Abstracts and Bios

Machines and Atmospheres

Gregers Andersen. Biopolitics in the Anthropocene: On the Invention of Future Biopolitics in Snowpiercer, Elysium and Interstellar

Abstract: As prognoses of the global warming that await humanity in this century are becoming ever gloomier, the atmosphere is not the only thing that is heating up. So, too, is the debate on what will be the proper technological response to mitigate the consequences of a changing climate. For instance, the US National Academy of Science recently released a two-volume report, stating that anthropogenic climate change has advanced so rapidly that the time has come "to look at options for a planetary-scale intervention" (Goldenberg). However, geoengineering on a planetary-scale is not just a matter for "Science" with a capital S (Latour). It would be a serious mistake to overlook how the debate on the role of technology in creating climate change resilience is also fought in popular culture. In this paper I will therefore trace how the mixed affective climate of ecological anxiety and technological optimism is given narrative form in contemporary cinema. In particular, I will turn towards three recent films: Snowpiercer (2013), Elysium (2013) and Interstellar (2014). These films will have my interest, because they all host the imagination that the engineering of artificial atmospheres will be an unavoidable part of human resilience in a future havocked by climatic and ecological devastation. Moreover, the three films indirectly imagine the answer to three questions that are important in the light of the prospects of this devastation. These questions are: 1) if a future technological response to climatic and ecological devastation will be a matter of survival, what kind of social design will follow from this response – or rather, how many humans will there be room for in the engineered atmospheres provided by technology? 2) In a world of such atmospheres, who shall have what? This question is particularly interesting, because already existing shortages of key resources are projected to increase at an accelerated pace, as we approach the latter parts of this century. 3) Finally, the two previous questions also beg a third question about control – namely, what kind of measures will be taken in order to control the distribution of the remaining resources? In fact, this final question will structure the paper in particular, as I take Snowpiercer, Elysium and Interstellar to be representative of three different constellations of engineered atmospheres and biopolitics.

Desiree Foerster. liminal experience as a formative force in atmospheric envrionments

Abstract: In my PhD, I investigate how a new aesthetic emerges in spatial design that disrupts the way we think the human and its relation to its environments in integrating embodiment and pre-reflective forms of cognition into the experiential dimension of architecture. I specially focus on the use and amplification of biochemical processes (thermoception, oxygen uptake, interoception), and how they prime feelings and perceived possibilities for action. The focus of my proposed paper presentation thus does not lie on "machines of air and atmospheres", but on the lived body as experiencing and mediating atmospheric events.

Wind, temperature, clouds, mist – these phenomena have in common that they can hardly be objectified. They have no identifiable parts or clear dimensions, no form and are partly or completely invisible. But we do experience their dynamic presence through our bodies: the body's sensitivity on cellular, organic, and organismic levels, allows for engagement with phenomena that go beyond subject/object dichotomies. I will investigate an aesthetic that provides liminal experiences, in including the full sensorium through engagement with normally invisible – or not primarily visual – phenomena. Besides presenting an analysis of existing artistic work against the background of process philosophy, phenomenology and cognitive science, I will present my own practical study of creating a sensual apparatus to extend the human sensorium to make experienceable connections with the environment, that usually escape conscious awareness. For this I created an experiment using VR, temperature, vibrotactile feedback and sound.

Bio:Desiree Foerster is a PhD student at the Institute for Arts and Media, University of Potsdam, Germany. She graduated in Philosophy, Literature (BA) and Media-Culture-Analysis (MA). Her research interest lies in embodiment and how new artistic and design practices shape affective atmospheres. She presented at several international conferences, participated in the New Materialism Training School "Research Genealogies and Material Practices" at Tate Modern, London 2016, was a Visiting Scholar at the Rensselaer Polytechnique Institut, Troy NY in 2017, and holds the Emergent Scholar Award of the New Directions in the Humanities Research Network. She worked as a program assistant for the Haus der Kulturen der Welt (HKW) and MitOst e.V.. As an independent curator, she organizes events at the intersection of art and theory in Berlin.

