

Techniques Matter. Researching More-Than-Human Worlds

Thursday May 7, 9.30 am – 6.16pm

Organisation: Institute of Aesthetic Practice and Theory IAeP, HGK FHNW

SNFS - Research Project *Ecodata–Ecomedia–Ecoaesthetics. The Role and Significance of New Media, Technologies and Technoscientific Methods in the Arts for the Perception and Awareness of the Ecological* (2017-2020)

Online Method Workshop by WebEx

With this method workshop, we bring together local and international researchers exploring techno-aesthetic and techno-scientific approaches towards natureculture. We are particularly interested in the sensorial and technical dimensions of scientific and aesthetic research and their impact for an ecological awareness. Furthermore, we want to critically discuss our adopted methods and question the role of technology for human's perception of the world.

What kind of techniques might provide us with an open sensorium towards the environment? What are the methods? What the technologies? What kind of processes, relations and aesthetics emerge out of them, and how can we tackle a more-than-human approach?

Invited speakers: Yves Citton, Paris; Anna Krzywoszynska, Sheffield; Christoph Kueffer, Rapperswil/Zürich; Jacopo Rasmi, Nancy; Andreas Rigling, Birmensdorf; Alexandra Toland, Weimar/ Berlin and the Team Ecodata–Ecomedia–Ecoaesthetics (Yvonne Volkart, lead; Marcus Maeder, Rasa Smite, Aline Veillat).

Moderation: Felipe Castelblanco (Basel) and Karolina Sobecka (Basel)

The workshop is free of charge.

To register, send an email to: yvonne.volkart@fhnw.ch (by May 6).

Schedule

9.30	Yvonne Volkart: Welcome / introduction to the participants / aims and goals / short presentation of the research project
09.50	Yves Citton: Technical Matteringings, Extractivist Attention, and the Ambivalence of Affordances –presentation 20-30'+ discussion 20-25'
10.45	15' Break
11.00	Jacopo Rasmi: All that is solid will melt into air. Atmosphere as a life space and a cinematic field –presentation 15' + 25' discussion 5' Break
11.45	Alexandra Toland: The Unbearable Heaviness of Dust – presentation 20' + discussion 20–25'
12.30	Lunch Break
13.30	A. Krzywoszynska: Unsettling soils: Soil microbiome, farmer knowledge anxieties, and the search for a Gaian agriculture – presentation 15' +

	discussion 25'
	5' Break
14.15	Christoph Küffer: Where Seeds Fall –presentation 20-30' + 20-25' discussion
15.00	15' Break
15.15	Andreas Rigling: Climate change impacts on Swiss forests – long-term monitoring and field experiments to analyze the role of extreme drought in ecosystem dynamics –presentation 30-45' + discussion 15'-25'
16.15	15' Break
16.30	Rasa Smite: Atmospheric Forest –presentation 20' + discussion 20'
	5' Break
17.15	Yvonne Volkart: For a Techno-Eco-Aesthetics of Care – presentation 15' + discussion 15'
17.45	Final discussion and conclusion
18.15	End

The discussions after the presentations are moderated by Felipe Castelblanco, Karolina Sobecka and the research team *Ecodata-Ecomedia-Ecoaesthetics*.

The research project is funded by the Swiss National Science Foundation SNFS.

More info: <https://www.fhnw.ch/de/die-fhnw/hochschulen/hgk/institute/institut-asthetische-praxis-und-theorie/forschung/oekodaten-oekomedienn-oekoasthetik>

ABSTRACTS AND BIOGRAPHIES

Felipe Castelblanco

Biography

Felipe Castelblanco is a multidisciplinary artist and researcher, working at the intersection of participatory, film and Media Arts. His work explores institutional forms, creates platforms for inter-epistemic dialogue and ventures out into new frontiers of publicness and unlikely sites like rivers, open oceans and most recently the Pan-Amazon rainforests. He is currently a PhD candidate at the ECAM Graduate School HGK - FHNW Basel in cooperation with the University of the Arts Linz, and holds an M.F.A from Carnegie Mellon University (U.S, 2013). His work has been exhibited at museums and galleries across Europe, Asia, North and South America, including ZKM in Karlsruhe, the Royal Academy of Arts in London and the San Diego Museum in California. Felipe has been the recipient of several international awards, including the Robert Rauschenberg Foundation Fellowship (U.S, 2019), Starr Fellowship at the Royal Academy Schools in London (UK, 2015) and in 2014 he served as a Cultural Emissary for the U.S State Department to the Philippines, through which he developed an ambitious participatory project around inter-cultural diplomacy.

