



FEM eeting/

BOOK OF ABSTRACTS. 2018.

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## FEMeeting: Women in Art, Science and Technology

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## FEMeeting: Women in Art, Science and Technology

Women are today a visible presence in international festivals and conferences in Art & Science, either as faculty, curators, artists, scientists or having an interweaved role. The balanced numbers between genders is an undeniable phenomenon and consequently this is an interesting time to reflect on the status quo of women in the field exploring the intersection of science and art.

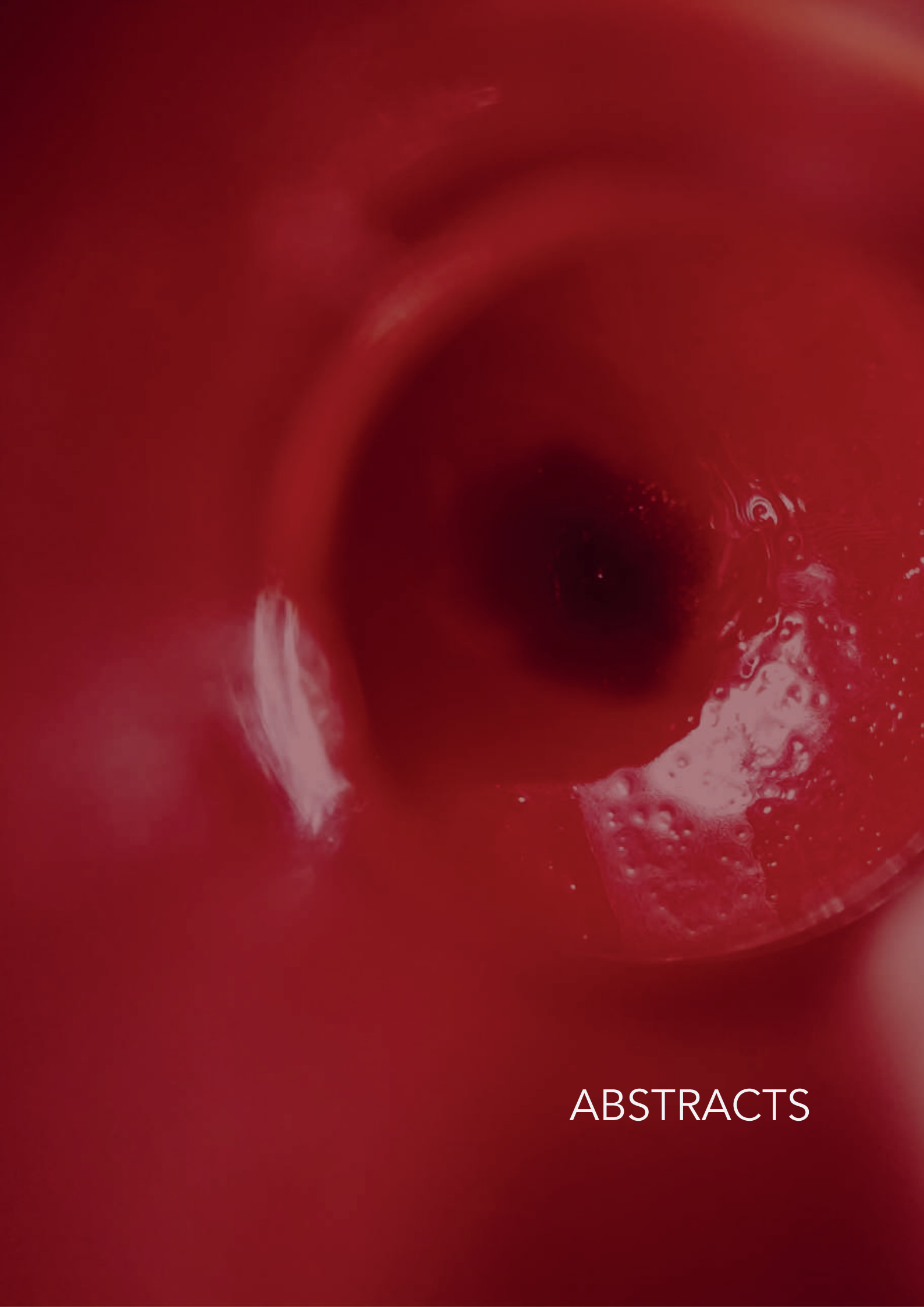
The concept of woman might be considered as a challenging one as it is nonconsensual in its multiplicity of roles and arousing cultural imaging. In her philosophical work *The Second Sex*, published in 1949, Simone de Beauvoir wrote: "The word "female" evokes a saraband of images: an enormous round egg snatching and castrating the agile sperm; monstrous and stuffed, the queen termite reigning over the servile males; the praying mantis and the spider, gorged on love, crushing their partners and gobbling them up; the dog in heat running through back alleys, leaving perverse smells in her wake; the monkey showing herself off brazenly, sneaking away with flirtatious hypocrisy. And the most splendid wildcats, the tigress, lioness, and panther, lie down slavishly under the male's imperial embrace, inert, impatient, shrewd, stupid, insensitive, lewd, fierce, and humiliated".

More recently, the artist Mary Maggic would post on her Facebook profile, referring to the article "Five Queer People on What 'Femme' Means to Them" published in vice.com (Dec 2017): "yes there are so many manifestations of femme... in my case I take it as having a cunt and a full womb as something to both be aware and to subvert, as both a femme labor and a femme joy, not to be solely defined by my body parts and babe-bearing, to live as non-binary non-normative WITH my cunt not despite having, to refuse the patriarchy, to care for the non-human, to care fucking CARE and celebrate that".

Therefore, contributions to the conference are welcome from individuals who identify themselves as women, independently of their sex.

FEMeeting aims is to bring together women from all over the world to share and disseminate their projects in the arts, science and technology research. The organizers of the conference wish to provide the opportunity for the gathering and presentation of artwork and research experiences in the unspoiled environment of southwest Portugal. The aim of the conference is to create a network of collaborative interactions, and to disseminate projects being undertaken by women worldwide. We anticipate, as a result, to contribute to the development of art-science research methodologies and to the growth of cooperation bringing different geographies closer.





ABSTRACTS





## **ANA BALEIA**

Ana Baleia is graduated in Fashion Design. She worked in Lisbon with several designers and fashion brands. After a brief period in Cape Verde, designing for a local brand, she returned to Portugal in 2008 and settled in São Luís. She is a founder and member of Ateneu do Catorze, an artistic and cultural space, where her studio is located. Her work includes costume design, product design and visual art, as well as collaborations with performing artists, theatre companies and product brands. Her interest in a more organic and tactile approach to textile media has led her to explore craft techniques and handiwork including sewing, ripping, painting that she uses to create wearable stories.

### **Ateneu do Catorze**

The Ateneu do Catorze is an artistic and cultural space founded in 2017, in the town of São Luís, Alentejo, Portugal. Based on the facilities and history of an old family shop and dwelling, once inhabited by the merchant known as Mr. Catorze, this space is currently divided into different work areas, assigned to various artists, who seek to develop their artistic practice, but also promote cultural initiatives, as a way of involving the community.

By reformulating its old borders and divisions, this cultural pole intends to receive resident artists, among them the co-founders Ana Baleia, Sérgio Fernandes and Maya Fernandes Kempe, artistic residencies, guests and sporadic events, which bring together different practices, artistic languages and nationalities.

In this context, a space for sharing between artists and the community is created, in a regime that goes from closed doors to the participation of all, providing exhibitions, concerts, performances, artistic installations, street theater, different artistic workshops among other cultural activities, which seek to weave an experimental way of communication, unique in the municipality of Odemira.

## **CRYSTAL KERSHAW**

Crystal Kershaw is an English cross-disciplinary artist and member of artist collective Ateneu Do Catorze, São Luis, Portugal; her work includes sculpture, painting, site specific installation and interior design. She studied Art & Design at Camberwell College Of Arts (UAL) and English Literature at King's College London; mainly self-taught she has continued her artistic practice while living, exhibiting and teaching creativity led workshops internationally.

## **MAYA FERNANDES KEMPE**

Maya Fernandes Kempe is a ceramist, sculptress, art pedagogue. Founder of espaço azul in Lisbon, worked 9 years in several artistic and educational projects in the museums of Berlin, teaches art pedagogy and ceramic sculpture at the Lisbon based art school nextart. Founder (with Ana Baleia, João Veiga and Sérgio Fernandes) and member of the recent art-center Ateneu do Catorze in São Luis.

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## Narrative Taxidermy

Taxidermy as an exhibitionist practice is a curious form that concerns us when we talk about the interception of a body with its environment and, at the same time, the strangeness that this may provoke. As the research aimed to the use of prostheses is being developed, whether they are voluntarily inscribed in the body as a way of enhancing their primary functions or either as forms that extend this same bodily organ to its biological capacities through a technical accident, what I am seeing is a curious and notorious distinction between 'what I am' and 'what I have been', as well as 'what I intend to be'. How do these processes occur? And how can we establish connections, created from a fictional narrative and caricaturedly simulated?

When speaking of taxidermy, we find an important parallelism in the use of personal narratives which describes the relationships between 'matter' and 'meaning', and between 'natural' and 'artificial' or even both. This term can be called "narrative taxidermy" and its *modus operandi* is applied as a way of preserving natural elements for exposure; the operational position that finds parallels with an experiential narrative which tends to reposition its own symbologies, such as the use of personal idols, figures and objects, in an illustrative way as an internal operation that immortalizes a distant occurrence in time. It will then, in this metamorphic zone (LATOIR) that we can notice a sort of second life of the body that creates new associations and completely random comparisons. Instead of trying to replicate the real, we reverse the process and operate on a caricature and socially metamorphic form.

Through scientific mechanisms that allow us to caricature what is 'real' we can describe the operation,

distribution and cooperation modes what I designate as a technical body. We realize then that the possible death of that body or part of it, happens not only because of the technological crash (VIRILIO), but is also the key to making it more technically capable and producing personal and concrete utopias. The crash test dummies (BALDWIN) are a good metaphor for understanding this body technicity and we can find in them three states of significance: if on one hand we have a corpse, on the other we have a survivor and finally the dummy, that makes the technical mediation. The dummy is a multidisciplinary being, symbiotic with its environment, previously produced on mechanisms that fabricate it as a simulated response to what a body has to support hypothetically. Thus, we might be closer to the dummy than actually the survivor, and this because the avatar will never die.

### **ANA SANTOS**

In 2014 finished a degree in Multimedia Design and Communication, later going on to Contemporary Artistic Practices at the Faculty of Fine Arts of Porto. Currently resides and works in Lisbon, where develops a PhD in Anthropology at ISCTE IUL. As a Media Artist, works with performance and installation, focusing the work on body technology studies. Has exhibited and participated in several collaborative projects in Europe and South America. The current research links the fields of art, technology and sociology through an accidentally symbiotic assumption among Nature Cultures, resulting in a mediated prosthesis research among artists, scientists and amputees.

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## Wandering Gaze

In the Wandering Gaze project, we aim to explore the relationship between the observer's gaze and a given image, using eye-tracking technology. By making use of magnets and metal shards this interactive installation proposes the suspension of gravity by a hidden force with the experience of a prosthetic gaze that pierces the object of regard. The installation consists of an X-Y plotter concealed behind a framed printed photograph, dynamically positioning a magnet behind the image. While observing the photograph through the viewfinder, the path traced by the viewer's gaze is recorded by the eye-tracking system, and then retraced by the plotter-manipulated magnet. On the front of the image, a cluster of metal swarf follows the magnet, and subsequently, through erosion scrapes away the image surface.

### **ANA TERESA VICENTE**

Ana Teresa Vicente (Lisbon, 1982) is an artist and a PhD student in Fine Arts (Photography) at the Artistic Studies Research Centre (CIEBA), Faculty of Fine Arts, University of Lisbon (FBAUL) with a fellowship by FCT- Foundation for Science and Technology (2013-2017). She completed her Master Degree in Painting in 2011 with the thesis *Body Rondo – The Illusion of Suspended Time*, and graduated in Fine Arts – Painting in 2007, at FBAUL. She also attended several courses on the subjects of illustration, image in motion, ballet, contemporary dance, and photography. She presents her work through exhibitions, lectures, and publications regularly since 2005. She is currently one of the coordinators of the Post-Screen: International Festival of Art, New Media and Cybercultures (Lisbon).

Areas which greater attract the stare of the viewer will be more aggressively eroded, eventually leaving only the "neutral" areas visible, i.e. those areas with less visual information. The shimmer of the metal cluster, concentrated in determined areas of the image, resembles that of a robotic insect, materializing the invisible paths traced by our gaze. This destruction of the photograph will, thus, happen over time, being more prominent in the areas where the visual information is richer. The pieces of metal retain a connection with pre-digital photography itself (gelatin silver processes, tintypes, daguerreotypes...), but also with the technological apparatuses (that make use of various metals to construct them; the earth is excavated in search of these materials, changing its landscape, atmosphere, and polluting its air).