Johanna Schmeer. Prototyping the Post-Anthropocene – Experiencing Possible Future Ecosystems through Conceptual Design

Abstract: Through the example of the design project "Prototyping the Post-Anthropocene," this paper will give an introduction to new approaches to Speculative and Critical Design (SCD), which move from fictional prototypes towards functional conceptual designs, while maintaining a critical stance. First, it will briefly introduce a preliminary study which led to the development of a framework that aims at avoiding two common pitfalls within the context of SCD moving closer towards the concrete and the functional: remaining on a level of insights and losing criticality within the process. Then, it will discuss "Prototyping the Post-Anthropocene," as an ongoing design project situated within this framework. The project includes the design of a series of technological devices, which allow plants and other species to be grown in micro-climates that simulate atmospheric and geological conditions of possible future ecosystems. It allows these species to experience possible future environmental conditions, and an audience to see and taste plants grown in these conditions, as a basis for starting discussions about the future of food, climate change, and geoengineering.

Jessica Broscheit, Susanne Draheimand Kai von Luck. How will we breathe tomorrow?

Abstract: The change in the atmosphere and the related consequences demand to be addressed by means of technological, data-based and ethical approaches. This not only requires access to knowledge, but also an interdisciplinary approach to address complex problems such as air quality in various ways. In order to allow a design-oriented access of relevant issues and technology, Jessica Broscheit developed a fiction-driven workshop to create action space for individuals to participate in creative practice. In the spirit of Anthony Dunne and Fiona Raby, she is interested in using objects for debate as tools to better understand the present and explore potential futures, so that an algorithm-driven world is not only lived in, but also consciously designed. Within the framework of an urban artist research and mediation project in Hamburg, a case study was created with the question "How will we breathe tomorrow?". In this workshop, the participants were instructed to implement a functional and data-based image of the future in order to perceive air quality, by sensing the environment with a tangible user interface. The aim of the workshop was to convey technical concepts and to enhance awareness of the environment through fiction-driven design approaches.

Bio: Jessica Broscheit studied communication design and received a Master of Arts in Next Media. She is currently working as a research assistant at the Faculty of Engineering and Computer Science of Hamburg University of Applied Science in the lab /* CREATIVE SPACE FOR TECHNICAL INNOVATIONS */. Her research focuses on the aesthetics of technology and the perception of data. Since her scholarship in China, Jessica Broscheit has been working on the perception of air. Her aim is to develop intuitive and aesthetic human-computer interactions with tangible interfaces. To achieve this, she works with sensors to visualize the data and make the invisible visible. In addition to her design research, Jessica Broscheit also develops workshops by using tangible interfaces and fiction-driven design approaches.

Links:
https://csti.haw-hamburg.de/
https://www.haw-hamburg.de
http://jessicabroscheit.com/
http://howwillwebreathetomorrow.com/
http://www.ada-hamburg.de/

Hanna Husberg and Agata Marzecová. 'And then air became this number: PM 2.5, imaginaries and datapolitics of air in Beijing'

Abstract: “Do you ever think about air? If you do, how do you come to notice it?”
In recent years Beijing has become infamous for the events of wumai, or extreme health threatening smog, resulting in the Chinese government’s declaration of “war on pollution” in 2014. Building upon Husberg’s 3-month artistic residency in Beijing in 2016, and further research done collaboratively by Husberg and Marzecová, this lecture performance addresses urban air and its substantiation through new technological means, such as the AQI index and PM 2.5 data streams. Framing urban air as a material, discursive, aesthetic, socioeconomic and environmental phenomenon the project explores some of the connections between the imaginaries, the governance and the technoecologies or urban air.

PM 2.5 refers to fine particulate matter smaller than 2.5 microns in diameter, or 1/30th of a human hair. Because PM 2.5 particles are so small, they are able to penetrate deep into our lungs and even pass into our bloodstream. As air, and the particulates it transports, is invisible the exposure of pollutants is dependent on analytical techniques of detection and representation - in other words, our perception of urban air is always technologically mediated. A key aspect of the PM 2.5 parameter, and one that benefited its dissemination, is its "big data" quality. The PM 2.5 number represents a simplified "proxy" of the real chemical nature of the particles, analysed in highly automated, real-time processes, and shared through networked data flows.
Measurements of PM 2.5 enabled imagining and describing invisible changes in air quality, constructing a distinctively new sense of air. In this process, PM 2.5 levels have acquired multiple meanings and encouraged various practices of adaptations, while naturalising the data and the technological infrastructures of the measurement. Because of this, technologies and measurements that enable its perception, interpretation and representation are crucial for understanding contemporary politics or urban air.
Examining how big data techniques change aerial imaginaries, our project explores the multiple, and at times contradictory, implications of the recent increase in awareness about the particulate pollutants. It traces new modalities of governance, and the politics mobilised by PM 2.5 data. While analytical data might seem objective, the project highlights that collection and interpretation of aerial data is context specific, and enable different politics, potentially foregrounding algorithmic forms of governance.

