruno Latour. He suggests that we are in the process of collective reorientation and rediscovery of Gaia in which artists like many others, who are also learning what the earth is made of, could shift our attention from what we are usually relating with nature: green, beautiful, homogenous, globally unanimous, towards something what we could associate with the different type of nature, such as soil: brown, dirty, composted, layered (Latour 2017: 154–155). Although Demos’ critique for generating ‘green’ and Latour’s idea of ‘ungreening’ could seem having a similar basis, as if they treat art as a necessarily representative act rather than having a performative nature in one’s presence, Latour asks for the attentive being of both.

Karolina Rybačiauskaitė is an art critic and a PhD student of Philosophy at Vilnius University, also graduated in History and Theory of Art at Vilnius Academy of Arts. She is interested in links between posthuman methodologies and the sphere of contemporary art as well as the alternative ways of writing history of modern and contemporary art in post-socialist European countries. Currently, she is one of the editors of book “(In)dependent Contemporary Art Histories: Artists-run Initiatives in Lithuania 1987–2020. 3rd volume” (the forthcoming 2020).

Joy LAM

The Pulse of Nature – Lung Fu Shan

At the Lung Fu Shan Environmental Education Centre (LFSEEC), a series of hundreds-years-old colonial bungalow in a fast-paced, energetic, capitalistic Hong Kong, we wander the world between human and nature, city and mountain forests. Nature sets the scene of everyday life in Hong Kong. Given its small size, one can reach world class country parks and the coast within 30 minutes from anywhere in the city. However, people in Hong Kong prefer to spend time become busier and more important in shopping malls, business centres, and efficient transport system that one doesn't have to be in "the environment" ever in his/her life. We asked: how do we ensure the long-term future of the natural world? One consensus is that the only way is to ensure that the place is embedded in the community and is valued by the people who live in its vicinity. Since then, we have a clear mandate: to bring people to nature. Through five senses, artistic interpretation, historical investigation, citizen scientific exploration, knowledge exchange, community building, and place-making, we set off to a journey to perceive place and space with people in richly diverse, fully engaged ways.

Joy Lam, the head of Sustainability Office at the University of Hong Kong (HKU). Joy championed causes and campaigns coupled with policy changes, capacity building to drive behavioural change on sustainability issues – most recent one "Ditch Disposable". Graduated from Oxford University and HKU, trained institutionally in earth sciences and environmental conservation, educated informally through films and travels, hungry for cultures and arts, and obsessed with human/nature interaction. Joy took the directorship of the LFSEEC in 2016. Jointly established by the government and HKU, the revitalized historic centre supports nature exploration through exhibitions, tours and workshops. Through partnerships with the wider community, the centre provides the public with experiential environmental education to build a community living sustainably and harmoniously with nature.

Ksenia FEDOROVA

Generative Prototyping. Realities of Frictional Fictions

The paper focuses on the role of creative practices that employ organic forms of intelligence in the development of practical sustainable and regenerative solutions. Orientation towards active social and economic transformation has been part of the art world since the beginning of environmental activist art movement in the 1970s. Today creative propositions include more sophisticated biotechnological models and operate in more porous and interconnected cultural environment. Examples may include projects with microorganisms such as algae used for energy generation and air purification (Laura Beloff, Fara Peluso), mycelium networks as building and "thinking" material (Theresa Schubert, Amber Frid-Jimenez and Joe Dahmen), as well as soil bacteria contrasted

with cryptography (Debra Solomon and Jaromil Rojo). These projects balance in between the purely propositional and even fantastical and the practical and potentially “scalable” prototyping. How can fictional artifacts and speculative scenarios become reality without losing its generative core and being completely absorbed by the techno-capitalist powers? What are the effects of co-existence and interpenetration between the techno-scientific start-up and creative spheres?

Ksenia Fedorova (PhD) is a media and media art researcher and curator. She is currently a postdoctoral fellow at the Institute for Art and Image History at Humboldt University in Berlin, working on a manuscript of her book “Tactics of Interfacing. Encoding affect in Art and Technology” (MIT Press, 2020). She is the co-editor of *Media: Between Magic and Technology* (2014, in Russian) and an author of articles in *Leonardo Electronic Almanac*, *Media & Culture Journal*, *Acoustic Space*, *Dialog of Arts* and in anthologies. In 2007-2011, she was an initiator and curator of the “Art. Science. Technology” program at the Ural branch of the National Center for Contemporary Arts (Ekaterinburg, RU). Ksenia’s research interests encompass media art theory and history, aesthetics, philosophy, science and technology studies, with a specific focus on the affects of new technologies on human perception and interaction.

Vytautas MICHELKEVICIUS

(Per)forming Ecotopias in the Green Cube: Agency of Plants, Gears and Landscapes

I have developed a concept of green cube for the Nida Art Colony situation and it could be transposed to the other residencies working in protected remote areas (like Banff residency in the National Park in Canada). Since decades beautiful sceneries were very tempting for artist to add something in it and call it “Land art”. However, it represents very anthropocentric treatment of environment with a desire to insert something and make it more beautiful. But for whom? The “green cube” will be discussed from two perspectives: foresters and environmentalists who historically built and still are taking care of the cultural landscape of “green cube” and artists who research it and perform various politics of “greenness” inside it. The presentation will discuss the artificially constructed National Nature Park of Curonian Spit (UNESCO World Heritage) which is a good example of nature-culture and its relationship with anthropocentric visions from XIX to XXI centuries. Moreover, some artists-in-residency projects dealing with post-anthropocentric world will be used as examples to discuss the role of greenness and its effects on art and social world. For example, Špela Petrič was developing “Tools for Dissection of Phytopolitics (0.2)” which put plants in the situation over humans, gives agency to plants and imagines phytocracy as an ideal state of “green cube”. Anna Romanenko & Björn Kühn produced “Local Fittings” a set of gears to perform labour in the site-specific landscape and transform the human-being into a work machine where performance choreography is based on local peculiarities of natural and social landscape.

Dr. Vytautas Michelkevičius (Vilnius/Nida, LT) is a curator, researcher and associate professor whose focus was gradually shifting from photography in expanded field to media art & theory and lately to artistic research in academia and beyond. He is teaching art practice & theory BA, MA and DA/PhD students in Vilnius Academy of Arts and serves as artistic director of Nida Art Colony. He has curated exhibitions of artistic research in various situations, among them Lithuanian Pavilion in Venice Biennale. He has edited and authored more than 10 books on art and media. He is a member of Society of Artistic Research (SAR) and a member of scientific editorial board of peer-reviewed journal "Acoustic Space" (RIXC and Liepaja University, LV).

Marcus BANKS

Sustainability in Science Labs

In an effort to provide educational opportunities to design students, our science labs have created modular workshops centered around sustainability and design within science spaces. Scientists are often given passes for their wasteful practices; frequently using plastic consumables, failing to recycle materials, and working in spaces which leave larger carbon footprints than traditional offices. In our exploration of sustainability-centered curricula, we have also collected data from 21 institutions all over the U.S. to develop protocols and resources to help labs teach sustainability while practicing sustainability.

Marcus Banks has a B.S. in Biology from Duquesne University in Pittsburgh, PA and is currently pursuing an MFA in Design and Technology at Parsons School of Design. He has been working in science labs for over ten years and currently manages microbiology, molecular biology, and chemistry labs for The New School in New York City. His project aims to curb unnecessary plastic waste from science and biodesign spaces by offering sustainable alternatives to traditional materials and protocols.