<https://www.felipecastelblanco.com>

Yves Citton

Technical Matterings, Extractivist Attention, and the Ambivalence of Affordances

Following Karen Barad's theory of "agential cuts" and applying it to media apparatuses, we will first study how certain issues "matter" to us through the cuts operated into our reality by various forms of media. This mattering results from "the entanglement of meaning and matter". We will then move to consider human attention as being functionally "extractivist": we tend spontaneously to pay attention to our surroundings in order to extract from them useful information which we can exploit in our actions and profit from. The last part of the presentation will discuss three modalities of extraction, inspired by a problem of translation of the word "affordance", made popular by J.J. Gibson's Ecological Approach to Human Perception: our attention can be in search of "resources", in which case it is purely extractivist; it can look for "affordances", in which case it is merely neurotypical; but it may also open itself to "invites", in which case a more-than-extractivist form of attention may be envisaged.

Biography

Yves Citton is professor in Literature and Media at the Université Paris and director of the EUR ArTeC. He is co-editor of the journal *Multitudes*, and recently published *Mediarchy* (Polity Press, 2019), *Contre-courants politiques* (Fayard, 2018), *The Ecology of Attention* (Polity Press, 2016). His latest book, *Génération collapsonautes* (Seuil, 2020), has been written in collaboration with Jacopo Rasmi.

Anna Krzywoszynska

Unsettling soils: Soil microbiome, farmer knowledge anxieties, and the search for a Gaian agriculture

Agriculture is where the Anthropocene as a socio-ecological crisis will be felt the hardest, and potentially where we are least prepared to tackle it. What forms of knowledge are needed for agri-environmental sustainability to take shape in the Anthropocene seen not as the epoch of 'Man', but the time when the Moderns awaken from the dream of dominance to discover a world that is already full? The environmental and social unsustainability of modern agriculture is often linked with

its homogenising tendencies. Modern agricultural practices depend on and indeed demand an obliteration and overcoming of diversity and heterogeneity which characterises natural ecosystems. This homogenisation of landscapes goes hand in hand with a similar homogenisation of agri-environmental knowledges. In this paper, I engage Stengers' figure of Gaia to argue for a reconfiguring of agri-environmental knowledge around apparatuses for cultivating the art of attention. Thinking with Gaia suggests that what matters about sustainability knowledges is how far different knowledge-action arrangements enable human actors to explore, recognise, and adapt to the needs of non-human entities on which their own flourishing and survival depends. We will particularly attend to the question of microbial knowledges and their place in the future of sustainable agri-environments, as in conventional modern agriculture soil microbial ecosystems are increasingly crucial to the securing of food and environmental futures.

Biography

Anna Krzywoszynska is a Faculty of Social Sciences Research Fellow. She is also an Associate Director at the University of Sheffield Institute for Sustainable Food, and the founder of the Soil Care Network. Her research concerns agriculture and food as the key spheres for the interaction between human and more-than-human worlds. She is especially interested in environmental knowledge, ethics, and affect, and how these shape and are shaped by rural and food-related spaces and practices. Her work engages frequently with the natural sciences. Consequently, her research also investigates the potential for 'opening up' the spaces of scientific knowledge production to non-certified expertise, as well as challenging the persistent division of labour between social and natural sciences in speaking about materiality, life, and ecology. For the last few years Anna has been exploring the reconceptualization of soils as lively ecosystems in conventional agricultural practice and its related knowledge fields, and the consequences of this for the future of agriculture and land use.