Harshavardhan Bhat. Monsoonal Methodologies

Abstract: Abstract : The Monsoons fool the body, into an ontological assumption of temporal materiality - in what people call rain, where clouds of the air translate to droplets of water, which is then a perceptional substance of the ground. The Monsoons occupy a moving mobility of temporal experience - which as a knowledge technology occupies a unique colonial, cultural, militarised, scientific, techno establishment, the hubris upon which our traces begin.

As Bremner notes "The monsoon is an abstraction, except when you feel it on your head"(1) (2017, pg. 93). So a methodology of Monsoon Air, unlike a study of architectural air(2) (with insides and outsides), toxic air(3) (of vectors and substantiation), anthropological air (poetics and sound), spatial airs (of jurisdictions(4) and lines) amongst other complex air-work poses a particular challenge, to understand. I argue in this paper, which seeks to engage with artistic practices of thinking about the air, that a Monsoon Air methodology offers a very particular opportunity of decolonising(5) air research out of it's 'spheres' by tracing, thinking and becoming Monsoonal 'as a wind that constantly changes direction' in it's very premise and method. So a Monsoon Air methodology and research practice is an attempt (and provocation) to follow matters of Monsoon Air (oceanic, terrestrial, biological, bacterial, precipitative, particular, dusty, infrastructural etc) as Monsoonal - where the machine of understanding transcends the spectroradiometer into a rigorously anti-disciplinary substantiation of relationalities that Monsoon Air as a hyperobject(6) is actually informing us in becoming.

So, in this paper, I ask what kind of machine life(7) can we use and think with in interlocuting Monsoon Air in research and practice? What would the possibility of a Monsoonal Methodology look like?

Bio : Bio: Harshavardhan Bhat is a PhD Researcher with the Monsoon Assemblages project housed at the University of Westminster and is a member of the Expanded Territories research group at the Department of Architecture. He holds an MSc in Comparative Politics (Conflict Studies) from the London School of Economics, a Bachelors in Business Management from Christ College (Autonomous) and is alumnus of the 15/16 Strelka Institute for Media, Architecture & Design postgraduate program on 'the city'. His current interdisciplinary doctoral work is looking at more-than-human monsoonal worlds – aerial, aerosol and circulatory from the situated-ness of New Delhi attempting inter-disciplinary monsoonal questions from the environmental humanities.

References:
(1)Bremner, Lindsay. "On Monsoon Assemblages." Migrant Journal, 2017.
(2) Junya Ishigami - Another Scale of Architecture. Tokyo: Seigensha Art Publishing, 2010.
(3) Shapiro, Nicholas. "Attuning to the Chemosphere: Domestic Formaldehyde, Bodily Reasoning, and the Chemical Sublime." Cultural Anthropology 30, no. 3 (August 10, 2015): 368–93. https://doi.org/10.14506/ca30.3.02.
(4) Philippopoulos-Mihalopoulos, Andreas. Spatial Justice. 1 edition. Abingdon: Routledge, 2015.
(5) Demos, TJ. Decolonizing Nature - Contemporary Art and the Politics of Ecology. Sternberg Press, 2016.
(6) Morton, Timothy. Hyperobjects: Philosophy and Ecology After the End of the World. Univ of Minnesota Press, 2013.
(7) Seshan, Suprabha. "Once, the Monsoon." EPW LII No 24 (June 17, 2017).