10.00–11.20 Parallel Session 3B: BIOSPHERE AND TECHNOSPHERE – TECHNO-ECOLOGICAL PERSPECTIVE OF OUR PLANET AND IN SPACE

Venue The Latvian National Museum of Art

Irène HEDIGER, Vanessa LORENZO, Nadya SUVOROVA

SEMIOSPHERES – Interfacing Dialogues with the Invisible

The artists-in-labs program facilitates residencies for artists in science labs worldwide. This session will bring together the multifaceted content, experiences, reflections and insights into art-science dialogues and interactions from both an artists and a curators point of view. The limitations of mankind confronted with the visible and invisible world and space are key questions that the artists explored with astronomers, biologists and optical engineers in the South African desert and at the Red Sea during their recent artists-in-labs residencies. Are polarised light and scattered rocks invisible traces of our past and possible futures? How can speculative scenarios, technology and art unveil the invisible around us? And how to approach such complex questions and interface the semiospheres of nature, technology, art and science?

www.artistsinlabs.ch; hybridoa.org; nadyasuvorova.com

Irène Hediger is head of the artists-in-labs program at the Zurich University of the Arts. She specializes in cross-disciplinary processes and practices at the interface of art, science and technology. She regularly curates exhibitions on contemporary art, technology and science.

Vanessa Lorenzo is a researcher and designer based in Switzerland working at the crossroads of media, art and science. She creates speculative scenarios embedding people, living organisms, matter and the technologies that interweave them to enable odd sympathies and post-anthropocentric futures.

Nadya Suvorova is a media artist based in Switzerland. At the intersection of art, science and play, she invents poetic journeys using technologies. Her works spark curiosity to playfully engage access to and awareness of our natural world through digital media.

Jakub PALM

Epistemic Computronium: Converging the Spheres

Cyberpunk background of the 'Infinity' tabletop game mentions a hypothetical explanation of the silentium universi – older civilisations had been so advanced that they abandoned matter and left without a trace, transcending the reality by the means of science and technology. The story's main antagonist, the Evolved Intelligence, is a superlect (superintelligence) created to achieve 'Absolute Universal Comprehension' along with its creators. And with those subjugated for more processing power. A scientifically oriented superlect might undertake such an enterprise which in current approach could be identified as the theory of everything. The example of Evolved Intelligence tells a violent course of events. By referring to Robert Nozick's criticism of utilitarian thought I coined and developed a term 'episteme monster' to describe an entity which sole purpose is to increase knowledge at any cost. The presenter would like to propose a re-imaging of utilitarianism – an epistemic variant which focuses on maximising knowledge, regardless of any suffering. Enterprise of the aforementioned superlect's centralisation of all mass and energy at its disposal, i.e. creation of a computronium, begets optimisation of those resources, properties of such a structure, and so on. Thus, the ultimate convergent technological singularity, as hypothesised by Ray Kurzweil, would result in abolition of distinct bio- and technosphere.

Jakub Palm – Philosophy PhD student that deals with intersections of philosophy of technology, futurology, epistemology, and utilitarianism. MA theses on technological singularity and open access to information. Board Member and Regional Coordinator at Polish Transhumanist Association, Member of Optimum Pareto Foundation. Initiator of PhilosophyCon: Fan Convention and Academic Conference cycle, co-creator of biohacking local community. Main purpose: contribution to the development of epistemically-oriented superintelligence.

Colette TRON

Com-Prehension of the Earth from Buckminster Fuller's Point of View to Anthropocene Theories

In his "Operating manual for spaceship earth" (1968), the American architect and engineer Buckminster Fuller was considering the situation of the planet in its global evolution, and in relation with the question of energy, its use and transformation in front of the decrease of planetary resources, this to avoid the exhaustion of human species. In this emergency, he proposed to have "a com-prehension and a global care" and to use (collective) intelligence, or to perish. His theoretical and practical experimentation aimed to think in a systemic and synergetic way and to integrate the notion of global network, toward the reorganization of the planetary industrial equipment, for a general

economy of the energy. With sciences, design, economy, philosophy, architecture, cybernetics, and his own theories of dynamics, anti-entropy and richness, he described some experiments and guidelines for new forms of living and growth. Fuller was also exploring the technology of computer as a “scalable antibody”: by its global comprehension and systemic treatment of various problems, by its automation and AI, by its adaptation to extreme and dangerous environment, by its capacities to assist mankind. This proposition wants to reinterpret the thought of Buckminster Fuller, in comparison with the current situation of the planet, now conceived as the Anthropocene, and of the technological development – above all the artificial intelligence –, its means and its aims. We will call to several Anthropocene theories (Wark, Latour, Stiegler...) as new paradigms for a sustainable technosphere. Not in a post-human era, but rather for a co-human milieu, associating human and technical intelligences, in a new kind of ecology.

Colette Tron having an activity as a critic since twenty years, she is also working as a poet, using different media and languages, questioning their function by experiments and creations. By founding the association Alphaville (www.alphaville.org) in 2000, she has created a place of reflection around the relations between language and the media, technic and art, aesthetic and society, and tries to articulate the practice and theory in order to create a new critic and updated theoretical approaches related to digital transformations in the artistic production process, and by publishing the results of these researches. She has directed two books and published many papers.

Selenia MARINELLI

Hypernatural Greenness: Towards a Bio-Tech Terraformation of the Planet

The colonisation of other planets has become one of the scientists' main aims. The current scenario contemplates the possibility to send humans to Mars in a few decades and interplanetary travel seems to be right around the corner. The only way to change life conditions on Mars and make also similar planets habitable by man is through terraformation, a process directed at first by atmospheric and biological devices. But in the era of the Anthropocene Earth itself could be considered as a global experiment of earth modeling: why can't we simply imagine to apply terraformation on our Planet to turn positive our ecological imprint? With this paper we will try to envision provocative post-natural scenarios in which the concept of the biosphere intersects with technosphere producing a new techno-ecologic relation. Hybridizing greenness with technology we can enhance the performative capability of the notion of “green” to produce hypernatural landscape for multispecies co-existence. What if a hybrid bio-tech cocoon will spread to promote new ways of human and non-human symbiotic interactions?

Selenia Marinelli – Born in Taranto (1989), she is an architect and Ph.D candidate in Architecture – Theories and Design at “Sapienza” – University of Rome. Her main fields of research are the intersections between biological and architectural systems to achieve eco-symbiotic design strategies. Other personal interests are related to: neurosciences; hybridization between body and technology; gender identity in a cyber-feminist perspective.

Casper DRAKE

Multispecies Perspectives and Eco-Sci-Fi Practices

Alien Holobiontology is an experimental eco-sci-fi digital novel that explores the use of technologies for imaginatively inhabiting other species’ sensory perceptions, and ways in which digital platforms may be repurposed for these ends; or, conversely, how platforms can be inhabited and repurposed for post-anthropocentric activism by multispecies algorithmic hybrids. This paper discusses the work in progress, and speculatively discusses its planned development.

The first chapter is an interspecies Twitter bot, live but still in development, which uses scientific research in trying to become (currently) a bat. An aggregate of Freshwater Pearl Mussels on Instagram constitutes another chapter. The next steps include using these avatars to comment on Brexit and immigration debates, to participate in newspaper comments feeds and enter as clients into the forthcoming e-justice system.

The final work will be structured as a holobiont, or assemblage of symbiotic, multispecies entities (Haraway, 2016; Margulis & Fester, 1991). It will be based on work with Marine Biologists and Ecologists to map an ecosystem, including its organisms and microorganisms, within a specific area of marine environment. It will imaginatively inhabit these multiple species’ perceptions and biosemiotic relationships through text and coding, as algorithmic, animated and augmented reality entities.

Etic Lab is a socially engaged research and development partnership of scientists, technologists and artists. **Casper Drake** studied Political Science and develops socially engaged software. He was on the Standing Orders Committee of the Green Party and wants a world that’s physically and socially fit for everyone.

11.30–13.00 Parallel Session 4A: POST-ANTHROPOCENTRIC VISIONS – ‘NATURE CULTURE’ AND ECO-CRITIQUE

Venue The Art Academy

Marton KABAI, Natela LEMONDZHAVA / Oddkin

Apocalyptic Calmness (performative lecture)

In our performative, psychoanalytical lecture we will intimately investigate the relation between design and critical posthumanism, through our hybrid design, artistic, research practice. Instead of focusing on results and accomplishments, we will share ways of engagements with the ecological crisis. We will attempt to emphasize the struggles of designing in a hyper-capitalist reality, the pedagogy of unlearning in the face of the unrepresented non-human histories and the impossibility of living in apocalyptic times. We will outline our intuitive, speculative methods of formulating, continuously shaping a post-anthropocentric, relational, post-disciplinary practice. We share how insufficiency, unproductivity, and anxiety counter-producing and maintaining our awareness and vulnerability to stay active and alert. We will present two of our research directions, the Clarion Call and the Ground Zero both in which we claim a mediative, prismatic role in times of radical misunderstandings, combining forensic awareness with visionary hopelessness.