Christoph Küffer

Where Seeds Fall

Spontaneous urban vegetation fascinates and provokes. For some these ruderal species are weeds and a nuisance while for others they are metaphorical representations of freedom, experimentation and marginalized actors in a city. Ecologists and conservationists, landscape architects and urban planners and environmental artists are simultaneously inspired and challenged by spontaneous vegetation in cities. In our citizen science projects "Where Seeds Fall", we invited citizens to engage with wild plant life in front of their home. We integrated the themes of spontaneous vegetation with questions about the relationship between wild nature and humans, and the need to network nature and humans across the urban landscape. Based on the project we will discuss the importance of rich and sensory outdoors experience that are inspired by both scientific literacy and artistic sensibilities for scientists and citizens as a basis for developing new relationships with nature in highly anthropogenic places.

Biography

Christoph Küffer is Professor of Urban Ecology at the Department of Landscape Architecture of HSR Rapperswil, senior lecturer in Global Change Ecology at ETH Zurich and associate professor of Environmental Sciences at Franklin University Switzerland. He studied Environmental Sciences at ETH Zurich, and where he completed his PhD and habilitation in plant ecology. He has long-standing experience of collaborating with social scientists, scholars from the humanities and artists; for instance as a fellow at the Collegium Helveticum and the Center for Interdisciplinary Research (ZiF) at Bielefeld University, and as a co-chair of Environmental Humanities Switzerland. Christoph's research focuses on urban ecology, biodiversity conservation in novel and human-dominated ecosystems, and global change impacts on island and mountain ecosystems.

Marcus Maeder

Biography

Marcus Maeder is a sound artist, composer of electronic music and researcher. He runs the music label domizil and has been working as a curator and researcher at the Institute for Computer Music and Sound Technology (ICST) of the Zurich University of the Arts ZHdK since 2005. In his research for *Ecodata-Ecomedia-Ecoaesthetics*, Maeder is working on data sonification of ecophysiological and climatic processes and studying the acoustic and aesthetic requirements for making them perceptible. On an invitation by French President François Hollande, Maeder presented his sound art installation *trees: Pinus sylvestris* at the 2015 United Nations Climate Change Conference COP21. In 2017 Maeder presented his installation *AmazonFACE: Ocotea* at the Inter-American Development Bank in Washington – the same year where he and Roman Zweifel received an honourable mention from the STARTS Prize by the European Commission at the Ars Electronica Festival in Linz/Austria.

<https://blog.zhdk.ch/marcusmaeder/>

Jacopo Rasmi

All that is solid melts into air. Atmosphere as a living space and cinematic field
[five notes]

What would it mean to think a groundless ecology, taking the unstable atmosphere rather than the solid land as the starting point? How can we think through the atmospheric medium our environmental entanglement and contamination? Are we able to perceive and feel the hyper-objective phenomena taking place in the aerial space, beyond the scientific data and statistics so difficult to embody? We will try to outline today's ecological conditions from the atmospheric point of view by analysing a series of cinematic examples that might help us to better detect and experiment our common presence in an airy ecosystem. We will attempt to think the atmosphere as a shared living environment and, at the same time, as an unsettling space of perception where new forms of external identification and domination struggle against opportunities of immanent multiplication and liberation. We will gather an eclectic group of filmmakers (Robert Fulton, Tomonari Nishikawa, Eleonore Weber) around a table where are sitting a handful of important contemporary thinkers (from Hito Steyerl to Emanuele Coccia).

Biography

Jacopo Rasmi has defended in 2019 a PhD in Literature and Arts in Université Grenoble Alpes on the ecological implications of contemporary documentary creation in the Italian context. He's now teaching cinema and media in Université de Lorraine (IECA/Crem). He participates to the editing team of *La revue documentaires* and *Multitudes* and programs cinematic screenings with the OASIS association (Grenoble) and independently. He has recently published the book *Génération Collapsonautes. Naviguer par temps d'effondrement*. (Seuil, 2020) with Yves Citton.