Brett Zehner. What Does Meteorology Know About Politics? Machine Weather and Atmospheric Control at its Limits

Abstract: Political theory is rife with concerns about atmospheric control. Peter Sloterdijk, in his book Terror from the Air, speaks about the shift from hand-to-hand combat in the First World War to more diffuse mustard gas attacks. The target was no longer the individual soldier but an indirect ambient target– that of the enemy's environment. The emergence of a dark meteorology militarized atmospheric conditions, turning the respiratory system into an apparatus of self-destruction. This is what Sloterdijk calls the birth of terrorism. Michel Foucault, in his understanding of atmospheric control, described the birth of neoliberalism as the point when technocrats predicted and averted climate shifts which could lead to social unrest. From state terrorism to neoliberalism– the atmosphere is the medium through which hegemony is enacted, perhaps not directly from body to body, but in a diffuse epistemic control over the general environment.
Now, of atmospheric phenomenon, the tornado is the hardest to predict. Tornadoes trigger an entire system of meteorological and social control as severe weather pose numerous dangers to the state. The first weather service in the United States was also tasked to predict "all

possible threats to domestic tranquility." The first computer program was devised to predict the weather. However, Norbert Wiener, mathematician and founder of cybernetics, had his doubts. He claimed that modeling the weather by way of computational physics was impossible, arguing that meteorology would never be an exact science. Yet a decade later, the first successful tornado warning was issued from a military base in Oklahoma in 1948. This was a great breakthrough for computational meteorology and the predictive capacity of the military.
My paper asks two central questions– First, what do the atmospheric sciences know about politics? And second, does environmental excess to governance inevitably feedback into systems of control? I will narrate the case study of a severe tornado event in the Midwest region of the United States through the aesthetic politics of scientific evidence, the mobilization of environmental response, and the production of subjectivity within the mediational apparatuses of meteorology. Beginning with the Meteorological prediction of severe thunderstorms, I will study the computational visualization processes and cinematic qualities of weather broadcasting. I will then follow networks of storm chasers, citizen scientists tasked with the protection of the public through new media reporting, as an emergent form of sensory environmental epistemology. At the point of tornadic contact with the built environment, I will theorize the catastrophe as a break in the temporal control of the state. Finally, I will discuss the disaster relief networks who mobilize mutual aid as an experimental political response to environmental contingency.
Despite a multitude of prediction and simulation technologies, infrastructural integrity testing, and the mobilization of forensic sciences used to determine tornado severity, tornado impacts figure a non-human resistance to modes of governance. Through this limit case of atmospheric control, my aim is to formulate a theory of climate mediation, to understand atmospheric science, simulation and scenario-building as joint methods of social engineering.

BIO: Brett Zehner is a PhD student in Performance Studies and Science and Technology Studies at Brown University in the United States. He is currently researching the relation between Art and Meteorology in the production of environmental subjectivity.

Agata Marzecova and Johan Gärdebo. Inbetween atmosphere : technosphere – planetary imaginaries and technologies that produce them

Abstract: Satellites, by providing spatial images, surveillance and communication, are central nodes of the global technological networks (technosphere). Hidden from the view, somewhere in the outer atmospheres, they are invisible. However, their opacity is not only in the physical distance. In contrast to the iconic and omnipresent imaginary of Sputnik, the vast networks of satellites have been always hidden, first protected by military laws, and later by their privatisation by large intra-national corporations. Whether due to state deregulation, military, or corporate secrecy, the information about metal extraction for building the satellites, distribution, or the full scope of satellite programs have never been publicly accessible. These military and yet corporate objects captured the imagination and imaginaries of the world. Remote sensing produces data layers for the monitoring and management, creating an awareness of Earth and its atmosphere as a globalized, interconnected, environment. Paradoxically, the orbiting satellites provide the means by which Earth and its

infrastructural networks can be known as a planetary phenomenon. The top-down gaze that we practice in our daily navigations, view seemingly from no-where, changes our being in the world, whether one willingly participates or not. The increasing reliance on satellite imagery increases the number of satellites launched and with them the amount of debris orbiting Earth. The increasing amounts of satellites required for the data collection have also polluted their own orbital environment, beyond every imagination of the first visionaries of space travel and space engineers. Technological expansion of satellites is rooted in the contingencies of earthly geopolitics and the continual breakdown of technology—in this instance as a space debris layer that forms in orbit around Earth. The more we want to know about the planet, the more we implicate in the nearly exponentially growing satellite network system. Equally, the increasing density of satellites moving at high speeds increases the risks of triggering the massive cascading collision, an orbital domino effect that may render the global technological networks unusable (so-called Kessler syndrome). The risk of self-exclusion seems to be part of the system. Should an orbital-scale Kessler syndrome occur, large parts of the technospheric networks in orbit and on Earth will fail to function, potentially also severing the epistemological and ontological provisions through which the orbital technologies enmesh in our lives.