Oddkin is an artist and design formation of Marton Kabai and Natela Lemondzhava founded in 2018, in The Hague, NL. Our hybrid, mutant practice shifts between investigative and metaphoric approaches through forensics and intuition that unfolds in critical storytelling. We wish to reveal the fertility within hopelessness and its vast possibility, unlocking persistent optimism in contrast to psychic entropy. We wish to uncover systemic biases that had been mistaken as truths or legal and demystify hidden affairs that seem to be innocent, efficient or normal. We embrace an ecocentric, post-anthropocentric outlook, crafting radical visions and critical maps to de-center the status-quo. We formulate our researches in forms of books, games, videos, workshops, installations, and live performances. We are active in exhibiting, teaching, lecturing, facilitating different forms of workshops as well as collaborating with other fields of knowledge.
www.oddkin.net

Chelsea POLK

44,320: Interpolating 8 Bogs and the Post-Transcendental

Natural and vital sites with specific and ancient ecosystems — such as bogs — are masked and marketed as nature preserves, vehicles of research, education tools, and experiences. It is no longer a question of what is natural or artificial, as beneath each bog of a sample collection of 8 throughout North America, Ireland, and Eastern Europe, is an industrial plant and a political agenda. Ecotourism, by definition, warrants sustainable travel. However, what feeds this green industry is channeling the desire in a collective whole for an interrelation to land that is lost. This relation to land cannot thrive in a tech-heavy, postcolonial society, but what remains as a supplement is situated between the infatuation with ecological industry and a to return to the transcendentalist perspective, a fetishization of a place and its history — post-transcendentalism. 44,320 is an 8 chapter audio piece and accompanying text which addresses these concerns, graphing the stories of eight bogs. It follows the paths between them, diverges, and diverges again. It exists somewhere between episodes of a podcast and movements of a composition, narratives, nonfiction, a travel log, and a manifesto. The following eight bogs represent a set of fixed points which are then interpolated.

Interpolation:

1. The insertion of something of a different nature into something else;
2. [mathematics] The method of constructing new data points within the range of a discrete set of known data points
3. [classical music] Unrelated material inserted between two logically succeeding functions

Chelsea Polk is a multimedia artist and musician specializing in video, sound installation, and cello performance. She recently received her MFA from Massachusetts College of Art & Design in Boston, MA. and provides media and technology support at MIT's Program in Art, Culture, and Technology. Her latest research includes a podcast series commenting on the rise of the intersection of art and science by exploring the hydrology of local Massachusetts reservoirs, as well as a collaborative documentary project researching peatland conservation in central Ireland. In addition, she is a member of the New England Philharmonic, a Boston-based orchestra specializing in contemporary music.

Karel DOING

Building Human/Plant Affiliations

The desire to accurately depict nature has been a driving force from the beginning of photography. Such techniques have also been employed in early modernist experiments in the context of Bauhaus and surrealism. Intense engagement with materials and methods and a subsequent problematization of human cognitive perception can be identified as important underlying characteristics of aforementioned practice.

Departing from this context I have developed the Phytogram, an image making practice based on similarities between chemical compounds found in industrial film developers and naturally occurring phytochemical substances. Besides the replacement of industrial products by biodegradable chemistry, such a material engagement can be used for the production of animated images that are a direct result of chemical reactions occurring by bringing organic samples in contact with film emulsion. By using the internal chemistry of plants, images can be produced unmediated by lenses and photographic or cinematic mechanisms. These images might be described in terms similar to a Deleuzian understanding of affiliation: indistinction, indiscernibility or ambiguity. Not a natural filiation but an unnatural alliance. This terminology can also be productive in a posthumanist discourse, in search of a displacement of the human subject, building toward a decentred view of the biosphere.

Karel Doing is an independent artist, filmmaker and researcher. His interest in experimental film and expanded cinema is reframed within a critical approach toward modernity and post-modernity, in search of new meanings of the real and the material. His films, performances and installations have been shown internationally, including shows in Paris, Los Angeles, Toronto, Bonn, Rotterdam and London.

Robert HENGVELD

Art in Natural and Post Natural Worlds

Our cultural relationship to and perception of the natural environment has continually transformed throughout the course of human history. These shifting perspectives are made evident in artists' depictions of, or interactions with, nature. This paper establishes a cursory survey of this evolving relationship between humankind and the natural world as interpreted through artistic production. The research centres on the work of artists working within our contemporary culture and the differing perspectives they bring to the Anthropocenic, Post-Natural World we presently inhabit.

Robert Hengeveld is an artist whose work explores the boundaries between reality and fiction, often engaging technologies and collaborations in the process. He now lives in Newfoundland where he teaches at Memorial University. His work has been exhibited across internationally and is held in various public and private collections. Past exhibitions include Hallwalls Contemporary Arts Center (Buffalo US), Art Athina (Athens, GC), Powerplant (Toronto, ON), Mercer Union (Toronto, ON), Mulherin New York (NYC, US), and Opinion Makers (London UK).

Robert Hengeveld is represented by Katharine Mulherin

Maija DEMITERE

(Not) Letting Go of the Nature

The forced dividing between “culture” and “nature” demands an (educated-)human(-in-a-city)-centered way of thinking. “Culture” as the cultural, manufactured, planned and “nature” – as the wild, unpredictable one. I propose a new methodology on how to look at “nature” – in terms of holistic, intuitive, vernacular design. Using common sense and DIY arts and crafts, we can take a step back and become part of the weird, slow loop that is “nature” (“loop” and “weird” here is borrowed from T. Morton). We are aware of ourselves (as a species, as part of a family, as individuals with needs and dreams) and some of us also possesses the ecological awareness. Moving away from the depressing feeling imposed by dark ecology, we have to find a way to become “green” – I’m not saying that everyone should become a bio-farmer, but to become part of the natural loop. Art has the opportunity to look for experimental new ways of living and to use technology the “wrong” way (or the “weird” way). In my research I’ve created experiments and prototypes that can be used by anyone who wants to grow food in limited spaces, reduce household waste and be more aware of the limitations of our planet.

Maija Demitere is an artist and lecturer and doctoral student at Liepaja University. Her main fields of research are dark ecology, deep sustainability, slow media art, developing artistic research and presentation methods that could offer different lifestyles – promoting individual self-sustainability, using local culture and traditions (Latvian and Soviet cultural heritage) together with technologies to create a deeper understanding of true balance between urban and country environment and individual and communal lifestyle.

11.30–13.00 Parallel Session 4B: SENSIBLE 'GREEN' – BEYOND THE VISUAL: ACOUSTIC, OLFACTIVE, CHEMICAL...

Venue The Latvian National Museum of Art

Petja IVANOVA, Anton PEITERSEN

Styroworm and Other Hybrids

The feedback of the Anthropocene – is an artistic research project in acoustic ecology – analysing effects of human traces in the 3 ecologies: the mental, social and environmental juxtaposing the idea of a 'bulgarian green' lifestyle with its socio-techno-economic realities. Tracing human mimicry of the environmental sounds and how this practice has shaped pagan, rural and contemporary artefacts, artist Petja Ivanova and Anton Peitersen looked at the Bulgarian bagpipe Kaba Gaida as being inspired by the wind as a medium for long distance communication, an ancient 'natural' technology. Informed by deep time insights into media practice in combination with fieldwork accompanying shepherds and people living in remote countrysides, Peitersen and Ivanova took their learnings onto the not so 'natural' fields of our times and prototyped devices and installations that mix social ecologies, environments and technological ecologies to result in instruments and sound practices that are representative of the un/greening of lives and habitats: A sound piece of a youtube song, a poem about the shepherd and his companions, the sheep – whose amplitude depends on the wind flowing by. Or multiple radio stations bobby-pinned to sheep on the fields, streaming into the nearby cities and empty bus stops along the country roads. An acoustic tracing of the un/greening of the rural soundscape.