Filmography accessible online

Ernesto de Carvalho, *It is never night-time on the map* (6 min, 2016):
<https://vimeo.com/175423925>

David Bryant & Karl Lemieux, *Quiet zone* (14 min, 2014):
<https://www.youtube.com/watch?v=syr3IG2sdgl>

Jacques Perconte, *A/pi* (numbered series of generative videos):

<http://www.jacquesperconte.com/oe?224>

Robert Fulton, *Inca Light* (17 min, 1972):
<https://www.youtube.com/watch?v=1ATQJ6m4MPs>

Tomonari Nishikawa, *Sound of a million insects, light of a thousand stars* (2 min, 2014):
<https://vimeo.com/117525500>

Andreas Rigling

Climate change impacts on Swiss forests – long-term monitoring and field experiments to analyze the role of extreme drought in ecosystem dynamics

Climate change is taking on striking proportions in Switzerland and extreme weather events such as winter storms, late frosts and dry years have increasingly left their mark on our forests in recent years. It must be assumed that periods of heat and drought will become even more frequent in the future.

What does this mean for our forests? Switzerland has a strong environmental monitoring system. Thanks to the latest measurement approaches and improved sensor technology, we are in a position to record the increasing incidence of climate extremes and the reaction of forests to them. The combination of long-term monitoring with short-term data collection and experiments, combined with modelling approaches, makes it possible to estimate the resistance and resilience of our forests in a future climate.

Our data show that the sensitivities vary considerably depending on the tree species and location. The future development of our forests will depend on the combination and timing of weather extremes. Forests can cope with a single dry year, but several successive heat and dry years combined with storms, pests and diseases will lead to massive changes in the growth dynamics and ultimately the tree species composition of forests.

Biography

Andreas Rigling, born in 1964, is a forest and dendro-ecologist, the head of the research unit “Forest Dynamics” at the Swiss Federal Institute for Forest, Snow and Landscape Research, and adjunct professor at ETH Zürich.

His research focus lies on forest ecosystems' resistance and resilience with respect to short- to long-term climate change, chronic biotic and abiotic stressors and natural disturbances. His research unit at WSL is operating long-term monitoring networks, large-scale field experiments and laboratories. A special emphasis lies on system analyses in forest ecosystem research which require integrative approaches combining the advantages of different research concepts, e.g. by linking environmental monitoring, experimental ecology and modelling approaches. Andreas Rigling aims to bridge the natural sciences with socio-economy, integrating stakeholder knowledge into research concepts and fosters implementation of research findings. At the interface between science and arts, he specifically contributes to combine components of natural research, arts, transdisciplinarity and outreach to a broader public.

Rasa Smite

Atmospheric Forest

Atmospheric Forest is a VR installation that visualizes the complex relations between a forest, climate change and the atmosphere. It is the result of a three-year artistic research project on Pfywald, an ancient Alpine coniferous forest, suffering from drought.

Overall, the trees are not only oxygen generators, they breathe as well. Trees emit large amounts of volatile organic compounds that we can sense as a habitual scent of the forest. While some

scientists believe that the strong smell of a pine forest indicates that climate change can be limited, others suggest that the volatile emissions could make global warming worse. Predicting the effects of natural volatile emissions is much more complex than thought.

During my research, I harvested the resin, responsible for the pine scent, and performed an experiment transforming it into the volatile liquid of turpentine and colophon sculpture. To create the Atmospheric Forest in VR, a scientific laser scanner was used to scan the Pfywald in point cloud. The data of volatile emissions and resin pressure in the bark of the trees were used to visualize the complex relations between the 'terrestrial' and 'atmospheric'. The viewer navigating through the emitting trees of the virtual forest, can observe this emitting forest ecosystem from the bottom up, and following the path through the tree trunk to get far up above it.

Uncertainty regarding the effects of volatile emissions remains. However, the visualized patterns show that with climate change we are set for a more fragrant and more "atmospheric forest" in the future.