As such, we intend to allude to the strong connection between photography and the gaze, particularly at a time when the paradigm with regard to production, distribution, and relationship with the images is in transformation.

I photograph myself exploring the natural world through my physical form. Much of my self-portrait work explores an archetypal understanding of self within tamed, ruined and untamed landscapes. Carving out identities with light and shadow, I construct moments that invite viewers into a fable-like arc of their own choosing.

The final image should lure viewers into creating their own narratives, simultaneously ushering in a brief respite from reality.

### **ANNA ISAAK-ROSS**

Anna Isaak-Ross holds a BFA from the School of Visual and Performing Arts at Syracuse University.

After working with several artists at Amorphic Robot Works in New York City, Anderson Ranch Arts Center in Snowmass, Colorado, and as an intern to Juan Quezada in Mata Ortiz, Mexico, she moved to Massachusetts. She has been a resident artist at Cultivamos Cultura in São Luís, Portugal. At present, Anna is the Studio Manager of the Art & Design Department at the University of Massachusetts, Lowell.

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## In the Service of Chance – Exploring Feminist Practices in Western Art Music

Konstmusiksystrar (Sisters in Art Music) is a Swedish network that works to increase the representation of women and transgender people in the realms of contemporary art music and sonic arts. In spite of Sweden's progressive attitude in matters of gender equality, the amount of music performed in musical institutions written by women composers is less than 4%. Since 2014 Konstmusiksystrar has worked tirelessly to challenge the hierarchies in our field and heighten the visibility of women composers. Currently, we are working on the project I Slumpens Tjänst (In the Service of Chance), a pre-study which aims to investigate the processes of selection in the programming of art music. The purpose of the project is to develop new strategies and methods for programming of art music. As part of the project, we collaborate with several musical institutions, organizations, and ensembles in an effort to map their current processes of scheduling. Together, we also explore how the concepts of chance and lottery could be implemented as working methods for programming. The purpose of this, of course, is to broaden the variety of gender, age, and race, but also to challenge the archaic conception of "highquality" in our field. In this presentation, we will propose the concepts of chance and lottery as game-changers in how we think about selection. In this cultural context, the concept of quality is

often defined in general terms without stating what it actually means - What is artistic quality and according to whom? How much is based on chance already in its current state? If the selection is based on the amount of artistic quality a certain piece or composer is believed to possess, we believe it is at least called for to have a discussion about what it means. Based on our experiences of working in the industry, we would argue that most people, until this day, associate "high-quality" with the idea of the Great (Male)

Genius. Working as a collective of women, we oppose this image through our mere existence. Many people are willing to acknowledge the liaison between (the lack of) equality and the ossified programming of Western Art Music. Still, taking a risk on different ways of programming seems to be a sensitive subject. Based on our experiences of working in the Service of Chance, we will show how the provocative nature of randomness, can function as an effective feminist strategy to erupt the long-time fixed foundation which the Western Art Music lies upon.

### **ANNA JAKOBSSON**

Anna Jakobsson is an artist-researcher, stage-director and producer based in Stockholm. Her practice expands over the fields of contemporary performance, opera and theatre and is distinguished by an interest in feminine narratives and non-hierarchical working methods. Anna's work often explores different modes of audience participation and she wants her work to be both gentle and challenging in once. She holds a MA in Performance Practice as Research from the Royal Central school of Speech in London. Anna also studied stage directing for opera under the supervision of prominent stage director Kasper Holten, former Director of Opera of the Royal Opera House in London. Since 2017 she is the producer of Konstmusiksyster (Sisters in Art Music).

### **ROSANNA GUNNARSSON**

Rosanna Gunnarsson (SE) is a composer and sound artist based in Stockholm. She has a bachelor's degree in composition from the Royal College of music in Stockholm and studied under Pär Lindgren, Marie Samuelsson, Per Mårtensson and Henrik Strindberg. Her main fields of work are contemporary music, both chamber and larger ensembles/orchestras, as well as electronic music and sound installations. One of her latest works is an audio-visual installation at Stockholm Arlanda airport, chronicling a Swedish surfer's experiences of riding waves in the Baltic sea. She is a board member in Konstmusiksyster (Sisters in Art Music) since 2017.

<http://www.rosannagunnarsson-music.com/>

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## Of ants and women: an evo devo performance on social life

In this presentation, I will discuss the creation of *The Colony*, an in-progress art-science performance dealing with evolutionary and developmental biology themes slated for premiere in Spring 2019. The performance examines the dynamics of sisterhood and the evolution of communication in two of the most social creatures on earth: humans and ants. In the performance, as Mona struggles to reconnect with her estranged sister Hennie, she turns to the ant colony for inspiration. With more than 500,000 ant sisters migrating, raiding, and even reproducing as one superorganism, an army ant colony appears to Mona as the paragon of successful social existence.

Informed by scientific research on the evolution of ant colonies and ant communication, *The Colony* ventures into speculative fiction, and will include projected animations and imagery alongside live spoken and musical performance. Writer and literary editor Emma Komlos-Hrobsky and I collaborated to develop the story and script for *The Colony*. I am currently developing the visuals and music for the performance. We have had the unique opportunity to draw imagery and research for *The Colony* from the Army Ant Guest Collection (AAGC) housed at the University of Connecticut, a world-class natural history collection amassed over more than fifty years of field research by Carl W. and Marian E. Rettenmeyer (partners in life and in work). The AAGC recently received NSF funding for the preservation and curation of the collection's more than 2,000,000 specimens and 5,000 Kodachrome slides. As part of developing *The Colony*, I have gained access to the AAGC and I have worked closely with the AAGC curator and manager. I acknowledge the generous support of the University of Connecticut School of Fine Arts Dean's Grant, the Office of the Vice President for Research, and the funded University of Connecticut Academic Plan Proposal "AntU: How



army ants and their guests can inspire synergy across science, fine arts, and the humanities” for helping to support the development and production of *The Colony*.

Through my work, I aim to kindle a sense of awe and understanding of our diverse biological world, while also reflecting on the human condition. *The Colony* will be a theatrical performance that illuminates the awe-inspiring dynamics of army ant colonies, while using the ant colony as a lens for understanding both successful and failed human communication and the bonds of sisterhood. In my presentation about creating *The Colony*, I will share my own process for collaborating across the arts and sciences, and for integrating scientific research within fictional narratives.

## **ANNA LINDEMANN**

As both an artist and educator, Anna Lindemann is devoted to integrating art and science. Her work combines animation, music, video, and performance to explore the emerging field of Evo Devo (Evolutionary Developmental Biology). She graduated magna cum laude with honors from Yale with a BS in Biology, where she worked in Dr. Antónia Monteiro’s lab conducting research on genes involved in the patterning of wing eyespots during butterfly development. She received an MFA in Integrated Electronic Arts from Rensselaer Polytechnic Institute, where she was awarded the DeWitt Wallace Fellowship, the Ellis and Karin Chingos Graduate Fellowship, and the Rensselaer Graduate Fellowship. Anna’s work has been presented at such venues as the Center for Media, Arts, and Performance, ATLAS Institute, University of Colorado at Boulder; Imagine Science Film Festival, New York, NY; ISEA, Vancouver, Canada; Experimental Media and Performing Arts Center, Troy, NY; KLI Institute for Theoretical Biology, Klosterneuburg, Austria; EvoMUSART, Parma, Italy. She is currently Assistant Professor in the Digital Media and Design Department at the University of Connecticut where she has pioneered curricula integrating art and science, including the courses “Animating Science,” “Scientific Visualization,” and the special topics course “AntU Traveling Exhibit Development.”

[www.annalindemann.com](http://www.annalindemann.com)

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## Mist Collector – Art and Science innovation project

Access to clean drinking water has become the world's biggest issue. In many parts of the world access to water is very scarce, especially in regions where groundwater or rain is not available. Because of climate change, fresh water sources are diminishing. The Mist Collector project addresses the issue of diminishing sources of fresh water in the world and looks at alternative methods of obtaining water from fog. Traditionally a net mesh has been used in this process being placed in the path of the wind. However this method produces clogging and presents a problem of drainage.

In our artistic and scientific research we discovered that a change of paradigm was necessary to obtain large efficiencies; thus, we have been focusing on a forest of flexible threads replacing the standard meshed net and exploring new shapes and structures. Our investigation has concentrated on understanding the principles of water droplet coalescence on parallel fibres, production of artificial fog and on the development of aerodynamic structures that could improve water collection. Our art and science collaboration can represent a model of a 'spontaneous cooperation', described by Buckminster Fuller as a necessary pillar of sustainability "... to make world resources work for 100% of humanity".

In this oral and visual presentation, I will use the Mist Collector project as an example of a 'spontaneous collaboration' reference by Buckminster Fuller in his Design-Science concept, in which design is not a fragmented notion applied to specialized professions or disciplines but a creative process that lies at the heart of any human activity. In fact according to architect Michael Ben Eli (2010), all aspects of human activity are manifestations of the design process. In his lecture "Architecting the Future", Eli

(2010) describes design as a process of realizing intentions that start from comprehensive goals (that come from experience) taken on the production and has “ensured that we could not simultaneously concentrpath of action towards realization, accompanied by the step-by-step (systematic) process of constant evaluation (Ben Eli, 2010). In the design process there is no such thing as failure because every failure becomes a departure point for new adjustments and resembles a spiral of evolution. Eli asserts that design suffers when its intentions are narrow, when, as in our current biopolitical system of capitalist democracy, we separate (banish) ourselves from the larger orders of life in the universe. Over centuries the tendency of narrowing focus has created specialized fields of production and has “ensured that we could not simultaneously concentrate on both the big and the small, the real and the symbolic, the human and non-human, the scientific and the ‘vécu’.” (Latour, 2004) Focusing on either the background or foreground we are not able to look at the whole picture at once. Narrowly defined intentions miss the sense of purposefulness such as “taking care of progressively more of what we can.” (Ben Eli, 2010).

## **ANA REWAKOWICZ**

Ana Rewakowicz ([www.rewana.com](http://www.rewana.com)) is an interdisciplinary artist born in Poland, living and working in Montreal (Canada) and Paris (France). She received her BFA from Ontario College of Art and Design, Toronto and MFA from Concordia University, Montréal, Canada and is currently pursuing her PhD in art and science at the École Polytechnique in Paris. Known for her stimulating, interactive, inflatable works that question our relationship with the environment, she is concerned with issues of sustainability and technology as an opportunity for social transformation. Presently her art engages in growing environmental complexities with a particular focus on water. She has works in permanent collections of the Musée d'art contemporain in Rome, Italy (MACRO), Musée d'art contemporain de Montréal, Musée national des beaux-arts du Québec, Musée de Joliette, and has exhibited extensively in Canada and abroad, including Copernicus Science Museum (Warsaw, Poland), Bienal del Fin del Mondo, (Mar Del Plata, Argentina), ISEA 2014 (Dubai, UAE), Foundation Stiftelsen 3,14 (Bergen, Norway), Anchorage Museum (Alaska, USA), Pori Art Museum (Finland) and La Maison Européenne de la Photographie (Paris, France). Her nomadic artwork SleepingBagDress is featured in "Microtopia", a documentary film by Swedish director Jesper Wachtmeister about micro dwellings, downsizing and living off the grid.

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## Planting a Seed in the Urban Post Industrial Landscape

Transformation through creative action! This is the very real passion of thousands who have engaged in grassroots collaborations at The Sanctuary for Independent Media in North Troy, NY over the past decade. Our non-profit organization, Media Alliance, was incorporated in 1980 at the dawn of the independent video movement. Now, as then, we strive to make the future now, by creating and supporting an engaged community of artists and activists.

North Troy is one of the most economically devastated neighborhoods in the region. Like Detroit, we are taking an area abandoned by capitalism, and building something out of the ruins... positive and hopeful. Shrugged off the malaise that's been pushed on people, creativity makes it possible to do things not valued in commercial world which defy the bottom line of the almighty dollar. Through arts and culture, we have power to shift the narrative: from negative class/ racial stereotypes to giving voice to local hero's positive stories, from sacrifice zone to destination spot, from gentrification to neighborhood development.

We work to be a resource for voiceless North Troy and other Capital Region neighborhoods, while connecting the Upstate NY region to a global community.

As our neighborhood ambassador "Uncle Mac" says, "*It's the we, not me.*" Through creative action and participatory design, we can make a microcosm for post-industrial landscapes in era coming after capitalism.