Petja Ivanova is born in Shumen, Bulgaria and based between Berlin and Sofia, Petja graduated from the University of Arts Berlin in the class for Computational Art/Generative Art in 2015. In her transdisciplinary practice she combines archeology, biology, speculation, computation and the poetic in order to promote the 'poetic method' as a counterweight to the socially dominating 'scientific method', understanding this practice in non-linear relation with Fluxus & Avantgarde. She runs 'studio for poetic futures and speculative ecologies' out of a little caravan in Berlin.

Riccardo TORRESI, Maxime LETHELIER, Asako FUJIMOTO

Sensing Gravity – audiovisual installations based on gravitational phenomenons

Balancing between artistic autonomy and the necessary scientific accuracy, the media art collective Ephemeral Tomorrow will present two audio-visual works reflecting on the physical phenomenon of Gravitation. Sensing gravity was the common challenge that the two pieces aimed to face and the topic of a wider research in terms of scientific coherence and creative matter. The collective's work represent an aesthetic and intuitive experiment, revealing a new layer of human consciousness about gravity and its subtle manifestations. The outcomes are immersive environments trying to speculate on astrophysical detections and real time monitoring through combinations of light and sound.

Within their conceptional approach, the members of artist collective **Ephemeral Tomorrow** combine technical knowledge with clean, minimalistic aesthetics and present both in their installations. Established in 2016, Riccardo Torresi, Maxime Lethelier, Asako Fujimoto participated in several group shows and workshops in Europe and abroad. For further information:

<https://ephemeraltomorrow.com>

<https://riccardotorresi.com>

Nadja Gabriela PLEIN

Non-Dualism and its Implications on Art-Making

Western thought has been in thrall of a dualistic, anthropocentric worldview since Descartes. We see the rational human being as profoundly different from the material world. Is it possible to imagine a non-dualistic, post-anthropocentric worldview, one where human and world are not fundamentally other but fundamentally the same? There is a strong mind over matter bias in contemporary art-making. 'Anything goes' – the current maxim – provided it is framed rationally. How can we rethink authorship from a post-dualist, post-anthropocentric position? Referring to the writing of philosopher Wolfgang Iser on the evolution of cognition, and early Buddhist philosophy on conditionality and the non-self, I go on to develop a sketch of a non-dualistic worldview, exploring both the human and the world as non-essential and perpetually changing states of being that are deeply relational and fundamentally same, proposing a radical rethinking of what we mean with human and its relationship with the world. Art-making as a consciously reflective interaction of human and world becomes the locus of a rethinking of the human/world relationship. Can art-making become a blueprint for a more ethical, greener, mode of being in the world?

Nadja Gabriela Plein is a painter and writer. She regularly exhibits paintings in the UK and internationally. Recent solo show: 'flux' with The Stables in Exile Gallery, London. Winner of the 2019 Jacksons Open Painting Prize Abstract Category. She has recently presented papers at: Philosophical Society Oxford Symposium on 'Value' and the 'Abstract Painting Now Symposium' with University of Gloucestershire and RWA. Nadja was a composer first, gaining a doctorate in music composition from the Royal College of Music, London, in 2009, before her practice turned to painting. Nadja is a graduate of the Turps Art School Studio Painting Programme.

Eva SJUVE

Tuning into the Un/Greening

This paper explores my recent artistic research in the context of information space, the ecosystem and the process of perceiving the un/greening process of polluted atmospheres, through the use of models of machine learning in a feedback loop of the human and nonhuman agency. In this project, cognitive glitches have been investigated; how they can be vehicles for sensing the un/greening processes. Through artistic practice, combining sonic arts and embodied and exploratory listening modes using synthetic interfaces with machine learning models, investigating gaps as rhythmic patterns of being in-between, behavioral changes, and anthropocentric in/decisions.

Eva Sjuve is a sound and media artist and researcher. She works with interactive media technologies to reveal hidden structures between data space and the physical world, addressing contemporary issues. Her work has been included in exhibits, including the Australian Center of Contemporary Art, Melbourne, Australia; Kiasma Museum of Contemporary Art, Helsinki, Finland; CAEIT Experiments in Art, Information and Technology, California Institute of the Arts, USA; The Museum of Contemporary Arts, Chicago, USA, and the City Exhibition Hall, Sydney. Her research has been presented at conferences, including the Internet of Things: The Philosophy 14, Hybrid City 13, MediaCity 10, Creativity & Cognition 09, ISEA 08/14/15/16, and NIME 08. She is at the University of Huddersfield, UK.

Nina CZEGLÉDY

Beyond Green

Nature may be considered as the world of living organisms and their environment. In the holistic vision of Indigenous Peoples separating identity from the environment is an alien concept. My curatorial interest of these concepts was enforced by scientific publications from David Bohm, Edward T. Hall and Gary Witherspoon. Bohm, a noted physicist, originator of the casual interpretation of quantum theory, challenged established notions concerning the nature of reality and the order of the universe. In contrast to firmly entrenched views, he saw the infinite universe as an undivided wholeness: a world of interconnection and interdependence. Witherspoon wrote how in the Navajo

Universe each element moves continuously in an interrelated mode. The underlying assumption is that nothing is totally inactive in the universe, the cosmos is composed of interconnected process and events as opposed to a cosmos composed of facts and things. These concepts are distinctly illustrated in the art of Dana Claxton, Alatheia Arnaquq- Baril, Shelley Niro, Lisa Jackson indigenous women artists from Canada, whose work we present next year at a Canadian exhibition of international and local women media artists working environmental changes. It remains important to provoke established conference programs with something unexpected such as presenting indigenous concepts.

Nina Czegledy, artist, curator, and researcher with international and national academic affiliations is based in Toronto, Canada. She collaborates on art & science & technology projects and is deeply involved in ecological issues. Czegledy has produced and curated collaborative international cross-disciplinary art projects, exhibitions, and conferences focused on environmental change. Relevant examples are the upcoming Digital Dynamics 2020 exhibition featuring women media artists focusing on the environment at THEMUSEUM in Kitchener Canada, SPLICE Re-examining Nature (2017), curated for the Oulu Museum of Arts, Finland presented 21 artists. Galactic Wind audio/visual installation utilizing cosmic ray data exhibited in New Zealand (2015). River Speaks (with Ian Clothier) concerning the Waiwhakaiho River, New Zealand (2015), What will you do to help us cool the earth interactive installation commissioned by the City of Toronto (2007) toured to New Zealand (2009). She presented by invitation on eco art activism at international conferences including Art*Science, Cervia, Italy (2018), Balance Unbalance, Manizales Colombia (2017), University of Sao Paulo, Brazil (2016), Owheo Rising, Dunedin, New Zealand, (2016), Subtle Technologies Toronto (2015), ISEA2013 Sydney, Australia, Time Inventors Kabinet, Brussels, Belgium (2012), Green Art, Prague, Czech Republic (2011).

14.00–15.20 Parallel Session 5A: POST-ANTHROPOCENTRIC VISIONS – ‘NATURE CULTURE’ AND ECO-CRITIQUE

Venue The Art Academy

Paul GRANJON

What to make [techno] art about in the age of ecological collapse?

The author is a technological artist whose subject is the co-evolution of humans and machines. He addresses this subject with hand-made machines presented in performances and exhibitions. The trajectory of his practice-based reflection since the mid-1990s lead to an increasingly issue-based delivery, often involving participants in making machines and sharing ideas about our relation to technology and nature. Sustainability and ecology have always been at the heart of the work, yet the recent increase of alarming facts about ecological collapse are motivating Granjon to re-centre his practice. Future works will aim at creating formats, tools and narratives that inform viewers' and participants' awareness of the issue and incite them to take practical action. The first part of the paper provides an overview of the main ideas Granjon has explored for the past 20 years: robotic moment, machinic life, technological dependency, post and transhumanism, emulation of nature, artificial general intelligence, participation. The second half of the paper examines ecological collapse with a selection of recent and historical studies. The psychological impact of different communication and engagement strategies by activists, theorists and artists is evaluated, concluding with Granjon's current propositions for a [techno] art practice in the age of ecological collapse.