Biography

Rasa Smite is artist-researcher, working with science and emerging technologies. She is founding director of RIXC Center for New Media Culture in Riga, Latvia (<http://rixc.org>). She holds MA in visual arts, and PhD in media culture and social sciences. In her artistic practice, she has worked together with Raitis Smits since mid 1990s. Their pioneering internet art project is – Xchange Net.Radio recieved PRIX Ars Electronica (1998). More recent artworks such as Talk to Me – exploring human-plant communication, and Biotricity – creating a poetics of green energy, have been exhibited in HeK, Ars Electronica, ZKM, Berlin's Futurium museum, Venice Architecture Biennial.

She is currently a researcher in "Ecodata–Ecomedia–Ecoaesthetics" SNSF-research project at the The Institute of Aesthetic Practices, HGK FHNW in Basel. Her new artwork "Atmospheric Forest", a large-scale VR installation, is a collaboration with the Swiss Federal Institute for Forest, Snow and Landscape Research WSL and an outcome of her "Ecodata" research in Pfywald forest. The "Atmospheric Forest" will be premiered in "Critical Zones" exhibition at ZKM, co-curated by Bruno Latour and it will be featured in the Virtual Opening on May 22, 2020.

<http://smitesmits.com>

Karolina Sobecka

Biography

Karolina Sobecka is an artist and researcher working at the intersection of art, science and technology, arranging and participating in social configurations that channel, accommodate or resist technological shifts. Karolina's current projects explore notions of ecology and governance through case studies in the fields of climate- and carbon- engineering.

Karolina's work has been shown internationally, and has received numerous awards, including from Creative Capital, NYFA, Princess Grace Foundation, Eyebeam, Rhizome, and Vida Art and Artificial Life Awards.

Karolina studied at the School of the Art Institute of Chicago and at Calarts, and has taught internationally, including at University of Washington, School of the Art Institute of Chicago, Rhode Island School of Design and New York University. She is currently a researcher at the Critical Media Lab Basel and a PhD candidate at European Center for Art, Design and Media based Reseach, and Kunstuniversität Linz

Alexandra Toland

The Unbearable Heaviness of Dust

Widespread atmospheric pollution, exasperated by global warming and the failure of industry regulations, demands a rethinking of relationships between plants and humans. Under the “unbearable heaviness” of life in the Anthropocene, the Ecosystem Services paradigm has become a hopeful attempt by many researchers and policy makers alike to quantify and thus presumably protect biodiversity, ecosystem functioning, and human well-being. By linking regulative ecosystem services (such as biofiltration) with cultural ecosystem services, (such as aesthetic appreciation and health benefits), *The Unbearable Heaviness of Dust* aims to raise awareness about anthropogenic pollutants in the atmosphere and topsoil as well as the plant protagonists that help reduce them.

As art, the project raises questions often avoided by scientists in ESS discourse: Should plants be seen as “service providers”? What moral responsibilities do humans have towards plants in return for their vital services? Can the services provided by plants be seen as phyto-technologies in a multi-species democracy? And how can new human technologies be used to improve relationships between plants and humans under the environmental strains of the Anthropocene? By engaging different disciplines with these questions, the project also demonstrates how artistic research can bring practitioners with different methodologies and worldviews together to critically address and creatively visualize problems of pollution affecting society and the planet.

Flowering plants are an important source of nectar for insects and aesthetic enjoyment for humans. They also help filter particulate matter (PM) by “brushing” the air with their leaves and petals, and “sucking” up heavy metals from the soil and storing them in their tissues. These special abilities are called *Ecosystem Services*, an important concept for environmental protection efforts that can be understood as a civic engagement in multi-species urban habitats, or simply as “nature at work”.

This transdisciplinary project juxtaposes the beauty, function, and value of urban flora using a synthesis of artistic and scientific approaches from disciplines ranging from soil physics, microbiology, urban ecology, environmental economics, speculative design, printmaking, sculpture, 3D printing technology, and the history and philosophy of science. It poetically addresses real problems of pollution in the atmosphere and topsoil – the literal “heaviness” of something so light it is barely perceptible until it lodges in the bodies of living creatures.