I will share strategies to *create infrastructure* to showcase independent voices – with intersections of bio-art, independent media and cultural action. Our internships, residencies and

workshops teach multimedia skills to support local voices. SanctuaryTV and our new radio station WOOC LP 105.3 FM Troy (which covers the estuary area on both sides of the river including Troy and Cohoes) offer powerful education and outreach tools. Our program NATURE Lab (North Troy Art, Technology, and Urban Research in Ecology) is an umbrella for ecological activities. Our outdoor campus is a living learning laboratory: Freedom Square for events, five lots and a carriage house for gardening, and a building for bio-art residencies and the proposed Troy Citizen Science Center.

In our neighborhood in New York State in the U.S., 69% of children younger than 12 have a strong commitment to our local low-income youth. Our program Uptown Summer is an annual series of arts and sustainability activities in which neighborhood teens work as media producers, urban gardeners and artists. Youth Media Sanctuary is a community media arts project designed to teach youth multimedia skills to help develop urgently needed independent local voices in our economically devastated neighborhood. Our mosaic art stage on Freedom Square offers an urban cultural and spiritual oasis and brings diverse communities together sharing art, food and music.

Our programs reflect our mission in action, including presentation and workshop programs, exhibitions, urban gardens and public art. Imagine a daisy – with petals offering strategies for creative partnerships. Each petal is a program – media production, events and culture, arts and education, urban gardening and sustainability. We grow community from the hyper-local up, with limited resources yet extraordinary “people power.” We’ve developed our spaces and programs to empower people to have a **voice**.

## BRANDA MILLER

Branda Miller is an internationally recognized media artist and educator, dedicated to explore new visions, use media for social change and support independent voices. With three decades of experience in youth media, community media, media arts and education, she seeks to expand documentary form through participatory design. Professor Miller is a co-founder and Arts and Education Coordinator at The Sanctuary for Independent Media in Troy, NY. She has produced diverse events and educational workshops, with an interdisciplinary breadth including media and film, photography, public lectures and public art. She has developed and overseen dozens of community arts and education initiatives engaging teens, community members and professional artists, with a focus on the environment, sustainability and local voices. A tenured Professor of Media Arts in the Integrated Electronic Arts Department at Rensselaer Polytechnic Institute (1991-2015), she played a key role in the shaping and development of the graduate and undergraduate interdisciplinary arts programs. Branda Miller is also an Emmy award-winning editor who has worked extensively in the media industry of Los Angeles and New York City. Professor Miller’s media art works have been screened at festivals, museums and exhibitions, broadcast nationally and internationally.

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## Paratactical Feminist Curating in Istanbul

In the last two decades, it became obligatory to explore tactical ways of making transdisciplinary research alongside, beside and beyond (-para) modern institutions of techno-science and contemporary arts. Uber-capitalist control of universities and contemporary art institutions has been drastically increased via corporatism. Such control has been accompanied with disciplinary orthodoxy, intellectual bigotry, precarity, cacophony and political-economic sanctions. Hence, transdisciplinary researchers, who identify themselves as or with women, independently of their sex, found themselves in an existential struggle. Their struggle has also been augmented with the extinction and destruction of socio-ecological commons.

This paper aims to introduce the emergence of paratactical curating from a contemporary feminist perspective. Curating, here, refers not only to its organizational aspects within contemporary arts or digital platforms. Reusing its etymological foundations, such as caring and curing, paratactical curating launches an open laboratory for making alternative knowledge and power production by collaborating with media artists, digital activists, makers, and media theorists, who challenges to care and cure commons from a critical and subversive positioning.

In these years, public understanding of gender identities along with techno-scientific controversies were reprogrammed and managed by the knowledge / power network of corporate media, law, local authorities and government. Violence on women and LGBT individuals has intensified and normalized by justifying hetero-normative accounts of political-economic rationales. Political authorities stated their biased views on techno-scientific controversies and this has led to the decrease in funding for the transdisciplinary research of techno-scientific controversies within

academic and artistic fields.

Having an STS background and a specialization in public understanding of science and technology, it became important to explore the tactical operations of these power networks by adopting open source culture. Curating, as a transdisciplinary research practice, emerged as an intervention in increasing the democratic participation and public understanding of techno-scientific controversies.

Appropriating the cacophonous obfuscation tactics of these power networks, paratactical curation was developed as a way to explore hidden operations of uber-capitalist associations. Based on literature review and participative ethnographic research findings, this paper aims to reveal the development of paratactical curating in Istanbul from a contemporary feminist perspective.

### **EBRU YETISKIN**

Ebru Yetiskin is an Istanbul based independent curator and media theorist who works on the interaction of sciences, technology, art and politics. She has been a full-time researcher and lecturer in Istanbul Technical University since 2003. She studied cinema (BA) in Istanbul University, Science, Technology and Society (STS) in University of Louis Pasteur and Istanbul Technical University (MA), and Sociology in Mimar Sinan Fine University (PhD). During her PhD research, she was a visiting scholar in Ecoles des Mines de Paris- Centre for Sociology of Innovation. As part of her research, she curated media art related exhibitions entitled, Cacophony (2013), Code Unknown (2014), Waves (2015), Contagious Bodies (2015), Illusionoscope (2017) and Interfaces (2018) in Istanbul.

She also directed and curated Plugin New Media Section of Contemporary Istanbul (2015). Since then, she focused more on writing and making public talks as well as workshops, such as “Network Politics in Data Driven Worlds” in Akbank Art Center and “Today’s Art: Yet Another” in Borusan Contemporary Museum. In 2016, she edited a book of poetry, “Like The Others,” written by a robot, Deniz Yilmaz; curated its autograph session in Istanbul Art and Book Fair and developed a transdisciplinary curating conception: paratactical curating.

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## Documenting Trans Resistance

In my presentation called 'Trans Resistance' on how documentary film making can help to support, build social movements, and advocate for LGBTQIA\* and disability rights, I would like to show two of my documentaries, 'Leelah's Highway' and 'Frolics Haunt', and discuss my artistic and social justice practice as an embedded, feminist documentary film maker and photojournalist. I focus on prioritizing grassroots voices in my film-making and pedagogical practice at every stage of the production and post production, and during my field reportage. "Leelah's Highway" is a 24-minute HD documentary focusing on trans youth, Leelah Alcorn, who committed suicide in Kings Mills, Ohio at the age of 17. Isolated by her parents in their basement, and forced to undergo conversion therapy by a Southern Baptist minister for six months, Leelah chose to end her own life by walking in front of a semitrailer on the highway near her house, moments after throwing her laptop to the side of the road. A highway cleanup has become a three times yearly event in her honour, organized by Chris Fortin, a fellow Kings Mill high school student. His interview about this cleanup, coordinated in Leelah's name provides a charming testimonial to his memorial outreach as a former Kings Mills Knight student, and as an 19 ally to her name. This documentary follows the path from Leelah's vigil, the recounting of the community who wanted to support her to the resistance of the trans community on inauguration day in Washington DC to the highway clean up in her honour, and ends with Cincinnati Pride, where group in a car float in her name hands out information on preventing trans suicide. "Leelah's Highway" is a very important story for me to discuss as an embedded social movement journalist because it portrays the vulnerability of trans youth from Leelah's point of view, but also, from the point of view as an educator, how the online, and actual, high school community can come together



to protect a teen from social isolation despite the pressures of transphobic state policy and the fundamentalist church in Ohio, which has promoted conversion therapy and trans discrimination. The second short documentary I would like to show is 'Frolic's Haunt', a 9-minute short about a team of passionate volunteers in Toronto, led by Robin Frolic, who has set out to improve accessibility issues in Hallowe'en trick or treating by designing a first-of-its-kind haunted house: one that's not just wheelchair accessible, but accessible for many different disabilities, with its own unique "Scare System". 'Frolic's Haunt' is a home haunt created by a core team of LGBT people with disabilities, where every decision is based on accessibility and social justice principles.

### **ELIZABETH LITTLEJOHN**

Elizabeth Littlejohn is a communications professor, human rights activist, photojournalist, and documentary film-maker, who teaches at Sheridan ITAL in Toronto. She has written for Rabble.ca for the past eleven years on social movements, sustainable urban planning, and climate change. As a running gun social movement videographer, she has filmed internationally. Her articles, photojournalism, and videos have been published widely to document the Occupy and Climate Change movements, LGBTQIA\* rights, and Idle No More, and printed in NOW Magazine, the Toronto Star, and Our Times. She has an unending passion to protest the rise of the right in the U.S. and Canada, and has filmed on the frontline of the queer resistance of Work for Peace during the inauguration, and for five years, the reign of Toronto's notorious right wing ex-Mayor, Rob Ford. Recently she has directed, filmed and produced 'Leelah's Highway', a broadcast half hour focusing on the suicide of trans youth, Leelah Alcorn, and 'Frolic's Haunt', a nine-minute film about a queer, accessible haunted house with its own unique scare system.

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## Reconnect with the canvases of old master paintings

When we look at a painting in a museum our focus is most often on the image and fewer consider what lies beneath: a canvas with a textile weave. Lab O was created by Helena Loermans in 2017 for the study and reconstruction of the canvases of old master paintings and is integrated in her atelier for Handwoven Textiles in Odemira. In this presentation she invites you to join in her journey of research on the canvases used by Spanish and Italian painters in the XVI and XVII centuries. On view will be her Handwoven reconstructions of the diamond pattern textiles seen by El Greco before starting to paint *The Burial of the Count of Orgaz*; the canvas Diego Velázquez saw before starting to paint *Saint John in the Wilderness*; and what stood in front of Titian as he painted the *Vendramin Family*.

### **HELENA LOERMANS**

Helena Loermans is a former laboratory technician engaged in experimental research and is now weaving in her studio in Odemira. She studied Jacquard Design in Florence, including textile analyses. Lab O is a laboratory for the research and reconstruction of canvases of old master paintings, incorporated in her studio.

### Embalmed Beauty

“Die young, and have a good-looking corpse”

Theoretical case study article deals and addresses the theme of eroticized female dead body in connection to post-mortem photography. The eroticized dead body is nothing new in the iconography of the West since throughout the history artists have been depicting dead women as sexually attractive. Throughout the 18th century Eros in Thanatos represented a subject of fascination both in art and in literature. In the 19th and 20th century, they unite in the erotic appeal of the dead body, the topic addressed by many, i.e. Walter Benjamin with the sexual attraction of inorganic and Georges Bataille with a negative experience of eroticism. Also Sigmund Freud's das Unheimliche and Julia Kristeva's abject come into mind. Representation of a beautiful woman who is "safely" dead was one of the favourite ways of depicting the transcendental spiritual values of the female victim's liability by painters of the late 19th century, i.e. the Pre-Raphaelites.

The dead body today represents a sphere of contemporary technicistic utopia with the projections of fantasies about total control (over the body), eternal youth and longevity, which is one of the most desirable ideals of western civilisation. Today, death has not only replaced the previous taboo of sexuality, but has merged with it and the connection between death, capitalism and consumerism has reached an odd peak. The entertainment industry fulfils the darkest fantasies constructed around death, sexuality and violence. It pushes the boundaries of un/acceptable relationships between the dead and the living while the line between fact and fiction is blurred. Many products of popular culture show that there is a public with so called "necrophiliac" orientation, where the corpse porn is only an extreme example. Pornography in pornography of corpses both exploit young, beautifully and naked

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## **JASNA JERNEJŠEK**

Jasna Jernejšek (1982) works as a freelance curator, project manager, researcher and publicist in the field of contemporary visual arts, especially photography, new media and related practices. She finished BA in Cultural Studies at the Faculty of Social Sciences in Ljubljana (2007), where she also completed her M.Sc. in Communication Studies (2013). She completed curatorial course at the World of Arts, School for Curatorial Practices and Critical Writing at the Center for Contemporary Arts, SCCA-Ljubljana (2011–2013). She was the co-editor of the Art-Area radio broadcast about contemporary visual and related arts at Radio Študent (2012-2016). She was a curator and project manager at Photon – Centre for Contemporary Photography in Ljubljana and with the international festival Photonic Moments – Month of Photography (2013-2017). She regularly writes exhibition and catalogue texts and publishes articles in the magazines "Fotografija" and "Membrana", both dedicated to photography. She is a member of the Sektor Institute for Networking, Research and Promotion of Media Arts. She lives and works in Ljubljana, Slovenia.

body. They both rely on a thorough investigation of the body, which they present as a scandalous look / gaze. Both enjoy the view of body fluids, and in both there is total absence of any emotions - love in pornography and sadness, compassion and the reflection of life in corpse porn. Some post-mortem photographs (photographing the deceased or photographing after death – the practice of post-mortem portraits which was at its peak in the late 19th and early 20th century) can be considered as beautiful and their aesthetic contemplation can bring a unique pleasure, while at the same time we can own them and fantasize about them. If we add a sexual impulse to death we find ourselves in the field of pathology. The double identity - indexicality and magic (believe in the ability of disclosing the invisible) - of photography is reflected in the understanding of photography which, on the account of its objectivity, materiality and tangibility, makes it an ideal fetish. Post-mortem photography more as any other medium depicts the phantasmic double that looks like us but is at the same time the ultimate Other; the spectator will exchange his or her pleasure in viewing between voyeurism and narcissism and shift his or her viewing position between identification and objectification.