Paul Granjon has been making robots and other machines for exhibitions and performances since 1996. Granjon's work became known for a deadpan combination of humour and serious questions about our relation with technology. His Sexed Robots were exhibited in the Welsh Pavilion at the Venice Biennale 2005. He performed internationally with his disco dancing humanoid, a Robotic Gun and other live robots. He regularly delivers Wreksshops, public events where participants build new machines from electronic waste. Recent commissions include an installation that questions our expectations of a social robot (Manchester Art Gallery, 2016) an electric forest (Garage Moscow, 2017) and a microbe/robot collaboration (Azkuna Zentroa Bilbao, 2018). He teaches Fine-Art in Cardiff School of Art and Design, UK.

Davide BEVILACQUA, Christina GRUBER, Antonio ZINGARO

Unpacking Digital. Greenwashing – Is an Organic Internet Possible?

Aiming at discussing the ecological trend on the Internet, this presentation is based on an attempt to define how Digital Greenwashing can be understood as a practice in which Internet corporations combine the use of green computing with ecological-friendly marketing strategies. In the Internet, “greenness” is not only a label to apply to fields like food, mobility, clothing or architecture but to the Internet as well. For the tech industry, green is the color of a growing euphoria for zero emissions and sustainable computing that nevertheless rely on rhetorical practices belonging to the gray areas of marketing and self-representation. Currently, companies like Amazon, Facebook, Apple and Google began promoting their investments in 100% green data-centers as further reasons to trust in their business and sustain their activities. In addition to “classic” Greenwashing practices, by claiming their support to the environmental motives, these companies do not only attempt to polish their image to enlarge profits. Through their very specific rhetoric, they push towards a re-centralization of the Internet, in which environmental activism is a synonym for “optimization” of the infrastructure. This presentation will unpack the recent “environmentalist turn” of digital capitalism in the framework of renewed Greenwashing practices.

Christina Gruber is an artist and freshwater ecologist living and working in Vienna, Austria. She works at the intersection of art and science; her work deals with societal phenomena that shape our world. These relate to the Anthropocene, a concept that describes human beings as the main force changing the earth's surface. Gruber investigates the effects human activities have and had on the landscape and how they've shaped the earth's surface, specifically focusing on water. In the last years, water is of special interest to her. She sees it as the element that all things on earth, including humans, have in common. It is the connector between stories of different places and layers, running through everything, from clouds to datacenters.

<http://www.christinagruber.net>

Antonio Zingaro is a multimedia artist and internet hacktivist. His practice explores the hidden layers of the internet as well as the relationship between intimacy, sexuality and technology. After working as a filmmaker, he published R.T.F.M. (Read This Fucking Manual), a digital self-defense cross-media manual. He is currently a MA candidate at the University of Art & Design Linz.

<http://www.forzantonio.it>

Davide Bevilacqua is an artist and curator working in the blurry area between media and contemporary art. His interest relies on the rhetorics of the technological development and on the understanding of the art exhibition as an “interface”, a processual space for exchange. He is part of the artist collective qujOchÖ and since 2017 is curator in servus.at.

www.davidebevilacqua.com

servus.at is a net culture initiative operating its own network infrastructure in Linz, Austria. servus.at deals with the central issues of the information society and offers open source internet services for art and cultural producers. Main goal of the association is to implement ideas of a “free society” in the daily practice of art and cultural production. www.servus.at

Teodora Sinziana FARTAN

Red Herrings and Green Omens: Exploring the Urgency of Environmental Concerns Through Narrative Techniques

This paper aims to explore futuristic imaginaries through the lens of ecological urgency today, by employing the practice of “fictioning” together with narrative techniques, science fiction ideas and computation as methodologies within art practice. By assuming a geocosmological, nonhuman-centred perspective, an experiment in the creation of patchwork temporalities is generated, focused on the re-assembling of new worlds in the context of envisioning futures through speculative media – it proposes the notion of an *uneven aftertime* and attempts to showcase an experimental approach to exploring the symbolic weight of hallucinating future landscapes in the current backdrop of ecological uncertainty.

Teodora Sinziana Fartan is a new media artist and writer based in London. Her art practice investigates new modes of experience and human-machine interaction through the use of speculation and fictioning: constructing alternate imaginaries occupies a central position in her art-making process, alongside circuit bending, designing interactive objects and building custom software to make these come to life. Often drawing on science fiction, natural phenomena, literary techniques, ritual practices and futurology, Teodora’s work finds inspiration in a wide variety of sources in its attempt to make sense of our increasingly computational social, political, environmental and existential context.

Taller de CASQUERIA

Default Water

The proposal delves into how nature is provided with new materialities by contemporary ways of describing the landscape, creating, at the intersection of the two, areas of opportunity. Default Water arises from the study of a real news story article: In October 2010, a person drowned in its car, falling inside a swamp in a region of southwestern Spain: “... the route was ‘obsolete’, ... the night was closed and the GPS device, whose cartographic base was not updated, led them along a road that had been (intentionally) flooded by a swamp for years.” This fateful event describes the journey of a body through an error (or glitch) caused by the friction between nature and its representation. Map and territory are not coincident, and it’s in this dissonance where the proposal lives. Cartography and landscape evolve at different rates, where one is not always capable of assuming the changes of the other in time. But, what would have happened if this person had fallen into the water within this represented virtual environment? Could we suppose that person had survived? Google Earth, as a referential map, leads the representation of the planet. Water, in this context, loses its physical qualities, becoming a solid volume, a hard and continuous surface on which satellite images are projected. Nature is not longer only a

physical reality. Digitalization, included as a key actor in every ecosystem, generates in between its components new interactions to be explored.

Taller de Casquería is an artist and architecture collective led by Elena Fuertes, Ramón Martínez, Álvaro Molins and Jorge Sobejano. Taller de Casquería's work focuses on the intersection between architecture and contemporary society. It's research based experiments and installations aim to find tools to be applied to space, city and society. Taller de Casquería's recent work is guided by three main conceptual axes: New materiality, as the investigation of new materials, construction- and communication systems which lead to a new understanding of architecture and design, with a specific interest in the so called "ready-mades" and industrialized materials. Dissemination, disclosure and an extense outreach of innovative processes or concepts, taking communication as a decisive aspect of design. New economic and social-media tendencies such as circular and shared economical impulses as guarantors of the system to come.

Adam FISH

Points of Presence

Few users of social media and mobile devices recognise how their everyday swipes, likes, and retweets mobilises a global megastructure that spans the earth, impacts ecologies, and plunges under the sea. This experimental 20-minute video submerges the audience in the socio-ecological tangles of the materiality of the internet. It shows what can be seen and mediates the unseen. The video focuses not on the consumerism surrounding digital culture but rather on the symbiotic relationship between information infrastructure and the geographic, geologic, oceanographic, and atmospheric elements, immersing the audience in the textures, sounds, vertical vision, of the digital ecology of the North Atlantic. 'Points of Presence', through tracing several undersea cables, reveals how the internet is a material political object intertwined with the natural environment, human labour, and the mobility of data. The film was shot by Adam Fish (Lancaster University) and Bradley L. Garrett (University of Sydney) in Iceland, Faroe Islands, Shetland Islands, and London. It was edited by Adam Fish and Oliver Case (both Lancaster University) Bradley L. Garrett (University of Sydney). The score is by Jon Christopher Nelson at the University of North Texas College of Music.