Biography

Alexandra Regan Toland is junior professor for arts and research at the Bauhaus University Weimar, where she directs the PhD programme in art and design. She earned her MFA from the Dutch Art Institute (DAI) and a doctorate degree in landscape planning from the TU-Berlin as a DFG fellow in the Perspectives of Urban Ecology Graduate Research Group. Alex has held lectures and teaching positions at the TU-Berlin, UDK, and Leuphana University and published on the topics of environmental art and aesthetics as they apply to soil protection issues. She co-chaired the German Soil Science Society’s (DBG) Commission on Soils in Education and Society from 2011 to 2015, and edited the book, *Field to Palette – Dialogues on Soil and Art in the Anthropocene*, which brings together over 100 international artists and leading scientists to discuss specific challenges and creative possibilities of soil protection. In her artistic practice, Alex explores social and cultural issues of urban soils and vegetation. She has worked as a freelance photographer for the environmental visualization firm Lenne 3D from 2006 – 2008 and participated as a design researcher at the Wriezener Park Open Space Lab in Berlin-Friedrichshain from 2005 – 2009. Her research interests include: socially engaged art, relational aesthetics, urban ecology, soil protection, sustainable agriculture, the Anthropocene, and transdisciplinary processes in sustainability sciences. In her free time, Alex is a passionate beekeeper, vermicomposter, forager, forester, and mother of two.

Aline Veillat

Biography

Aline Veillat was born in the Réunion Island, Indian Ocean, and grew up in Rabat in Morocco. Later she lived in Paris and Lausanne and has worked as independent artist researcher for many years. She currently lives in Basel. She works for the research project *Ecodata-Ecomedia-Ecoaesthetics* at the Institute of Aesthetic Practice and Theory at HGK FHNW and she is associate researcher at IMÉRA Foundation for Advanced Studies in Marseille. She holds MA and PhD degrees in Aesthetic, Sciences and Technologies of Arts from Paris 8 University, and Post-Diploma in Digital Media from ECAL Lausanne Art School.

Yvonne Volkart

For an Eco-Techno-Aesthetics of Care

In present, we notice an increased interest in the use of technological means of sensing in “nature mediation”: eco-media apparatuses are designed to help us detect non-human forms of existence which have, up to now, evaded our attention. On the one hand, it comes with the hope that measuring data can be used to render factual and politicize unknown or disowned environmental phenomena. On the other hand, it generates new forms of relationality and care for the “environment”. With reference to our research project “Ecodata-Ecomedia-Ecoaesthetics”, I wish to show that moments of relationality are generated not so much through technologies of detection, as by the means of sensory aesthetics.

Biography

Yvonne Volkart lectures art and media theory at the Academy of Art and Design FHNW Basel where she has led the Swiss National Science Foundation research project *Ecodata - Ecomedia - Ecoesthetics. The Role and Significance of New Media, Technologies and Technoscientific Methods in the Arts for the Perception and Awareness of the Ecological* (2017-2020). In collaboration with Sabine Himmelsbach (HeK, Basel) and Karin Ohlenschläger (LABoral, Gijon) she co-curated the exhibition and book project *Eco-Visionaries. Art, Architecture and New Media After the Anthropocene* (2018), a follow-up of the exhibition project *Ecomedia* (2007). She co-organized the conference *seeds & soil* at Centre Culturel Suisse Paris (with Claire Hoffmann, 2019). Completed research projects include: *Times of Waste* (2015–2018. Lead: Flavia Caviezel). From 2009 to 2012 Volkart was co-curator at the Shedhalle Zürich. She writes regularly for *Springerin*. Last publication: “Aesthetic Strategies in the Wasteocene”. Forthcoming in: Aldouby, Hava (ed.): *Shifting Interfaces. Presence and Relationality in New Media Arts of the Early 21st Century*. Leuven University Press Leuven [peer reviewed].

Her concerns lie in the modes how art, ecology, technology, and feminism come together and bring us in relation to the world.

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

<https://objektbiografie.times-of-waste.ch>