### Living Images - Making pictures with diverse yeasts

I would like to propose my ongoing Living Images- project for the FEM-conference and come to Portugal to share my artistic practice with living material, learn from the conference participants and from the nature. In FEM-conference it would be a unique opportunity to meet people in the field, worldwide and above all, make connections.

I am a visual artist working with living materials mainly yeasts. I learned the yeastogram-technique from Austrian artist group Pavillon\_35 back in 2013. Since then I have worked with yeast images with different priorities and goals. The core has been the same, the research is done in intensive periods when I am making images with living material and studying them by photographing for different lengths of time. This experimental research explores the world by artistic means with methods from the biosciences. Continuously the yeasts have surprised me with its behavior. I have worked with mainly commercial yeasts which means different strains of *Saccharomyces cerevisiae*. Last autumn I got to try two laboratory yeast strains which I got from Biocenter Oulu. And I made the yeastograms out of them in Aalto University's laboratory, in Biofilia. The blue strain was GMO yeast and it did not work well in yeastograms. Other yeast the W303, without human influence on their genome, worked well.

I am continuing the Living Images- project with the funding from Kone Foundation. The focus is in finding new yeast strains to work with and analyze the results that I have from the past research. Second part of the project is development of new ways to put the Living images on display. Third part is to gather a team of artists and scientist who would work together with focus on yeasts, particularly wild yeast strains and to create a cooperation network with yeast research.

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## **JOHANNA ROTKO**

Johanna Rotko is a visual artist who lives and works in Kotka, Finland. She has been working with *Saccharomyces cerevisiae* since she learned the technique from Pavillon\_35 art group in 2013. She lives with her man Tommi, two years old daughter Frida and a jackrusselterrier called Pulla (Bun) who does not know if she is a man or not. Rotko's laboratory is in their kitchen, exposure happens in her studio and the research area is in their balcony. Last November, her home laboratory expanded to Biofilia laboratory in Aalto University. Also the research area has moved indoors due to winter conditions. Projects main themes for the artistic research is Rotko's own relationship with nature and how nature is affected by her actions. She got to know bioart first time when she was studying the MA degree in Aalto University and she was inspired to do minor subject (26 credits) with biological arts. These courses guided her to do the MA thesis work with yeastograms in 2014-2015. Her work has been exhibited in Oulu, Corvallis, Helsinki, Kotka, Dortmund, Tokyo and Paris. The Living images, yeastograms -project has been funded by City of Kotka, Art Promotion Center Finland, Bioart Society and Kone Foundation.

Currently, I am looking for ways to gather yeast for yeastograms from my backyard/nature. Yet I am not sure if the production of yeast is possible in my home lab or would I need access to a real laboratory.

My artistic research has confirmed my relationship with nature with biocentric world view, which does not place people above nature. We are members of the biotic community, and we have an obligation to protect and respect the ecosystems, as well as to take into account the other species. Even the smallest creatures. My artistic research has convinced me that biodiversity is a key factor in finding a balance between all species, good and bad.

It would be an honour to take part in the meeting and share my project. My artistic research has been flexible and sometimes the direction has been given by the living material, yeasts and other creatures with the changing environment. I hope the next steps of the project would be set in Portugal.

### ART FOR ADAPTATION – Challenging habits and empowering youth for climate change solutions

Despite the robustness of scientific data, climate change remains abstract and distant for many, and advances in science do not always lead to more sustainable behaviors. To bridge this knowledge and action gap requires a rethinking of climate change engagement and education of young people. Project ART FOR ADAPTATION aims to challenge habits and empower youth for new narratives and solutions. It engages young people in an experiment with change. Participants adopt a sustainable behavior for 30 days during which they receive information and insights, then share their experiences and reflect through art. Twenty-five students of grade eleven of the António Arroio Art High School in Lisbon, Portugal, were engaged in the project. They chose a sustainable behavior - such as to eat healthier, be vegetarian, use public transportation, don't use plastic water bottles, buy only national products - and adopted it for 30 days. During this period they reflected individually and in group discussion about the challenges and opportunities associated with behavior change and sustainability. Then, each of them produced a poster and a brochure that reflects his/her personal and collective experience with change. A questionnaire survey was applied to the participants before and after the project, exploring the impact of the project on students' interest in climate change, perceived empowerment and impact on ultimate environment such as family and friends.

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Preliminary results show that the involvement through a practical experience (behavior change), accompanied with regular reflections and art making led to an increased feeling of empowerment and of interest in climate change and in contributing to mitigating it. This shows that a combination of art, science and reflection has the capacity to not only raise awareness about complex issues such as climate change, but also support reflexivity. Creative ways of integrating the practical, personal and political dimensions of climate change may contribute to more successful social transformation and adaptation to climate change.

### **JULIA BENTZ**

Julia Bentz is a postdoc researcher and integrated member of the Centre for Ecology, Evolution and Environmental Changes at the University of Lisbon. Her background in interdisciplinary social sciences (MPhil. Development Studies, University of Vienna, Austria; PhD Economics, University of the Azores, Portugal) and personal interests have directed her research towards the interactions between social and ecological systems in a variety of research fields, including marine spatial planning, marine wildlife tourism, protected areas, sustainable mobility, climate change adaptation and transformation. Within her current project, ART FOR ADAPTATION, she aims to develop new understandings of how artistic and creative practices can contribute to successful climate change adaptation.



### “Flags”

Our time is the time in which everything is ending: we have seen the end of modernity, history, ideologies and revolutions. We have also seen the end of progress, in which future is no longer a time of promises, development and growth. And now we are facing the end of resources ( water, pure air, oil, eco-systems...) Nowadays, it seems like we all have accepted the end of the world as an imminent and irreversible fact.

Our everyday life is full of apocalyptic narratives, and we live our life in a postum condition: we are surviving ones with each others in a time that is consuming. The political, cultural and academic industries condition us with this ideas. So we think about oursevelves from an “exhausted” perspective: we avoid questions and responsibilities.... we are losing control in our lifes and we entrust our future to capitalism and the dominant class.

This feeling of “living at the end of times” transcends from the most collective issues to the most intimate ones. In smaller or bigger scale this fascination for the end of the world is getting into our bones and it is taking part of all our decisions. Our slogans today are : “untill when?”, “now or never”, and also “whatever”. We are looking for other planets, and the names of their discoverers are the new Columbus and Marco Polo from the XXI century. Our heros on the movies are no longer conquering the west, they are conquering mars. Some people have already bought an exit ticket ... the ways of exiting earth are being studied and the richest people are queuing already.

In these apocalyptic scenario, capitalism gives us all kind of gadgets not to loose faith in humanity, and turning the distopy into an utopy. There are lots of "salvation-gadgets": technology, dogmatic researches, political meetings, signi ficant dates,

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celebrations, memorials, facts... but there's one gadget that represents the triumph of humanity (in a postcolonial point of view) by excellence: THE FLAG. This gadget has had a crucial role during the history of colonisation, so now that we have to abandon our old and useless earth, we must have our representative symbols ready in order to start conquering other planets of the solar system. Under this framework, the installation/performance is focusing on the creation of these flags, and the relation between these two layers of the catastrophe: the intimate one and the global-universal. The fact that me, myself is being the first person creating the flags of the planets on my bedroom, might be the process and the result itself.

This project has been born in Helsinki during my exchange studies in Theatre Academy of Helsinki, where I got familiar with all the posthuman and new materiality theories. I would be very pleased about being in Femmeeting, because I think I would get very interesting perspectives from women around the world.

## **JÚLIA BARBANY ARIMANY**

Júlia Barbany Arimany, Born in Barcelona 1994, is currently finishing her studies in acting at Institut del Teatre of Barcelona. Although her studies are in acting, she is very interested in other ways of materializing her ideas like drawing, installation and videoart pieces. She has done some installations and performances with her collective "LAS HUECAS" who are working in the field of the political and social issues about the urbanism of the 92' Olympic games from Barcelona. Comic-lover, waiting for the end of the world, she is afraid of everything.

### Art & science as a liminal state

In traditional way of thinking art is something that shouldn't be pragmatic but art&science provides a special occasion to be in some state between different areas of culture creation. Artists working in this way are somehow in liminal state, according to the term of liminality existing in anthropology. They can make important observations useful for social and cultural studies.

Arnold van Gennep in the book Rites of passage (2006) proposed the scheme of trigeminal structure of the rite. In his theory the first state of the rite is preliminar state. Person being at that state has been removed from previous environment and group. The next step is the liminal state, the state of being „in between“. Being in that state, the person becomes invisible, without a specific status. Finally, that person is included in the new environment, new group. This state is called postliminal. Participation in rites is hard from an emotional point of view. A person, being in that process, is torn between the need of something new and feeling safe in previous situation. There is much easier to pass the rite in the company of the group.

We can't say artists entering scientific laboratories pass the rite. They don't move out from the previous area, the area of art, and they don't enter definitely the new area of science. Art&science practice seems to be intentionally staying in the „in between“ state. That position is conscious and can be understood as a cognitive strategy.

We can say art&science is some kind of imperfect rite. There is pretty big community on the world staying in that liminal state. It is true that being in the group makes it easier to be in that complicated position. The art&science community seems to be separated from the area of art in general. They organize special events (exhibitions, conferences). There are many organizations in different countries working practically and theoretically with the topic of art&science. An important role is played by resident

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## **KAROLINA ŻYNIOWICZ**

Karolina Żyniewicz- artist (2009 graduated from the Academy of Fine Arts in Łódź, Department of Visual Arts), PhD student (third year, Transdisciplinary PhD Programme at Artes Liberales Faculty, University of Warsaw). Working in a laboratory (mostly at Institute of Genetics and Biotechnology, Faculty of Biology, University of Warsaw) locates her works in the field of bio art. She tries to use her artistic projects as a research method. Her artistic activity is focused on broad understood life (its biological and cultural meaning). Her projects have mostly conceptual character. The visual site of them is rather limited and has sources in laboratory practice. The main point of her research interest are multilevel relations emerging during realization of bio art projects. She tries to put her observations, as an artist, in the context of Science and Technology Studies (STS) and Actor-Network Theory by Bruno Latour.

programmes dedicated to. An important role is played by resident programmes dedicated to the cooperation of artists and scientific institutions. We can say art&science events help their participants to feel good in liminal state.

What makes art&science similar to a rite is also the person of guide. There is also some common element within art&science and ethnographical field work, where the person of gate keeper is important. In case of art&science practice, the artist conducting his/her project in the area of science needs to have a scientist who will let him/her to enter the area of exploration (laboratory, the group of scientists).

According to the topic of liminality mentioned above, art&science practice is linked also with different meanings of that state. Especially for bio artist who works with nonhuman living beings playing the main role in biological research. Susan Merrill Squire (Liminal Lives. Imagining the human at the frontiers of biomedicine, 2004) called some of them liminal lives including stem cells lines, banked embryos, organs for transplantation. All of them are in a state between bodies, between two different states of embodiment. The status of that form of matter is unclear. Being liminal beings art&science practitioners are strongly interested in laboratory liminal lives. Many projects have been devoted for cells, bacteria, mold. Not every laboratory living being fits to Merrill Squier definition of liminal lives but it can be considered like some kind of being staying „in between“, between organic and artificial scientific state.

It seems to be interesting how culture looks like from the perspective of its liminal participants. I am one of them being an artist conducting artistic projects in biological laboratories. So I can describe my experiences with the use of ethnography of laboratory and autoethnography.

making it beyond human capacities for sense-making.

I describe how humans require a second form of mining, data mining, to “make sense” of worldly sensibility. Although data mining is generative, I argue that it is also extractivist insofar as it is heir to colonial extractivist logics that materially reconfigure and exploit the social. Finally, I turn to a third form of extractivism, Bitcoin mining. As a case study, Bitcoin mining fuses the ecological impact of commodity mining and the rearrangement of the social in data mining. Arguing that every predictive data practice is also by definition a cryptographic data practice, I arrive at a notion I call “cryptographic consciousness.” I use this term to describe the human abdication of sensibility to nonhuman algorithms. Drawing on the privacy structure of cryptocurrencies, and the preceding discussions of extractivism and sensor arrays, I characterized cryptographic consciousness as profoundly isolationist, extremist, barricaded, and remote.

### **KATHERINE BEHAR**

Katherine Behar is an interdisciplinary media and performance artist who uses materialism and feminism to explore contemporary digital culture. She is known for projects that mix low and high technologies to create hybrid forms that are by turns humorous and sensuous. Behar’s works 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, City University of New York.