Michal Krawczakand Agnieszka Jelewska. Breath in, breath out: the dark ecology of atmosphere.

Abstract: The "uncanny" state of atmosphere has become intrinsic for our research (on both scientific and artistic levels) in the process of designing most of our work: including an interactive installation called "Post-Apocalypsis" (2015), a speculative design project called "Antropogenitus" (2016). We would like to share some ideas that became constitutive for our concept of data sonification as a machine of affective cognition of weather states. The audiosphere of "Post-Apocalypsis" that surrounds the viewers was woven from real-time weather data collected from selected points on Earth, such as Los Alamos, Fukushima, Chernobyl, where the local and global, technological and "natural", scientific and political spectrum of weather were intertwined in a catastrophic state. In the installation, participants immersed in the weather of sonified data are directly incorporated into this dark ecosystem. Therefore, the space of the installation undergoes territorial dispersion and makes participants experience the effect of perceptual extension. In the installation, there are also hybrid objects - technologized trees - communicating through interfaces of bone conduction. Errors and electronic glitches in the act of communication between spectators and techno-natural objects, together with dynamic sonified weather, change, creating potential, but at the same time, real space for the affective cognition of "constant planetary crisis".

BIO: Agnieszka Jelewska, dr., hab., professor at Theater and Media Arts Department (Adam Mickiewicz University) in Poznań, Poland. From 2011 she has also been a director and co-founder of Humanities/Art/Technology Research Center at AMU (artandsciencestudies.com) and a member of the research and art collective Dead Baitz. She has given lectures at a wide range of institutions, including Kent University in Canterbury, Folkwang Universität der Künste, Essen, Harvard University. She is an author of several books and many articles from the fields of environmental humanities, experimental practice and collaborative work connecting art, science and technology, idea of laboratory as the global cultural and political

project. She is also a curator of art and science projects, such as Transnature is Here (2013), Post-Apocalypsis (2015), Anaesthesia (2016) Arthropocene (2017).

BIO: Michał Krawczak, PhD, associate professor, Deputy Director of Theater and Media Arts Department (Adam Mickiewicz University in Poznan, Poland), co-founder of H/A/T Research Center at AMU (artandsciencestudies.com) and a member of the research and art collective Dead Baitz. He is also the head of the Stanislaw Lem Laboratory for Experimental Media at AMU. Author, designer and curator of art and science projects, such as Transnature is Here (2013), Post-Apocalypsis (2015), Anaesthesia (2016) Arthropocene (2017). He was awarded a Golden Medal for the sound design for the collective interactive installation Post-Apocalypsis (2015) at the Prague Quadrennial of Performance Design and Space. His main fields of research are: media and performance art, ecology of sound, social robotics, artificial intelligence and technological natures.

Dehlia Hannah. Airs Apparent

Abstract: Proposed as the opening paper and theoretical introduction to the sub-theme Machines of Atmospheres, this paper attends to how slippers and diaphanous notions of air, atmosphere, clouds, are operationalized and granted fixed meanings through technological apparatus. Atmospheric phenomena, its qualities and compositions, are to a large extent made perceptually available through scientific instruments, imaging technologies and information systems. Air surrounds and permeates our bodies, buildings, and cities; its flow is regulated by a patchwork of technologies and natural processes: wind, breath, windows, pumps, vents, pneumatics, air locks, etc. Across these spaces air carries particles, bacteria, heat, smells and information; on the wings of gases travel messages, memories, and miasmas. Air is an aggregate and a carrier; atmosphere at once an object and a background condition. This paper explores how airs and atmospheres appear—and disappear—by examining a collection of historical and artistic examples of measuring devices that yield ambiguous readings and meanings. Drawing on the methodologies of historical epistemology and anthropology, (for example, Jan Golinski's study of the barometer's migration in the eighteenth century from the laboratory to the bourgeois parlor and Tim Choy's study of air quality ratings), the paper foregrounds the cultural and scientific work of negotiating the function of new instrumentation as a crucial dimension of every historical episteme.