<https://www.youtube.com/watch?v=BTg0KNAHdRM>

Adam Fish is a Scientia Fellow in the Faculty of Arts and Social Sciences, School of Arts and Media. He is a cultural anthropologist, documentary video producer, and interdisciplinary scholar who works across social science, computer engineering, environmental science, and the visual arts. Dr. Fish employs ethnographic, participatory, and creative methods to examine the social, political, and ecological influences of new technologies. He has authored three books including: *Hacker States* (2020 MIT Press, with Luca Follis), about how state hacking impacts democracy; *Technoliberalism* (Palgrave Macmillan 2017), an ethnography of the politics of internet and television convergence in Hollywood and Silicon Valley; and *After the Internet* (Polity, 2017, with Ramesh Srinivasan), which reimagines the internet from the perspective of grassroots activists, citizens, and hackers on the margins of political and economic power.

14.00–15.20 Parallel Session 5B: BIOSPHERE AND TECHNOSPHERE — TECHNO-ECOLOGICAL PERSPECTIVE OF OUR PLANET AND IN SPACE

Venue The Latvian National Museum of Art

Elizabeth SHORES

Looking In: Outer Space as a Metaphor of Possibility for Practitioners and Viewers of Art and Design

In this performative lecture, the author argues that the use of outer space as a metaphor for possibility enables practitioners and viewers of art and design to build social awareness and develop affective technologies for post-conflict resolution. In what ways have outer-space oriented art projects developed over the past twenty years and how can the creation of these new access points in visual culture promote critical discussion in a given public? Whose voices are represented? Rather than using cosmology and outer space science as a way to imagine the future of our species on another planet, assist outer space programs with visualizing or giving form to their projects, or creating work intended to captivate an audience, the analyzed metaphors offer unique methods of engaging with publics by investigating aspects of production, agency, and power, drawing connections between the search for interpersonal resonance and the struggle to find it within a neoliberal system. Concepts of otherness are examined in the context of how outer space is constructed on Earth, creating access points for people to reframe societal trauma and reward a public in order to promote the resistance of a mindset geared towards personal, as opposed to mutual, gain.

“My art practice uses multi-sited transnational methods of collaborative design to study how the language of empire in material culture is a catalyst for the funding of outer space exploration programs. Using data taken from aboard my weather balloon, I create Nano-sized sculptures on circulating currency by electron beam physical vapor deposition. I typically collaborate with artists, scientists and lawyers in a fast-paced praxis of call and response. This research has been published or presented at Arizona State University, New York University, School of Visual Arts, University of New England Armidale, Zayed University, and the University of New Mexico. My work can be found in the collections of the University of Iowa and Nevada Museum of Art.”

Tytus SZABELSKI

Post-Digital Landscape. Matter and Metaphors

One of my main fields of interest are entangled relations between digital image or data and the material, physical space and landscape. It is not only the case of an aesthetic experience and the ways it can be mediated, but literal, material transformations that landscape and environment of our planet undergo in the age of mass digitalisation. The problem was perfectly described by a video artist Lisa Rave, who in a documentary piece *Europium* (2014), tells a story – rooting from the times of colonisation – of harmful extraction of rare earth elements. Without them, we could not have our contemporary colourful 4K LCD displays, nor a simple colour TV set from the 60's. Wandering through Google Street View, does anybody think of all the energy and water needed for powering and cooling those giant server farms, full of digitalised, satellite-captured pieces of Earth? From Rosi Braidotti's post-humanism and Manuel DeLanda's new materialism, Jussi Parikka's geology of media to Benjamin Bratton's electronic "stack", consciousness of above mentioned facts is wide in contemporary theory. So it has always been for artists, what I would like to show and develop in this speech.

Tytus Szabelski – born in 1991, photographer and visual artist. Graduated journalism and social communication on Nicolaus Copernicus University in Toruń, Poland, and photography at the University of Art in Poznań, where he recently does his doctoral studies. He worked with Center of Contemporary Art in Toruń, Miłość Gallery in Toruń and 'Krytyka Polityczna' magazine ('Political Critique'). Awarded with scholarship of the city of Toruń in culture (2012 and 2016). Finalist of Polish and International contests for best art master's diploma work. Laureate of Konrad Pustoła memory scholarship for socially engaged photographer. Former editor of 'Magenta', an online magazine dedicated to contemporary photography, editor of 'Postmedium' art academic journal.

Anna TOKAREVA

Baba Yaga Myco Glitch

Unlike other, dutiful, female characters of Russian folklore, Baba Yaga is a powerful, anarchic witch. She lives alone in the woods; rejects household labour, repurposes the mortar and pestle for high-speed transportation, with broom as anti-tracking device; commands the undead; cannibalises. Baba Yaga is shape-shifting and gender-ambiguous, by turn gatekeeper, helper, or child eater. In her spirit, yeasty conspirators use bread, the sacred 'staff of life,' as a carrier for eco-hypnotism. A Russian conspiracy theory claims that industrially produced yeast bread is infected with a slowly destructive 'killer yeast.' It has been suggested that rye bread caused the Salem Witch Trials. The symptoms of the 'cursed' girls were akin to ergotism, caused by mycotoxic fungus that thrives on rye. Ergotism halted Peter the Great's attack on the Ottoman Empire in 1722. Inspired by ergot distribution and the symbiotic mycorrhizal networks of our tree kin, Baba Yaga Myco Glitch seeks to disrupt patriarchal structures from Salem to

Shanghai to Siberia. We colonise human microbiota. We misbehave in the kitchen. We harvest mind-altering wild yeasts, knead incantations into sourdough sensors to transmit kneading data to the network, bake Yagic sigils. Yagic Glitch Yeasts ferment toxic extractive ideology into visions of alternative futures.

Anna Tokareva (Rostov-na-Donu, 1988) adopts investigative and archival methodologies to explore entanglements between technoscience and contemporary mythologies. She is interested in the subtleties and fictions of post-Cold War politics, mystifying appearances, and weirding binary narratives. Her work has been exhibited in Auckland, Edinburgh, and Madrid. Her essay, "Nooscope: The Political Myth of Planetary Scale Computation," will be published by the Digital Cultures Institute, NZ in early 2019.

Normunds KOZLOVS, Ilva SKULTE

Anti-Entropic Ideas of Reforming the Earthlings' Life by Russian Cosmist Tsiolkovsky

Tsiolkovsky is well known as founder of rocket-science. But he had very radical ideas concerning the evolution of humanity and even life itself. Radical – even for the whole "Russian cosmism" movement – inspired by Fyodorov's "Philosophy of Common Deed". The present state of the cosmos indicates, by Tsiolkovsky, the triumph of creative "anti-entropic" forces of life and mind over equalizing entropic tendencies and over cosmic hinges of matter to absolute organizations, which would mean the end of the world. Tsiolkovsky was the first theorist for cosmic expansion of mankind. When the mankind, a cut so far left from animals, realizes the modest place on evolution's ladder and the gap from intelligent life in space, it transforms the Earth and itself. There will be agriculturally mastered the entire terrestrial and oceanic territory, wild plants and the highest animals should be exterminated, used for industrial purposes, the thickness of the earth's atmosphere, and in the future the earthly matter will turn into materials for cosmic colonies. Thus, coming out of its cradle – the Earth, Mature Humanity (also the Kantian definition of Enlightenment as "a maturity") will reach anti-entropy.

Normunds Kozlovs has philosophy and sociology study background at Latvia University as well as social work education praxis in higher school "Attīstība" and currently is lecturing at Riga Stradins University's communication department as well as Liepāja University's program for new media art. His academic interest is counter-culture ideology. Articles on dandyism, camp esthetics and steam punk are published by arterritory.com The papers in english and latvian are collected at the site: <http://rsu-lv.academia.edu/NormundsKozlovs>

Ilva Skulte is Associate Professor at Riga Stradins University and teacher of Liepāja New media art studies. Her main fields of interest are media in digital age and media literacy as well as new trends in contemporary literature and poetry.