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## “What Makes Sense? Environmental Sensing and Nonhuman Sense”

This talk begins with a seemingly senseless question, “What makes sense?” Could it be that what makes sense today, if only because who seems no longer up to the task of sense-making? In ubiquitous computing, nonhuman digital sensors dwarf the capacities and slash time frames of the human sensorium. Simply put, digital sensors might “make more sense” than we do. Deployed throughout contemporary environments, networked digital sensor arrays reproduce the extractive logics of conventional mining practices that also systematically harvest value from the earth. Yet individually, sensors produce raw data as a function of their own isolated umwelts. Ironically, this aspect of nonhuman sense parallels a shift in human sense-making. As human sensibility turns from subject-oriented to object-oriented, intersectional data mining, encryption, and predictive analytics are on the rise. These data practices sequester data production, amplify human dependence on algorithmic decision-making, and displace sensible discourse, leading to a condition I call “cryptographic consciousness.”

While this talk uses a performance lecture format and crosses freely between theoretical, poetic, technical, and artistic registers, its reasoning follows this rough schematic: Beginning with an explanation of environmental sensing technologies, I explain how sense data about the world is produced by environmental sensors and trace their technical development within design principles of ubiquitous computing. I liken this extraction of sense data from the earth to mineral mining, which is in turn linked to European colonialism and its violences. Next, I discuss media theorist Mark Hansen’s proposal that this world of data brings about a worldly sensibility. This nonhuman worldly sensibility simultaneously forms and is formed by predictive data analytics,

### Visual Narratives of Biology, Bodies & Beliefs

Using visual narratives from the newly launched Stem Cells Across the Curriculum project, biologist Katayoun Chamany, showcased how ART can involve multiple bodies, including those of the egg provider, the potential surrogate, the embryo, and the future child. Some children are conceived through a combination of IVF and Preimplantation Genetic Diagnosis (PGD), a genetic screening technique that can exclude embryos with gene variants associated with disease risk, but improve the probability of an immunological match to a sibling living with disease. Stem cells can be obtained from the cord blood, peripheral blood, or bone marrow of the “savior sibling” to support the treatment of the sibling living with disease. The labor involved in hormone stimulation of the mother’s ovaries and the retrieval of stem cells from the sibling, create new forms of kinship and responsibility in families that have the means to engage in such practices.

#### **KATAYOUN CHAMANY**

Born in Iran, raised in Iowa, and trained as a geneticist and cell biologist, Katayoun Chamany finds the study of biological processes fascinating. Part of her work suggests that biology courses must be contextualized and made relevant, especially for those students who don’t initially see biology as important to their everyday experiences. To promote this education reform, she has developed seminars, workshops and educational materials that reflect an interactive and case-based method of teaching and learning. She firmly believes that biology is accessible and relevant to everyone, and that a basic understanding of biology is important for contributive members of society. She got her BA in Biology from the University of Iowa and her PhD in Molecular and Cell Biology from the University of California at Berkeley.

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## [Im]Probability Current: Flow(s), Friction and Temporal Distortion

Taking the contributions of Lucy Wills and Leo Vroman, the aim of this presentation is to develop a proposal focused on flow(s). By seeing the large, or extension, in the small, Wills and Vroman brought Haematology into its poetry, connecting the fluidity of flows, connecting what appears as disconnected due to the social constructivism of knowledge as separate disciplines. Taking the metaphor of blood\_flows, the purpose is to think on mode\_flow(s), as an imperfect, chaotic, and as a media.

Most of the time Philosophy has been allegorical, producing metaphors instead of situated figures, but art practises working with\_in Science(s\_friction) are challenging philosophy to redesign language, understanding language as technology. Philosophy is challenged to dismantle ontological supremacy, performing metaphysics formalism, disrupting the fake mirror of the unity, rethinking the ethical actor(s) because the relation meaning\_making is no longer an exclusive human prerogative. The meaning-making is contextual, it is a constitutive process, a constitutive becoming. This fluidity of flows is a potentia to hack, to perform, to queer what has been coded unmistakably feminine. Fluidity generates ruptures, voids and changes in meaning\_structures. Framed in the nature\_culture continuum and (com)posthuman theories, the philosophical claims of this proposal are directly related to matter, focusing on the entangled potentia to persist, to matter(ing). We can find a relation between Spinoza's "ontology" and a political perspective on being entangled with all being\_things\_entities\_agents, a political becoming, an immanence that becomes potentia as opposed to dualist and hierarchical ontology, or as Anne Sauvagnargues has recently suggested: disrupting ontology to perform becomology, to hack temporality performing the idea of future. The promise of a (possible) future articulates new idols, or as remarked by Santiago López Petit



(1994), articulates “a continual recycling of meaning”. The over-exploitation of the speculative and of the idea of future is setting up new idols in a collective falsification of temporarily distancing ourselves from that imminent danger which we intend to combat but which we relate to from the attempt and against which we never commit ourselves. For this reason, many of the speculative discourses serve the cause of endowing reality with meaning, as they are projects that never completely transmute into an affirmative movement, and therefore, they perpetuate the old values of promises for the future, those that they are supposedly fighting against. As a consequence, the future in speculative practises is turning into that eternal instant that never arrives and that through the promise exhausts all possibles. Will it not be then that between the absence of future and the exhaustion of the possible we need to operate a collective temporal distortion? Projects such as trans\_hack\_feminist biohacking proposals open up a political space for going beyond the exhaustion of the possible and perhaps, in those chinks we can tackle distortions of temporality and forget about the future as a promise that gifts us a lethargic and dreamlike void of non-action. Or re-appropriating Haraway we could propose: *Make kin(d), not future(s)*.

## LAURA BENÍTEZ VALERO

Laura Benítez Valero has a PhD in Philosophy from the Autonomous University of Barcelona (UAB). She is an external collaborator at the Department of Philosophy of the UAB, and coordinator at the Institute of Humanities of Barcelona. Guest lecturer at Master’s degree in Research in Arts and Design at EINA and Lecturer on Dystopian Thinking at ELISAVA. She has been guest researcher at the Ars Electronica arts centre, and researcher at the MACBA’s documentation centre. She has participated in cycles as a reader, teacher and guest researcher at different international institutions. Based as researcher in HANGAR, centre for arts production and research, her current research focuses on processes of bio-resistance, bio-civil disobedience and non-human agents.

## PAULA PIN

Paula Pin is a transhackfeminist performer and researcher with a strong inclination towards research and experimentation processes. Her working fields range drawing, abstract video or circuit bending, always located in the intersection between biology, science and queer art. As her interest in the relationship with nature grows, she has begun to occupy laboratory spaces and hack the performativity of science. This activity of workshops, sharing her knowledge and spreading the ethic of DIY and open technology, is an integral part of her practice. Paula’s active participation in the lab Pechblenda and Transnoise, besides her social ideals and her work as a noise performance, has taken her to many spaces and contexts, specially to the point of starting to collaborate in Hackteria, a biohacking network.

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## MANUELLE FREIRE

Manuelle Freire is currently postdoctoral researcher at EnsadLab – PSL (Paris). She is a lecturer and program developer in art-science-technology for academic and cultural institutions. Her current work is inscribed in the “Chaire arts-science”, jointly created by Fondation Daniel et Nina Carasso, l’École Nationale des Arts Décoratifs, and l’École Polytechnique. Her research aims to propose institutional innovation strategies for academia in line with the emerging cognitive paradigms. She investigates specifically the institutional structures for art-based research involving transdisciplinary, cross-institution and/or cross-sector collaborations. Through a 10-year practice as a designer, Dr. Freire transitioned to scholarly research and academic roles since 2008: Teaching assistant, part-time faculty in the department of Art Education at Concordia University (2008-2014); Several research assistant positions, namely to the dean of Fine Arts in the development of academic programs for Research-Creation (2009-2012); Programme coordinator of Hexagram: the international network dedicated to research-creation in media arts, design, technology and digital culture (2013-2016); Associate artistic director at ELEKTRA – BIAN (2016-2017).

The Chaire Arts et Sciences was signed in September 2017 in Paris by a robotic arm, officially bringing together three institutions: EnsadLab is a practice-based researchcreation lab from École Nationale Supérieure des Arts Décoratifs; L’HadHyX -Laboratoire Hydronomique from École Polytechnique is a science lab engaged in practice-based artistic research; and Fondation Daniel et Nina Carasso, which is dedicated to public education and mediation about complex contemporary issues, namely sustainable production and consumption of natural resources. Our mission is “composer les savoirs”: to engage the arts and the sciences in a dialogue that will produce new forms of knowledge for a sustainable future; forms of knowledge that will speak of and to a broad public, including but not limited to scholarly minds. The actions we deploy disrupt the established institutional and disciplinary cultures by means of artbased gestures and transdisciplinary encounters that seem unlikely in the prevailing research structures. They require breaking with protocols, hermetic discourses, and knowledge sharing mechanisms. As such, our actions are not dissociated of the gender imbalance in our field, ingrained in the status quo of institutional legacies, habits, and discourses. A number of us - researchers, coordinators, and collaborators - tackle these issues in their practice and programming of the “Chaire Arts et Sciences”: examples of work and orientations will be briefly presented, namely the work of Manuelle Freire (CA/PT/FR), Aniara Rodado (CO), Jeanne Vicerial (FR), and Julie Sauret (FR). Inscribed in a groundbreaking approach for institutional innovation, what all these actions have in common is that they propose alternative managerial aesthetics of research that intersect knowledge systems, contexts, and processes contributing to disrupt the established research paradigms.

### Looking through the lens of empathy: from biology to art

I can recall the first time I felt empathy, this extraordinary acknowledgement of the other, unexpectedly. I was 18 years old and a 1st year student of a bachelor in Biology.

We were in the lab for a course on Cell Biology and we took a drop of river water and looked it under the microscope. I knew already about microorganisms, but that moment struck me like a lightning. I saw this Rotifera, dancing around. I tried to follow it, but it was soon lost in the depths of the water.

This overwhelming feeling kept surprising me throughout the bachelor. For three years, I was constantly feeling amazed by life. But, as time went on, I started to feel a little different. Everybody had ideas for projects or things that they wanted to try out and I'm not sure if I ever felt that urge. I just thought that biology was the most beautiful subject in the world.

I called myself at the time, and still today, a "contemplative biologist". I just liked to sit down and think on how crazy, amazing and beautiful it was that DNA could replicate itself.

I ended up doing a sabbatic year and I worked with a scientific team, on marine ecology and climate change. The team, leaded by an incredible woman scientist, was amazing but I felt that I was looking into the world in a sterile way, overanalyzing it. I felt I needed to go back to contemplation and empathy and find a way to share it with people around me.

When I started my masters in multimedia art, I had no clue if I could reconcile art and science.

As I worked more and more in projects, in which other women had a decisive role, I saw that underlying every single one of them was that overwhelming feeling of empathy that I experienced as an 18 year old.

Almost all of my pieces, whether they're related to biology or not, were driven by looking into the other, re-thinking the other, re-appreciating the other, finding myself in the other. There are two

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## **MARIA FRANCISCA DE ABREU-AFONSO**

Maria Francisca de Abreu-Afonso was born in August 1994 (Lisbon). She lived in Lisbon and while studying dedicated herself to music, dance, theatre and illustration. Graduated from the Faculty of Sciences of the University of Lisbon, with a degree in Biology (2012/2015). In 2014/2015, lived in Brussels and, as part of the study program, went to Guyana. This expedition shifted her and how she wanted to do as a practice in Biology. After graduation, she did a sabbatic year in which she worked with a scientific team of Marine Ecology and Climate Change (MARE Institute) and was involved in several projects, such as the short film Reich der Möglichkeiten: intermitências da percepção (with Clemens Schöll). She's currently doing her masters in multimedia art, with a specialization in photography, in the Faculty of Fine-Arts of Lisbon. In December 2016, she represented Portugal in the jury at the first EUFA (European University Film Awards), category of the European Film Awards, held in Hamburg. She won the Faculty of Fine Arts' scholarship for Marta de Menezes Summer School (2017) and has been exhibiting ever since. Her pieces are about identity, search for the self and the relationship with the other.

in which empathy and my feminine nature are clear: Cabeças Falantes (2017) and Se te procuro e não te encontro, (...) (2018).

In Cabeças Falantes, people's faces turn into ghosts and allow for their own microbiome to be the true subject, emphasizing that one's face doesn't belong to one's self, but to the whole of organisms that compose it.

In Se te procuro e não te encontro, (...), the idea of reality is questioned. It's thesis is that reality is a matter of scale and re-thinking the scale is re-thinking reality as something wider than we think in a first glance. I can be big compared to a bacteria, but I'm just a microorganism when compared to the cosmos.

My talk will be about how femininity affects my body of work, the way I relate to others and to world itself.