With such considerations in mind, the appearance in contemporary art of a proliferation of real and figurative scientific instruments for detecting, measuring and imagining atmospheres assumes particular significance. Beginning with Andrea Polli's by now classic work in this field, Particle Falls, which was exhibited as part of the Chemical Heritage Museum's 2014 exhibition Sensing Change, I consider how artists are intervening in the calibration of the human sensorium to laboratory instruments. In the context of the museum's archives and permanent exhibition on the history of chemistry, these artworks both extend and question the notion that scientific instruments render an invisible world transparent and intelligible. With the realization that human activities have irrevocably changed atmospheric and geological conditions in the era we may come to call the Anthropocene, it becomes imperative to track our modes of habituation and acclimatization to an increasingly turbulent world. This

process begins, this paper argues, by noticing how our quotidian experiences of air and atmosphere as well as our modes of imagining the future are modulated by encounters with sensing devices and information that alternately reinforce, antagonize and baffle our perceptual habits. What we need, I contend, is not merely an increase in devices for making the invisible visible, but the cultivation of dynamic and responsive modes of sensing airs to come.

Karolina Sobecka. Machine for Making the Future of the Air

Abstract: A Machine For Making The Future of the Air is a project that brings together experimentalists from various fields to work in interdisciplinary groups on proposals for experiments on the material and the imaginary of the air, atmosphere and the climate. The project started with an event that mirrored a workshop on solar geoengineering held at the Institute for Advanced Sustainability Studies in Potsdam on September 7-8, 2016.

In addition to producing an alternative list experiments, the mirror events aim to be a reflection on the process of experimentation, its design and governance. They broaden the group of experimentalists to include artists and practitioners from other fields, and aim to explicitly contrast imaginaries of the future coming from different fields of inquiry. The collaborative work of designing experiments is performed in public, as a kind of experiment in experimentation. Prior mirror events will be presented in this talk and a short experimental design session will be conducted.

Anette Vandsø. Plants as Machines of Earth Atmoshere: How remote sensing and big data regarding the chemical composition of the atmosphere change our apprehension of green nature.

Abstract: This presentation will explore how technologies based on remote sensing and collection of big data concerning the atmosphere's chemical composition, impact our apprehension of the terrestrial environment and in particular our relation to plants.
Without doubt global climate changes has brought about a hitherto unprecedented focus on the intimate relation between plants and air, as trees and plants are now used as a CO2 reducing/O2 producing machines of atmosphere; politicians make goals to plant more trees and cityplanners and architects aim a re-naturalizing our cities to improve local and global climate.
This presentation will suggest that not only does remote sensing 'impact' our concern for or ideas about the world, rather it constitutes it.
I will explore this post-phenomenological statement with a tentative analysis of how aesthetics (that which is pertaining to sensing, remote sensing, doubling of perception (Virilio)) is related to epistemology and ontology (techno-ontology, object oriented ontology) in the Planthropocene (Meyers), and indeed also how it relates to ethics.
The presentation will take it's offset in a suggestive analysis of Katharina Grosse's 'Asphalt Air And Hair' (2017) - the white and pink painting of the Memorial Park near the queens castle in

Aarhus. With this concrete intervention (Kester) in a specific socio-ecological site, Grosses excavates both past and future layers in the human-nature relation: From nature as a representation of the power of the ruler, to the newer perceptions of plants as air-improving technologies. Perhaps the invention reveals are more fundamental techno-ontological status of 'nature'? And perhaps the abstract painting on the site as a canvas also points towards the possibility of an aesthetic relation to nature where it is perceived as a 'zweckmässigkeit ohne zweck', as Kant would have it; a purposefulness without purpose.

Christian Brems. In the Sky of Tomorrow: Artistic Investigations Catalysing Machines for a New Human-Weather Connectivity

Abstract: The history of meteorology reveals a trajectory towards a data-driven, distanced logic. But today's sky is changing: The new scientific area of 'event attribution' now correlates how human-induced climate changes impact individual weather events. It emerged within a meteorological record-breaking decade and is grounded in the realization that the future will include even more severe weather extremes due to human agency. However, as the future of meteorology seems only to strengthen the rational ontology and point-of-view using drones, sensors, radars, satellites, and supercomputers, the arts have an opportunity to address weather's affective, sensitive and conceptual perspectives.

It will be suggested that we have entered a fourth meteorological period termed 'Meteorology of Connectivity': Emerging in the advent of event attribution, this period aims to redefine a contemporary human-weather connectivity grounded in instrumenting new embodied interactions within a shared human-weather lifeworld. It will re-actualize weather instruments from the previous centuries revealing now unseen artistic and aesthetic qualities. From this I will speculatively suggest new possible weather instruments and machines made for the period 'Meteorology of Connectivity'. It is thus explored how new machines can be developed which might help cognitively comprehending and re-sensitizing body and mind to tomorrow's sky.