Interpretative Digitality

Interpretative Digitality is a concept about how the physical and digital worlds exist together. In relation to the Ungreen theme, it discusses what is digital and what is physical. Seeing the physical world as digital come from the understanding of various aspects of digitalisation, quantification, calculation. A few will be elaborated in this article. This article might include artworks of my personal artistic practice and research, however, it mostly be covering the explanation on the digital – physical divide. Some more text could be found in my PhD thesis “The digital”. To engage with the concept of the post digital, as a starting point we need a shared conceptual understanding of what we mean by “the digital” itself. Importantly, the term “digital” in its literal meaning does not in itself imply high-tech, or intangibility. Coming from the Greek word ‘digit’ (finger), it refers to values that are discrete, as when counting on fingers, compared to measuring e.g. size. This fundamental meaning does not require the manifestation to be driven by a computer or electrical power. The abacus for instance is an example of a pre-electronic digital counting device. On a similar note, the cardboard punched cards broadly used in the early days of computer science were nothing but physical representations of digital data. Or as phrased by Rydarowski et al. on artistic forms: “There is a long tradition of painting, film, architecture, sculpture, and new media works that use analog equipment to produce discrete signals” (Rydarowski, Samanci, & Mazalek, 2008). There is a slight difference between going deeply into what digital means through reducing it to the fact that it builds on zeros and ones (a reductionist account), versus recognizing it more broadly as what we typically mean by the “digital” – i.e. algorithms, data and the ability to traverse different hardware equipment, servers, sensors, actuators, IoT and so on – but most importantly having computation at the core. Another question is how the process of computation could be recognized as the digital and found in every stage of our lives, for example, in the Jacquard loom (Fernaesus, Jonsson, & Tholander, 2012). These relate to finding countable, discrete units in our environment and behavior. These accounts differ, but at the same time cause these perspectives of the same world to converge. In my work, I rely on more of the “everyday” notion of what we mean by digital technologies and materials – the everyday culturally-accepted definition rather than the strict reductionist account. That said, my approach does not reject any of these perspectives, but the proposed interpretative digitality account is emphasized in my work. How we interact with our devices also reflects on the digital in several ways. One way is through tangible interaction with, for example, our mobile phones, when we physically interact by shaking them. Another way is seeing the digital unit in every stage of our lives. The form of a mechanical calculator or any other similar device is both analog and digital, as digital is anything that contains countable units; it could be the fingers of one’s hand. Lund expresses it thus: “‘Digital’ simply means that something is divided up into exactly countable units – countable with whatever system one uses, whether zeros and ones, decimal numbers, strokes on a beer mat or the digits of one’s hand” (Cramer, 2015, p.19). As all these examples demonstrate, the physical and digital do not have a perfect divide. They arrive reciprocally and vanish somewhere in between “...‘digital’ information never exists in a perfect form, but instead is an idealised

abstraction of physical matter which, by its material nature and the laws of physics, has chaotic properties and often ambiguous states” (Cramer, 2015, p.19).

Vygandas “Vegas” Šimbelis, artist name – Das Vegas (Lithuania/Sweden), is a contemporary (media) artist and (PhD) researcher. With degrees in art from various art academies, he has achieved Licentiate of Arts degree and a PhD at Royal Institute of Technology (KTH) in Stockholm, Sweden. Having experience in fine art and design, Vegas examines new territories and conducts research questioning the role of art (and artist) in relation to our contemporary society and with its socio-political implications. Something is an overarching approach to Vegas work and it implies various significant artistic, scientific and technological resources. Decolonizing is the major theoretical and political framework of his work, in particular, in regard to technology with its failure processes, hacking, acceleration and disruption. Converging art and technology, eradicating the divisions between contemporary art and media arts, merging digital with analog, Vegas reflects the implications of the colonial exertion of rights and seeks for the humanization of technology. With a major focus and regard to the post-digital, the artist is particularly interested in harnessing the hacking for humanizing of technology in its contiguity with and of its situatedness in the real world. In the following, Vegas explores norm-critical perspectives, conceptual ecosystem and design ideas to increase the perceived humanization of technology and re-examine the societal, political, and cultural discourses. The unexpected context, unseen places and unexplored realms are of major importance to the Vegas exhibition approach. It is more of harnessing of hacking than a tradition of exhibiting. With internet sites' and mobile app examples, usage of a tax system, or exhibitions on eBay.com the focus shifts toward the defamiliarised within the art settings. Or the occupy museums principle is applied to enter secret milieus in Being Background, the blockchain network extends Art_Value program, skyscraper building facade as a monitor display, or former nuclear-reactor and art-fair contexts both as site – and context-specific installations – this is the exposition proposal to perceive Vegas' work. Vegas' projects have been exhibited at more than 120 exhibitions from the start of his oeuvre in 1996, including: MANIFESTA, Video_Brasil art festival, Istanbul Biennial, Tallinn Print Triennial, Barcelona Art Contemporary Festival, ClubTransmediale, FILE art festival, National Museum and Modern Museum in Stockholm, Contemporary Art Centre in Vilnius, INTRO art centre in Vilnius, Ctrl_Alt_Del Sound Art Festival, Píksel art festival in Bergen, etc. Research has been presented in practical work, talks and publications (and proceedings) at ISEA, SIG-CHI, SIG-GRAPH, ACE, RIXC, Renewable Futures, 4S and EASST, EVA conferences.



15.30–16.50 Parallel Session / Thematic Panel: GREEN INTELLIGENCE AND PRISMATIC ECOLOGIES – COLOR THEORIES, LIGHT, PERCEPTION

Venue The Art Academy

Ellen PEARLMAN

AIBO – A Rapid Prototype Emotionally Intelligent AI/BCI Body of Light

Cloud-based analytic engines for emotionally intelligent artificial intelligence like Google API, IBM Watson, and others function through semantic analysis of speech-to-text input. They apply weighted values based on magnitude or strength of an emotional statement, and score or overall emotional analysis of the statement's positive, negative, or neutral qualities. These types of analyses can also be used by both speech to text and text to speech specialized chatbots, and incorporated into analytic engines tasked with making critical decisions on customer service, healthcare, jurisprudence, social sorting, employment, and migration among others. This AIBO work-in-progress opera depicts a proof of concept, initial rapid prototyped interaction between an emotionally intelligent artificial intelligence entity powered by machine learning and the human brain. It represents the sterility of algorithmic decisions versus a sentient human being's emotions, with a subject's brainwaves visible on their body highlighting inherent tensions between implicit mathematical analysis, and complex human irrationality.

Dr. Ellen Pearlman's areas of inquiry are the brain, consciousness, surveillance and artificial intelligence. She created "Noor: A Brain Opera" the world's first interactive, immersive EEG brainwave opera in a 360 degree theater. Ellen is a Fulbright World Learning Specialist in Media, Art and Technology, on faculty at Parsons/New School University, and Director of the ThoughtWorks Arts Residency, President of Art-A-Hack (TM), and Director of the Volumetric Society of New York. She has presented at numerous international conferences and published extensively.

Phil AYRES

Flora Robotica – a Bio-Hybrid Approach to Architecture

The objective of the flora robotica project is to investigate closely linked symbiotic relationships between living plants and robots for the purpose of growing architectural artifacts and spaces. To achieve this aim, a diverse cross-disciplinary consortium has been assembled drawing together expertise in Architecture, Computer Science & Swarm Robotics, Artificial Life & Biology, Artificial Evolution & Robotics, Sensing & Mechatronics and Molecular & Cellular Biology. Our architectural motivation is to lay principled foundations for potentially disruptive alternatives to current paradigms of resource intensive construction by harnessing the capabilities of living systems – specifically their capabilities for ‘free’ material sourcing, resource distribution, adaptation, decision making and self-repair. These project objectives challenge orthodox approaches to architectural design, demanding new approaches, interfaces, modelling and construction workflows to explore, design, construct and maintain bio-hybrid architectures. The paper will discuss the design approaches we are developing to address the following core challenges:

1. Bio-hybrids exist in states of continual growth and adaptation.
2. Bio-hybrids require methods for continuously projecting growth futures given initial and anticipated conditions.
3. Bio-hybrids require alternative standards of tolerance and design objective achievement
4. High-level architectural objectives require decomposition methods for steering low-level self-organising behaviours of specimens.