## Zhèng 證: Cross-Cultural Encounters in Art, Medicine and Technology

I propose to present a paper on: Zhèng 證 – Cross-Cultural Encounters in Art, Medicine and Technology. This project constitutes a new area of research development in the arts, sciences and humanities and also in intercultural communication, because although artistic practice is now widely used to research and communicate biomedicine practice to a global community, using artistic practice to research and communicate Asian and Chinese medicine practices to international audiences has been wholly neglected. This performance art practice research project enables me to test out and produce new reflections on a cross-cultural medical body. The aim of my approach is to diversify the dominant conceptions of what a body is and can do.

Drawing upon my expertise as an artist and clinical acupuncturist with training in biomedicine, my project adapts Chinese medicine practice into a strategic tool to investigate new synergies between art, medicine, technology, East, West, modernity and pre-modernity. For example, currently I collaborate with 4DSOUND-Budapest, where we explore the relationship between the body's infrasonic dynamics and spatial sound environments according to Chinese medicine theories. In my performances, I use Chinese pulse diagnosis (a scientific/medical method) as an artistic method to produce spatial soundscapes. By restaging the Chinese medicine clinic within the public domain, my research utilises the performative element of the Chinese medical encounter to enable greater reflection of and renegotiation of art and medicine and their current functions in society.

Practising as an artist-acupuncturist within the context of the biomedical clinic is transdisciplinary and transcultural by its very nature, since working with the body within this context integrates together three disciplines (art, medicine and technology) and two

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## **MICHELLE LEWIS-KING**

Dr Michelle Lewis-King is a sound artist, acupuncturist and Senior Lecturer at Roy Ascott Studios, DeTao Masters Academy at SIVA, Shanghai, China. She currently works with 4DSOUND on projects involving spatial sound and embodiment- an article on this collaboration is published in the Red Bull Music Academy Daily (11/2016). Michelle's own research is published in: Technoetic Arts (Vol 13, Iss.3), Digital Creativity (Vol 26, Iss. 1), Journal Sonic Studies (Issue 4), ELSE Journal of Artistic Research (Issue 0) and many conference proceedings. Her artistic research has been exhibited in: Digital Suzhou (2018), Reflections from the Inner Mirror (2017), PROJECT ANYWHERE (2015-2016), TodaysArt NL 2015, Drawing Towards Sound: with John Cage, Pierre Boulez, Aura Satz, etc. (2015), Digital Futures: V&A Museum (2014), Chinese Film Festival, Anatomy Museum London (2014), Disjointed: Digital Cultures, Ex-Teresa Museum Mexico (2013), Artist Games, Spike Island, UK (2012) and Experimental Notations, Royal Nonesuch Gallery, Oakland, CA (2011).

cultural approaches to medicine (biomedicine and Chinese medicine). Given this experience, I view the Chinese medicine clinical encounter as a unique time-space that contains multidimensional interactions between one person and another and one cultural practice (modern allopathic medicine) within another ('traditional' Chinese medicine). Given that Chinese medicine has travelled across time and space to become practiced in over 160 countries and has lasted over a thousand years, this paper presents my performances of the Chinese medicine encounter as a tool for demonstrating that Chinese medicine practice offers a unique means for both questioning current understanding of the coherences of art and science and also for integrating artistic and scientific methods into a powerfully artistic medicine.

This research travels laterally between cultures, practices and epochs and calls for a radical change in conceiving of the body in 'oriental' and 'occidental' terms in order to both reduce ethnocentrism and also to travel beyond the tired bifurcations between mind and body, self and others and Western and othered cultures. In combining art, technology and diverse medicines together with contemporary digital culture, this project opens transverse lines of inquiry that open new channels between disciplinary practices, whilst at the same time, it generates new forms of cultural engagement through performance and sound works.

### Remaining Animal, Becoming Other: Bodies, Senses and Science

This presentation will explore the potential for participatory artworks to affect the way audiences experience the role bodies, senses, and technologies play in defining and mediating our relationships to the natural world and notions of “the future”. Key themes for investigation are human exceptionalism, bodily augmentation, interspecies relationships, and the evolution of the post-human in a time of ecological crisis and rapid technological change. These ideas will be explored through the presentation of three works: *Human Cheese* (2011) - a socio-technical and economic system for sourcing, making and distributing cheese made from human milk. Sourcing human milk via the internet, making cheese in my kitchen, and adopting the methods of ‘marketing science’ for small-scale artisanal food brands, *Human Cheese* culminated in *The Lady Cheese Shop*: an installation presenting ethically sourced, locally made cheeses made from ‘the original natural food’ – human milk - and asked visitors to taste - or not to taste - this cheese. *Human Cheese* thus aimed to provoke a space for discourse with regards to food production, emerging bioavailabilities, and the commodification of bodies, firstly through the sensorial challenge of consumption. *All That Is Used, Broken, Lost* (2014) was conceived as a participatory ritual attendance to New York’s only federally protected endangered plant, the *Agalinis acuta*. The flower is so small its scent is not perceivable by humans in the wild - only to insects. In collaboration with chemists, I captured the volatile chemicals and recreated them as scent. The *Agalinis* is also a hemiparasite - its roots must attach to a neighboring little bluestem grass to grow. Visitors don a wearable device that provides them with an insect antennae that contains the scent, while they drink a cocktail steeped with the flavor of the grass. Thus for one brief moment when scent and taste combine, visitors experience the flavor of this almost-extinct flower as an insect would. *Training Transhumanism (I Want to Become a*

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## **MIRIAM SIMUN**

Miriam Simun is a research-based artist investigating the implications of socio-technical and environmental change. Simun is a graduate of the London School of Economics, the Interactive Telecommunications Program at New York University. Her work has been the subject of numerous international presentations, including exhibitions at the New Museum of Contemporary Art, New York; the Museum of Arts and Design, New York; the DeutscheBank Kunsthalle, Berlin; The Contemporary, Baltimore; Ronald Feldman Fine Arts, New York; the Museum of Fine Arts, Split; the Bemis Center for Contemporary Arts, Omaha; the Himalayas Museum, Shanghai; and the Beall Center for Art + Technology, Irvine. Simun is a recipient of awards from Creative Capital, the Robert Rauschenberg Foundation, the Joan Mitchell Foundation, and the Foundation for Contemporary Arts. She was the recipient of the Santa Fe Art Institute's 2015 Food Justice Residency in New Mexico, and the OMI International Arts Center's 2016 Artist Residency in New York. Simun's work has received extensive coverage in media outlets both stateside and abroad, including the BBC, The New York Times, The New Yorker, CBC, MTV, Forbes, Art21, and ARTNews.

[www.miriamsimun.com](http://www.miriamsimun.com)

Cephalopod) (2018-ongoing) is a psycho-physical training regimen for evolving the future of the human. The regimen seeks to develop within the human new sensitivities and capacities for a world marked by ever-increasing ecological and technological change, based on the model of the cephalopod. We will focus on three main traits: (1) tactile awareness and cognition; (2) camouflage, defined as a hyper-awareness of one's local environment and the flexibility to respond by morphing, and (3) a distributed intelligence (the ability to form a superorganism, by developing a shared intention with one or more people). Using the cephalopod rather than the machine as the model for the future of the human, the work embraces the capacities residing in the biological human body and the pleasures rooted in bodily labors; posits the "model species" as a role model for humanity rather than instrument for science; and embraces training as a technology is rooted in practice, development of internal abilities, and equity in access.



### *Crystal Lattice: Between East and West*

*Crystal Lattice* is an ongoing art-sci project exploring the physical and metaphorical properties of crystallization. Materials are sourced through dialog and interaction with local Chinese medicine doctors. Eventually, one type of Chinese medicine was discovered that is used for expelling toxins in the lungs (dealing with the harsh reality of severe air pollution) and, in the U.S., the same agent is used in substances for killing cockroaches. This is then used as the initial crystallizing agent to grow petri-dish "inmotion" sculptures. Chinese medicine and artist pigment are combined in various ratios and then left to naturally grow in a slow and suspenseful manner taking over six months to fully mature.

The project outcomes range in scope from scaled photographic documentation, mapped drawings, growing and bubbling sculptures, to moving image depictions. The works can be reminiscent of Song Dynasty landscape paintings and recall an essence of natural phenomena with objects in the foreground and vast space in the background.

Eventually, the crystallization process fully absorbs all of the water and disintegrates into dust particles, illustrating a full life cycle. Through the process of understanding the material in its cultural context, engaging an experimental art-lab process, and discovering its natural growth patterns, *Crystal Lattice* draws attention to the intersection of art and science, contemplates boundaries of the organic and inorganic, and raises questions of growth and space.

Ultimately, further projects have emerged from *Crystal Lattice* to include divergent investigations of crystallization, such as in the current project, *Cycle* (2018), undertaking research of bodily fluid crystallization as it relates to the female reproductive cycle.

### **NICOLE CONDON-SHIH**

Nicole Condon-Shih is an interdisciplinary artist and educator working between the United States and Beijing, China. Her practice intersects art and science and examines the dichotomy between the microscopic versus the macroscopic in thinking about biological systems, and, more recently, cultural and urban networks. She works both individually and collaboratively, such as with her local Chinese medicine doctor, and engages the community as a laboratory. Her work has been shown internationally in Hong Kong at the Bi-City Biennale of Urbanism & Architecture, in Beijing at the B3 Biennale of the Moving Image, and in the Reverse the Perspective exhibition at the Xiangsi Art Museum in Tianjin, China. She received her B.F.A. from Cornell University's School of Architecture, Art, and Planning and M.F.A. from Hunter College, City University of New York. Nicole Condon-Shih recently joined the Cleveland Institute of Art (CIA) as an Assistant Professor of Foundations and previously spent eight years heading the

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## Awakening Female Intimacy

### Aim:

The aim of my research is to generate different video clips (3 mins. each) through which women of the world from all different ages can learn more about their own sexuality. In order to do this, women will be invited to talk openly about anatomy, how it works, how we are built, what is the clitoris, why we do not know much about it, what is female ejaculation, why we don't even have a name for it and any other aspect that may arise during this research. Also I want to address and question how the oppression of the body and our sexuality have shaped the bodies and the behaviours, by constructing our lives around a political regime that builds a social technique called heterosexuality. The theoretical framework that is at the basis of this research is: *Straight Mind* by Monique Wittig and *Intimate Justice: A Critical Analysis of Sexual Satisfaction* by Sara I. McClelland.

### Objective:

Inform, educate and share by creating channels through social media to distribute this material.

### Methodology:

The fundamental part of my research will be backed by interviews with specialists on fields such as health, science, humanities, etc. I will also include the testimonies and self exploring opinions of different women from various backgrounds. I want to use questionnaires inspired on the work of Peggy Orenstein which includes questions like: How do young and old women view their sexual pleasure?  
Capacity and rights to sexual pleasure?  
How do you mark if your sexual experience was pleasant?  
What is your attitude and experience in sex?

What are your feelings towards your genitalia?

By doing so, at the end, maybe I will be able to produce a documentary of 1hr duration by knitting the different clips together.

Motivation:

Sexuality has political and personal implications: disparity, inequality, even violence. On 1998, when viagra and male erectile disfunction was solved, the first complete anatomy of the clitoris was published by urologist Dr. Hellen O'Connell in Australia. Her work is forcing to rethink and rewrite anatomy books and sexual history for women. Also, female sexuality has often no names, no images. Women from all over the world, when they reach puberty, are confronted with words such as blood, bad smell, public scrutiny, pregnancy, not even the word masturbation is properly allowed as it is for the male counterpart. Males talk easily about erection and ejaculation, women do not even have a word that names our squirting, which has been thought as incontinence.

## **PAULINA GARCÍA HUBARD**

Paulina García Hubard was born in Mexico City on 1968. She studied at the Active School of Photography then did a BA Hons. Photography at London College of Printing (1992-1995) and later completed an MA Applied Arts and Visual Culture at London Guildhall University (1996-1998). Between 1998 and 2001 she documented the villages of Aldeburgh, Suffolk, in England and St. Feliu de Guixols on the Costa Brava of Catalunya. In 2005 she founded and directed the Workshop "Abriendo Los Ojos-Afro México", where more than 15 students from Costa Chica (Guerrero and Oaxaca) learned to express themselves through visual language using new photographic technologies. During 2006 and 2009 she coordinated, photographed and edited the Graphic Memories of the IFE (Federal Electorate Institute). In 2009, she won the BANAMEX contest award, El México de los Mexicanos : 1st Place "Children in their Environment", publishing her work in the book El México de los Mexicanos, name that also gave title to the collective exhibition in the Rejas de Chapultepec of 2009. In September 2011 she organised, promoted and exhibited again in the Rejas de Chapultepec the Project "Abriendo Los Ojos Afro-México", curated by Francisco Mata Rosas. Last year her work on the killings of Ayotzinapa was published on a book by F. Mata Rosas and the UAM University, called 43.