BIO: Christian Brems is a Danish artist and researcher who has exhibited internationally since 2010. With a BA (hons) in Fine Art from London (UK) and a MA in Visual Culture Studies from University of Copenhagen (DK), his work intertwines academic writing and artistic production. A principal focus in both research and practice are topics and conceptions of the changing human relationship to the natural world in the Anthropocene. Specifically, how artistic and speculative works might produce novel agencies towards and within it.
These investigations are primarily explored through photography, writing and filmmaking - and the Third Spaces of meaning that emerges between the mediums. Spaces that Brems continuously develop and explore throughout his practice.

Erich Berger. (Deep) Time Machines, artistic vehicles and the scope of the real

Abstract: The realization that anthropogenic impact is leading to the transformation of the earth system which follow through into deep futures is not only discussed within the natural sciences and the humanities. The anthropocene and with it a strong interest directed towards

deep time and matters of geology and how they intersect with technolology and ecology surface increasingly within contemporary artistic practices. At its core artists look at the stony matters at hand and the origins and consequences of intentional and unintentional human impact and its politics. Thereby they enter the terrain of planetary deep time and deep futures. The processes and scales involved present a challenge to artistic strategies who often enough aim to down-sample and scale the vastness and inhuman complexities of the planet and time to suit human experience. In the talk the author will explore and argue for artistic approaches, which aim for the opposite, to scale art to the scope of the real (paraphrasing Benjamin Bratton 2016) and to find strategies to let processes and materials articulate themselves. Amongst other examples the authors work INHERITANCE will serve as one entry point for discussion.

BIO: Erich Berger is an artist, curator and cultural worker based in Helsinki. He directs the Bioartsociety creating interdisciplinary encounters between art and science. His artistic interests lie in information processes and feedback structures, which he investigates through installations, situations, performances and interfaces. Throughout his artistic practice he has explored the materiality of information and information and technology as artistic material. His current interest in issues of deep time and hybrid ecology led him to work with geological processes, radiogenic phenomena and their socio-political implications in the here and now. Berger has exhibited widely in various museums, galleries and major art events in Europe and worldwide and his works received several awards and prices.
http://inheritance-project.net
http://randomseed.org

Theun Karelseand Ian Ingram. Machine Wilderness / Random Forests

Abstract: Machine Wilderness / Random Forests - Theun Karelse and Ian Ingram.
The idea of the wilderness is a multifaceted concept. To some it means an area of self-willed nature, to others areas of unproductive land. To others it represents a safe-haven away from governments and economic pressures, like a political free zone. The general perception seems to be that there is less of it now.

The Industrial Revolution has shifted power-relations between humans and other species dramatically. If Howard Wilson calls the age of mass-extinction ‘the Age of Loneliness’, then our technological presence in the landscape has been shaped by a ‘Technology of Loneliness’. In many ways our technologies are not developed to exist in these complex environments.

Machine Wilderness is a programme that proposes ways of imagining our technological presence in the landscape based on more balanced power relations. Not only because we need harmonising technologies urgently, but also to liberate our imagination of technology from this lonely perspective. We share the planet with millions of non-humans, varied beyond imagination, but our design practice includes machines address the needs of only one species, a particular kind of ape. The programme radically expands the prototyping of technology beyond engineers. Humans don’t have much experience with developing technology that relates to complex ecosystems. Few of us may even experience living in complex ecosystems

on a daily basis. So we all share the same starting point. Central to the programme are in-situ prototyping sessions, moving beyond controlled lab environments, to deal with the reality and complexity of our landscapes.
In the ten days before the conference Ian Ingram, Theun Karelse, Shah Selbe and Antti Tenetz will be working in the Kilpisjarvi biological research station in the context of the Random Forests programme that Theun is setting up. This programme investigates what the arrival of AI means for our relationship with our landscapes: until recently the ability to make sense of the environment was limited to biological beings, now machines are starting to blur those lines. At the Politics of Machines conference, we would present a short paper with some of the initial questions in the programme and some of the artistic experiments undertaken at Kilpisjarvi.