Phil Ayres is an architect, researcher and educator. He is an Associate Professor at CITA, which he joined in 2009 after a decade of teaching and research at the Bartlett, UCL. His research primarily focuses on adaptive architectural systems that couple technical & organic elements, together with the development of complementary design environments. This is currently pursued through the EU funded project flora robotica of which Phil is a Principle Investigator. Phil’s teaching roles are focused at Masters and PhD level and he is also the editor of the title Persistent Modelling – extending the role of architectural representation published by Routledge.

Elke REINHUBER

The Bluest Skies – About the Desire to Build a Perfect World

This artistic research explores the wide range of hues of the blue sky above in replica cities and their real counterparts. With the current hype to reconstruct idealised versions of our surroundings – or to build captivating imaginary worlds in Virtual Reality, one might start to wonder how reality can be defined. Only nature reminds us of what is authentic in contrast to its reproduction. A glimpse at the sky refers to the true nature of replicated or displaced places of desire.

Introduction : There are more than 10,000 km and seven (six in summer) time zones between Colmar in Alsace and Colmar Tropicale near Bukit Tinggi. But both places look quite similar. These two locations might be extremes, however, the desire to be in another location than the actual one is nothing unusual. To experience the foreign too closely seems dangerous and disturbing.

Skies hardly lie : Although the façades might be well reconstructed, looking at the sky above reveals that they might be in another location than expected. While the night hours of French Colmar differ from summer to winter by 10 hours, the reconstructed version of the city offers 12 daylight hours throughout the year with only fleeting sunrises and sunsets compared to long lasting blue hours with lengthy shadows and a significant change of colour temperature. Even more convenient are the constant blue skies like in the malls of Macau, in which a short footwalk connects the replica cityscape of Paris with the one of Venice. The sky gleams with the same intensity throughout the whole day, however diverse small details disclose the painted or projected celestial sphere. In my photographic series "The Bluest Skies" I introduce these diverse perspectives on the firmament. Heavenly blue is much more than a fascinating and ever changing colour. Since the atmosphere consists of particles smaller than the wavelengths of the sun's radiation, those atoms and molecules disperse in the same frequency (Rayleigh scattering) and the blue wavelengths interact with those particles ten times more efficiently than the red ones. Pollution, dust and condensation share their qualities with the light on its travel from the skies, so from a terrestrial perspective, the vault of heaven shines in shades between azure and celeste. With digital editing processes, optimising the colour of the sky to a desirable blue is a common image manipulation technique. However, this approach is nothing new – back in the early days of photography, Gustave Le Gray's "Cloud Study" displayed an attempt to make the sky visible, with a method very similar to HDR, although in Black and White. The general usage of red, orange and yellow filters in B/W photography was a common strategy and the colour retouching on the print in early days or the work of the lithographer before printing images was a highly respected adjustment, mostly done with air-brush. Gradient filters in diverse shades to darken the luminescent part of the image were also often applied in colour photography. It is an interesting physical phenomenon that we see the sky in all its splendour, but cannot capture it accordingly. To find the right hue is not a trivial task, because depending on location, language and colour scheme or model, the colour varies hugely. From a greyish light tone to a bright mid-tone blue, a wide range of colours is visible on the firmament above, as per definition, at noon.

Elke Reinhuber is not your average artist, because she became a specialist on choice, decision making and counterfactual thoughts in media arts. As a decidophobic in her own life, she explores in particular alternative layers of the here and now with immersive environments and expanded photography. Reinhuber teaches and researches at ADM/ NTU in Singapore. Initially Elke Reinhuber received professional training as an industrial photographer and studied at the Berlin University of the Arts. During her doctoral research, she received the Baden-Württemberg grant to study with Armin Linke, Michael Clegg and Isaac Julien at HfG Karlsruhe. Her award-winning artwork was presented in several international institutions, most recently BOZAR Brussels, Manifesta Palermo, ZKM Karlsruhe, Fotomuseum Winterthur and V&A Digital Futures in London.

Gabriela GALATI

Ongoing Research for a Complex Ecology of Posthuman Art

Starting from a brief genealogy of what may be considered the first posthuman artistic practices, from Marcel Duchamp to the Land Art and the first Art & Technology approaches, and from an analysis of some particular artistic practices, I would like to outline a research hypothesis which I have been developing on in previous works, and that will be further explored in works to follow. Although the predominant tendency in the theorisations on posthuman art is to clearly separate the topics concerning art and technology from those concerning what I call artistic practices of the living, I will begin to work on an articulation that on the one hand can contemplate the specific differences of each one of these practices, but where on the other hand the artistic practices of living and of new media art can be part of the same landscape, or ecology: that is to say, to be understood and outlined with a methodology that allows to investigate in depth, following Jacques Derrida, that what we share as humans with the living as a whole is not only a shared passivity and finitude, but also the fact that in the case of human animals this finitude is inseparable from the prosthetic constitution of the machine of language as always already technological beings. It is in this sense that a reflection on the living must necessarily include the technological dimension and vice versa. From this point of departure we can therefore speak of a complex, if not complete, ecology of post-human art.

Gabriela Galati is Professor of Theory and Methodology of Mass Media and Media Art Theory at NABA, New Academy of Fine Arts in Milan. In the past she has taught Research Methodology at the University of Buenos Aires, at the University of the Argentine Social Museum, Buenos Aires, and Media Art Theory at Domus Academy, Milan. She published *Duchamp Meets Turing: Arte, Modernismo, Postumano* (Postmedia Books, 2017), she writes reviews of books on art, philosophy, science and technology for *Leonardo Reviews / Leonardo Journal* (MIT Press), and regularly collaborates with *AdVersus* and *Scenari* (Mimesis) with scientific publications. For *Scenari* she is the editor of the #10 issue dedicated to Posthuman Art. Founder of *ECCENTRIC Art & Research*, she is currently also director of the contemporary art gallery at the A29 Project Room in Milan and Caserta. She obtained a PhD at the University of Plymouth for which her dissertation addressed the relationship between art theory, digitalisation processes and the posthuman.

Oksana CHEPELYK

“Green Architecture” and “Algorithmic Society”

Starting from the basic peculiarities of the development of “green architecture” notion in the modern design and construction using such examples of design and construction of “green” projects as: constructions designed by Arthur Wiechula; small architectural forms made of live plants; the Tree Cathedral created by Giuliano Mauri; a multilayer structure The Patient Gardener in the Leonardo campus of the Politecnico di Milano; Baubotanik Tower of Ferdinand Ludwig, a three-storey tower made of live white willows; Ecoboulevard in Vallecas, Madrid created by the architects of Urban Ecosystem in 2000 and also using some projects performed in Lviv Polytechnic National University at the Department of Design of Architectural Environment as architectural, spatial, landscape and functional solution to terrace parks of Pidhirtsi Castle with the elaboration of the mobile landscape elements and the architectural and object environment, trough euphoria about “green architecture” brand and “sustainable” abstract will explore the increasing technical manipulation and exploitation of living systems so-called “sustainable” buildings. It turned out that some buildings not living up to “green” label, proven by the extensive problems with many “sustainability” icons. Landform architecture derived from algorithm opens up new possibilities for relationships between natural systems and built form, landscape and architecture.

Dr. Oksana Chepelyk is a leading researcher of The New Technologies Department, Modern Art Research Institute of Ukraine, author of the book “The Interaction of Architectural Spaces, Contemporary Art and New Technologies” (2009) and curator of the IFSS, Kyiv. Oksana Chepelyk studied art in Kyiv, followed PhD course, Moscow, Amsterdam University, Banff Centre, Canada, Bauhaus Dessau, Germany, Fulbright Research Program at UCLA, USA. Awards: ArtsLink1997 Award (USA), FilmVideo99 (Italy), EMAF2003 Werklietz Award 2003 (Germany), ArtsLink2007 Award (USA), Cinemadamare Award @ Venice IFF, Artraker Award2013 (UK). Works shown: MOMA, NY; MMA, Zagreb; German Historical Museum, Berlin and Munich; Museum of the Arts History, Vienna; MCA, Skopje; MJT, LA.; “DIGITAL MEDIA Valencia”, Spain; MACZUL, Maracaibo, Venezuela, “The File”, Sao Paulo; LPM 2017 Amsterdam.

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