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## Fern: an artistic view over the human female saliva's arborization phenomenon

As we know, fertile human females experience hormonal changes during the menstrual cycle as well as various physiological alterations. They also include variations in the microscopic structure of both cervical mucus and other bodily fluids, such as saliva. The phenomenon was already well observed and described by the medical literature.

Papanicolau (1945 and 1946), for example, noted that the cervical mucus after drying and consequent crystallization in a microscopic slide, shows a peculiar pattern, called "arborization" or "ferning" - once it shows similarity to the leaves of ferns. It is known today that this phenomenon occurs due to the activity of the hormone estrogen, present in the second half of a fertile cycle, which is responsible for the release of a mature ovule. It is also known that "ferning" results from the crystallization of sodium and potassium chloride around a quantity of organic matter, having its peak during ovulation and disappearing after it.

Barbato M., Pandolfi A., Guida M. (1993) and other more recent investigations confirm that the monitoring of saliva or cervical fluid is considered an effective auxiliary method of fertility detection. This proceeding became popular through the use of portable microscopes and has been an extra tool to practitioners of natural birth control methods (FAM), which is used for both conception and contraception purposes.

This work aims to present an appreciation of the phenomenon in an artistic approach through the collection, observation via portable microscope and daily photographic record. In this sense, it is intended to monitor and observe the gradual changes in the microscopic structures of saliva during a menstrual cycle. And thus, to appreciate the structures acquired by their crystallization patterns, proposing an unusual look for a recurring phenomenon, revealing its unexpected forms and the hidden beauty of the female cycle by this point of view.

### RENATA ROSADO

Renata Rosado holds a graduation in Biological Sciences at the public University of Alfenas (UNIFAL), Minas Gerais, Brazil. She is currently doing a master degree of Drawing at Faculty of Fine Arts at University of Lisbon, Portugal. As biologist she has experience with micro algae taxonomy, palynology and paleopalynology. Besides that, she also worked with public health, after college. Recently, as an artist, she is still seeking for a place between science and art, paving her way of an old passion on scientific drawing as well as experimenting many other expressions of art and means with the purpose of unite her investigative approach and her artistic aspiration.

### Trading Systems: Bio-Economic Fairy Tales of the Anthropocene

My presentation will provide an overview of a hybrid art and science project titled "Trading Systems: Bio-Economic Fairy Tales of the Anthropocene". It is currently a work-in-progress. The project explores both the intersections and dualisms between social systems and non-human ecologies within our current anthropogenic, socio-political climate.

Moving between notions of the Anthropocene and its critique, the Capitalocene, the project questions what it might look like if non-human forces could be put in the "cultural" driver's seat. For example, what happens when models of non-human ecological systems are used to identify and possibly rethink the dysfunctional systems, the "fairy tales," that are currently troubling our social welfare, economy, and governance?

The idea draws from biological market theory in which the behavior of animals and more recently microorganisms is analyzed through theories of the economic market. Microbiologists such as Toby Kiers at Vrije Universiteit in Amsterdam are experimenting with ways to manipulate "market conditions" between microbes in order to create more sustainable food production and environmental remediation. Using an anthropomorphic approach, the microbiologists are reframing the microbial behavior in economic terms, examining the way they "exchange goods" or "allocate resources."

The project is comprised of a series of speculative visualizations embodying these "bio-market" ideas. Each visualization takes the form of a 2D diagram and correlating 3D model to create a whimsical wetware-inspired, biological circuit reminiscent of a kid's science project. For instance, a simple supply and demand economic model that shows the relationship between

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## **STEPHANIE ROTHENBERG**

Stephanie Rothenberg's interdisciplinary artworks make visible the physical and imaginary networks that create technological utopias. Moving between real and virtual spaces, she explores how new technologies mediate our everyday experiences and connect us to larger global systems. Her work has been exhibited in venues including House of Electronic Arts (HeK), MASS MoCA, LABoral, Sundance Film Festival, Transmediale and ZKM. In addition, she has participated in and organized numerous events and conferences on economic themes including Baltan Lab's "Economia" in Eindhoven and MoneyLab #2 and #3 in Amsterdam, and co-organizing #5 in Buffalo this April. She is a recipient of numerous grants and awards including a Creative Capital. Residencies include the LMCC Workspace program, Eyebeam and the Santa Fe Art Institute. Her work is in the collection of the Whitney Museum and has been widely reviewed including Artforum, The Brooklyn Rail and Hyperallergic. Stephanie received her MFA from The School of the Art Institute of Chicago. She is Associate Professor and Director of Graduate Studies in the Department of Art at SUNY Buffalo where she teaches courses in design and emerging technologies.

labor, production and the market is remapped through the lens of a plant-soil (mycelial) ecological "circuit". The "labor" of the microbes produces the energy (microbial fuel cell) to charge a piezo speaker sonifying the sounds of this subterranean, non-human, bio-economic machine. In other working prototypes, the question of what to do when life gives you lemons is visualized through the creation of a lemon battery, and the reproduction of rhizopus stolonifer, a household bread mold, is equated to the "reproduction" of American student debt.

By playing with metaphors of "trader" and "markets" through these rather absurd remixes, the streamlined mechanizations of capital get messy – and even dirty, like real dirty, as in soil and mud and even bacteria. I question the possibility of these incongruent co-productions to be a provocation for interrupting the current narrative and creating spaces for rethinking the current reality.

### Inclusion and Diversity in a Feminist Artist-Run Centre

This presentation explores how empathy can be used in art galleries in order to create outreach programs that are more inclusive and relevant to the communities they serve. The initial purpose of this study was to use the Empathetic Museum Maturity Model – metric for institutional transformation developed by the Empathetic museum to test the level of commitment of an art institution to diversity and inclusion. The chart analyses factors such as “civic vision” and “institutional body language” among others. In this presentation, I look at the different community outreach initiatives, the role that the art centres play within different communities, the makeup of the board, the diversity of artists presented and so on.

In 2017, I coordinated the second edition of the Feminist Studio Visit, an event where nine artists members of La Centrale welcomed up to 25 women from different community centres, both in their studios and at the gallery. The goal of the event is to demystify contemporary art by providing tools for reflection and creating links between the artists’ lives and those of the participants. It is also an attempt to present the centre and its different feminist activities, and to build long-term relations between La Centrale and women from different community centres.

La Centrale Galerie Powerhouse is a non-profit artist-run centre that was founded in 1973 by a group of women artists who wanted to meet and to discuss about the difficulties of exhibiting work of women. Its mandate is to provide a platform for artists interested in feminisms, gender theory, interculturalism and trans-disciplinary practices . La Centrale is composed of different committees, such as programming and education, and has recently added a “diversity’ study group to its list of activities in order to reflect on how to become more inclusive of different cultural communities in Montreal.

### TANHA GOMES

Tanha Gomes has a BFA in photography and is currently pursuing her master’s degree in art education (both at Concordia University, Canada). She has a strong, diversified and international experience in contemporary art education with children, adolescent and adult populations (in Brazil, France, Argentina and Montreal). Her current research and expertise focuses on issues of inclusion in museums, galleries and artist-run centres, where she explores how art education serves to counter exclusion and foster intercultural relations and social justice. She lives in Montreal, where she works as an art educator at DHC/ART Foundation for Contemporary art, OPTICA and the feminist artist-run centre La Centrale, where she serves on the board of directors.

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## Hybrid tools or future interspecies media ecologies for alternative social imaginaries

Like in “Nausicaa, in the Valley of the wind ” , we have now to deal with new ecologies of relations, ecosystems and toxic jungles. This requires hybrid tools that enables us to think of future interspecies ecologies, of alternative social imaginaries, and the relation between ecosystemic thinking and artistic imagination. We urge to flatten the hierarchical ontology between humans and non-humans by including the other , with its otherness, into media systems with particular rhythms, codes, politics and capacities that would lead to more inclusive stories with a holistic approach. When an intervening instrument (aka media) integrates the non-human people, it emphasises their role to produce knowledge. We realize their agency. Suddenly, things have political weight, sensing capabilities, social capacities and memory to project us far beyond the Anthropocene. How to build this media ecologies? How to design beyond human scales or human standards of aesthetics? To develop this idea further, I propose to describe 2 practice-based and theory-driven hybrid objects . The first one includes cyber-moss, the second one bacterial “superpowers” and toxic glitches in nature. Both work as extensions of our senses to transcend our worlds of technoscience.

### *Camera Obscura and the Artefacts of the Invisible*

Environmental changes are often invisible. Some are trapped in complex data in scientific reports, and/or communicated below the radar of our cognition. The unseen remains unknown; furtive glitches in nature: artefacts. Camera Obscura & the artefacts of the invisible is a DIY, bio-hacked, open source tool to make visible the invisible environmental events. By merging electronic media with toxic artefacts, this interactive installation displays a dialogue between genetically modified bacteria and toxic matter. A narrative thread gets translated into bits of black drops as alienated



memories of a damaged spot on Earth. By shifting the narrator, we discharge a shirking society to speak up, confront the fact and to seek for alternative futures. The more people come and see, the more evident the traces become.

*Mossphone (Musgófono)*

When we first touch a Mossphone, we experience a pleasant feeling of joy. Dipping our fingers into this humid pool of life, we enter part of our existence into an old queendom of resistance. Our body interacts physically and emotionally with an entity that silently keeps track of our actions. Since the 60s, mosses have been used as biomonitors of atmospheric deposition of heavy metals in the Nordic Countries. Combined with a satellite they serve to map their impact after an ecological threat and, since 2008, they are used to monitor toxic particles in other European cities. Equipped with a cybernetic add-on, Mossphone invite us to speculate sounding out changes from a wide range of acute pollution episodes (London Great Smog, Minamata, Visp) to pristine Moorlands in Switzerland, Iceland, Highlands or polar caps in Siberia.

**VANESSA TOQUERO**

Vanessa Toquero is an independent researcher and designer working at the crossroads of Art, Design and Biology. Trained as design engineer, media researcher, and biohacker (self and community trained), she creates fictional scenarios embedding people, living organisms and matter into devices forming new media ecologies. Also, she nourishes (from) and believes (in) the middle ground (communities of hackers / artists / citizens working in alternative spaces) to have the power to subvert the dominating role of traditional science and technology spheres and therefore, guide us towards a more inclusive knowledge production. She researches about the role of an artist to influence the social imaginary through workshops and interfaces that focus on the radical poetry of the nonhuman.

[www.hybridoa.org](http://www.hybridoa.org)  
[www.hackuarium.ch](http://www.hackuarium.ch)





GUEST SPEAKERS

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## Prototyping Livable Futures

### **AMY M. YOUNGS**

Amy Youngs creates biological art, interactive sculptures, and digital media works that explore relationships between technology and our changing concept of nature and self. Research interests include: interactions with plants and animals, technological nature follies, constructed ecosystems, and seeing through the eyes of machines. Youngs has exhibited her works nationally and internationally at venues such as the Te Papa Museum in New Zealand, the Trondheim Electronic Arts Centre in Norway, and the Peabody Essex Museum in Salem, MA. She has lectured widely at venues such as the Australian Center For the Moving Image in Australia and the Walker Art Center.

She has published articles in *Leonardo* and *Antennae* and her work was profiled in the book, *Art in Action, Nature, Creativity & our Collective Future*. She received her MFA from the School of the Art Institute of Chicago and is currently an Associate Professor of Art at The Ohio State University, where she teaches media arts and eco arts courses.

Can we imagine a future that includes a diversity of life forms that also includes our human selves? In these days of accelerated extinctions, eco-catastrophic events and nihilistic predictions, it may be easier to imagine that the earth will be better off without us, than to plan for our species future. Although we may be conflicted or even doubtful of our own survival, I propose that now is a good time to plan, prototype, and test alternative scenarios for living together more gracefully.

As an artist, my practice is motivated by a desire to empathize with the non-human and to experience myself as part of the ecosystem. I create situations designed to encourage others to sense themselves in there as well. These functional models include insects, worms, plants, bacteria, technology, and humans, coming together into systems that encourage interdependence and cooperation, rather than competition. Technology is experimentally employed; in an attempt to create interfaces, amplifiers, or connectors, rather than system controllers. The work endeavors to forge pathways that lead out of personal and species narcissism. Can we grow beyond our individual egos and re-imagine ourselves as ecosystem participants rather than consumers of ecosystem services?

In an ecocentric future, we will learn from non-humans, develop biomimetic systems, and form multispecies kinship networks. What does this kind of future look and feel like? How do we begin? Calling all creatives: let's get together, prototype some possibilities, and try them out.

### Expanding the Bubble

For my generation, the "Blue Marble", the image of the Earth taken by the astronauts of the Apollo mission was a symbol of humility and fragility. For the generations born after the fall of the Berlin

Wall, it has become a symbol of arrogance and domination.

For my generation, one of the goals was to show to the wider audience as possible those extraordinary artworks dealing with science and technologies. Today, in-between a growing academic discourse and the immediacy and buzz of the social networks, the question is how do we get out of our bubble and rescue the artworks from the flow.

Both the discourses toward the art-science-technology field —from enthusiasm to resilience— and the means to reach audiences have evolved.

Framed by those two poles, I shall present some of the recent projects I have been involved in such as "Trust Me, I'm An Artist" dealing with ethics and bioart/biomedicine, "FEAT/Future Emerging Art and Technology" an artists in residence programme in scientific labs or the LASER/Leonardo Art Science Rendezvous events. I shall discuss some of the topics I am currently researching such as "Reinhabiting" expanding on the exhibition I curated in 2009 about life in extreme environments or "Repairing, Regenerating, Augmenting" and some of the modalities/possibilities to "show", write and communicate about the artworks at the intersection of exhibition and documentation such as the "enriched video capsules" based on the MemoRekall software.

### ANNICK BUREAUD

Annick Bureaud ([www.annickbureaud.net](http://www.annickbureaud.net)), is a Paris-based art critic (collaborating to the French contemporary art magazine Art Press) and curator in art-science and technology. She is the director of Leonardo/Olats ([www.olats.org](http://www.olats.org)), the French/European sister organisation to Leonardo/ISAST ([www.leonardo.info](http://www.leonardo.info)).

She wrote numerous articles and co-edited the ebooks *Water is in the Air: Physics, Politics and Poetics of Water in the Arts*, Leonardo/ISAST, MIT Press, 2014 and *Meta-Life. Biotechnologies, Synthetic Biology, ALife and the Arts*, Leonardo/ISAST, MIT Press, 2014. She organised many symposia, conferences and workshops among which *Artmedia VIII: From Aesthetics of Communication to Net Art*, Paris, 2002 and *Visibility – Legibility of Space Art. Art and Zero Gravity: The Experience of Parabolic Flight*, Paris, 2003. In 2009, she co-curated the exhibition *(Un)Inhabitable? Art of Extreme Environments*, Festival @rt Outsiders, MEP/European House of Photography, Paris. In 2012, she was the curator of the work *Tales of a Sea Cow* by Etienne de France at the PAV in Torino, Italy.

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## **CATARINA POMBO NABAIS**

Catarina Pombo Nabais is born in Lisbon in 1976. Graduated in Philosophy by the Faculty of Letters of the Classical University of Lisbon (1998), she obtained the Diplôme d'Etudes Approfondies in Philosophy at the University of Amiens, France (1999) and a PhD in Philosophy by University of Paris VIII, Vincennes- Saint-Denis, under the supervision of Jacques Rancière, awarded with the highest distinction for a PhD thesis in France, 2007. In 2013 she published her first book, entitled *Deleuze: Philosophie et Littérature*, edited by L'Harmattan, Paris. Catarina Pombo Nabais is a FCT Post-doc Researcher at the Centre of Philosophy of Science of University of Lisbon (CFCUL), where she is an integrated member since 2006. From 2007 up to 2014 she was the Head of the CFCUL "Science and Art" Research Group. She is now the Head of the "Science-Art-Philosophy Laboratory" (SAP LAB). Having a Post-graduation in Art Curating by FSCH/Nova, Catarina Pombo Nabais has also been developing work as Curator.

### Becoming-woman: the minorization of the body through tattoo

According to Deleuze and Guattari, the process of artistic creation is a political act. It is a process of becoming-minor (woman, child, black, Gitano, animal and so on). As they clearly state, there is no becoming-bigger, no becoming-man. All becoming is a minorization, because it is the fight of the minorities against the oppression of the power. Following this conception of art as politics and of politics as the expression of the minorities, I will analyze a paradigmatic case of female body's affirmation by tattoos.

Tattooing has a long and not always linear historic path. Sometimes, it was a sign of the veneration of the body, other times it was a forbidden, illegal and marginal practice. In some communities, female tattoo has been a women's affirmation of power. But most of the time, specially in Western culture, tattoo was a symbol of man's power over women.

This talk aims to think how tattoo, as the first, primordial body art practice, may be seen as the construction of a political territory while a new body-other, that is, may function as a singular mode of resistance to power major structures and men's civilization. In this context, which meaning can be given to female tattoo? May it be seen as an affirmative expression of a female body, freed from all kinds of domination?

Preindividuation and Bacteria:  
Revisiting Gilbert Simondon through the Hologenome

Mid last century, French philosopher Gilbert Simondon reconsidered the individual human in terms of individuation, process, and the unique idea of “preindividuation.” Distancing individuality from singularity, the discrete self for Simondon emerges from a field of unfolding and multiplicity. Individuals do not appear *ex nihilo* fully formed in a oneness of being, but are the materialization of an in-betweenness that itself emerges from a roiling plenum of diversity. He argued that we should “try to grasp the entire unfolding [of ontogenesis] in all its variety, and to understand the individual from the perspective of the process of individuation rather than the process of individuation by means of the individual.” While Simondon’s writing was shaped by forces both wet and dry – given form by the biological and technological, from crystals to coelenterates to cars – today his ideas resonate in newfound ways through knowledge of the microbiome. This essay revisits Simondon’s idea of identity propounded by his concepts of “preindividuation,” “transindividuation,” and “transduction” in light of the microbiome, hologenome and holobiont. While the microbiome identifies the bacteria and its genetic material within a given environment, the hologenome reconfigures individual plants and animals in terms of the holobiont, that is, the host with all of its commensal and symbiotic microbes. From this perspective, I argue that the habits and necessities of bacteria and hosts instantiate Simondon’s ideas about preindividuation in ways that are new. At the same time, these connections are connected in unforeseen ways to Simondon’s original take on taxonomy and the natural sciences that includes jellyfish, crustacea, motorcycle engines, and cathode tubes. Uniting Simondon and bacteria, I argue here for a new scalar identity politics rooted in microbiology.

**CHARISSA N. TERRANOVA**

Charissa N. Terranova is a writer and educator. Terranova researches complex biological systems from a cultural purview, focusing on the history of evolutionary theory, biology, and biocentrism in art, architecture, and design. She is author of *Art as Organism: Biology and the Evolution of the Digital Image* (2016) and *Automotive Prosthetic: Technological Mediation and the Car in Conceptual Art* (2014), and coeditor with Meredith Tromble of *The Routledge Companion to Biology in Art and Architecture* (2016). Terranova is currently coediting with Ellen K. Levy D’Arcy Wentworth Thompson’s *Generative Influences in Art, Design, and Architecture: From Forces to Forms*, forthcoming from Bloomsbury Press, 2019, and writing a monograph titled *Biology in the British Bauhaus: Morphogenic Modernism in Art, Science, and Design*. Associate Professor of Aesthetic Studies, she lectures and teaches seminars at the University of Texas at Dallas on modern and contemporary art and architectural history and theory, the history of biology in art and architecture, and media and new media art and theory.

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## **DALILA HONORATO**

Dalila Honorato, Ph.D, is a facilitator of safe spaces for hosting the interaction of ideas around liminal issues in the frame of Art&Sci. Her research focus is on embodiment, monstrosity, the uncanny and the acrobatic balance between phobia and paraphilia. She is Assistant Professor in Media Aesthetics and Semiotics at the Ionian University, Greece, guest faculty at Alma Mater Europaea, Slovenia, collaborator at the Center of Philosophy of Sciences, University of Lisbon, Portugal and member of the Steering Committee of the conference "Taboo-Transgressions-Transcendence in Art & Science".  
<http://ionio.academia.edu/DalilaHonorato>

### What am I doing here?

I identify as a social scientist working within Art, Science and Technology. In the same way that I also prefer to choose the non-binary gender title Dr. when booking a flight I know that I am not exactly the type of scientist or doctor one has in mind when thinking about those labels. Coming from a background in communication and with a passion for the anatomy and cognition of body expression there is after all one main issue that brought me here: my role as an academic working in an interdisciplinary environment within art & technology. Therefore, I would like to share my obsession with hybrid narrative and ethnographic methodology in practice research.



But arts and sciences should be like mines, where the noise of new works and further advances is heard on every side. — Sir Francis Bacon. Original Latin as in *Novum Organum*, Book 1, XC, collected in *The Works of Francis Bacon* (1826), Vol. 8, 50-51. As translated by James Spedding and Robert Leslie Ellis in *The Works of Francis Bacon* (1863), 127.

Art and science have their meeting point in method. — Earl Edward George Bulwer-Lytton, *Caxtoniana* (1875), 303.

These two quotations that I chose to start with, are the crux of my interest and focus. It was serendipity that lead from fondness and curiosity to passionate and purposeful work. What begun as an observation on the similarities between the creative processes in art and science, and a rudimentary and theoretical approach, developed in a well-structure mode of tackling the simulations generated by the BioMedical Simulations Laboratory (BSL). I do strongly believe that arts in general and visual arts in particular have a crucial role to play in scientific research by bringing to the forefront the ethics of investigations and their results as well as through their means of expression and interpreting the world around & highlighting the broader context (thus participating fully to the paradigm shifts). As a result, I am engaged in facilitating the collaborations between the group I am affiliated with (BSL) and bio-, multi-media- and sound artists and designers.

The strategy for achieving a successful outcome progressed over the last decade. In the early days, it was based on assiduous theoretical research and “in-lab” fine-tuning of computer simulations by blending established engineering and medical conventions with modes of representation common with visual arts.

The next step was a more direct engagement with the arts,

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namely collaborating on projects that allowed either the use of patient data-based images in multi-media installations or creating a soundscape based on raw- or visualized bio-data.

Lastly, a more “purposeful” type of partnership was established through step-by-step, continuous collaboration between the clinical, engineering and sound design team. In addition to the artistic involvement, the collaboration involves an anthropologic side that, for the time being, is also being part of my mission.

This being said, I salute this remarkable initiative and am very much looking forward to sharing my experience, practise and interests with the other participants in the hope of creating new, long-lasting partnerships.

## **DOLORES STEINMAN**

Dolores Steinman was trained as a Paediatrician and, upon relocating to Canada, obtained her PhD in Cell Biology. Currently she is a Research Associate in the Department of Mechanical Engineering at the University of Toronto and a volunteer Docent at the Art Gallery of Ontario. In her research she observes the rapport and the connection between medical imagery and its non-scientific counterparts. Her pursuit is driven by her keen interest in placing the ever increasingly technology-based medical research in the larger context of the humanities.

### The Scent of a Woman

Passion, strong, delicate, supremely sensuous, classic, magnetic, powerful, mesmerizing, enchanting, feminine, sparkling – the list goes on describing the scents designed for women. With a curiosity towards body matter and its inherent potential as a vessel for lucrative compounds, the possibility of mining, exploring and transforming it is alluring. Feeling somewhat like an alchemist or perhaps a witch I have found myself researching myths, folkloric references and scientific papers in my research for the project HumanPerfume.

### HEGE TAPIO

Hege Tapio (NO) is based in Stavanger, the oil capital of Norway. During her artistic and curatorial practice she has for a long time pursued her interest in the intersection of art, technology and science. With a kitchen bench DIY attitude and through artistic practice she has been inspired to how apparatuses, new technology and life science opens to renewed interpretation, creative misuse and critical thinking. She is the founder and director of of i/o/lab – Centre for Future Art since 2001, where she has established and curated Article biennial – a festival for the electronic and unstable art. Her work has been exhibited and presented in Greece, China, Latvia, Denmark, England and several places in Norway, along with public commissions and several curatorial projects.

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## The Beauty Kit & Farm – Queering for recruitment

My artistic research evolves around the effort of creating narratives that stimulate the trans individual ecology of imagination and its faculty to propose liberation dispositives for a hyper commodified life. This is leading me to intertwine multiple art forms with technology, biology and agriculture, proposing participatory performances that write Sci-Fi stories, in situ and in praxis time, such as “The Beauty Kit Focus Group & Farm”. This “making with criticality” and “worlding” project, aims at deconstructing the commodification process of a good, a beauty product, and the notion of materiality imbedded in its industrial process. The intention is to destabilize the fixed categories of production understandings, by queering both: process and material, transforming process and material into modes for archiving knowledge and product into a camouflaged activism.

I’m fascinated by the hybrid nature of the female sexual organs, as they seem to have a certain “non-human agency”, which produces a variety of fluids containing “animal like nutritious properties with plant like healing faculties” pertaining to the: menstruating, fertile, orgasmic, pregnant specific and menopausal ecologies of the female organs. Throughout a dedicated enquiry into allopathic and alternative medicines (i.e. Chinese medicine), I understand that these fluids have properties that can enhance beauty and health. In the Beauty Kit Focus Group, a participatory lecture, I display the lines of beauty bio-products that I manufacture and develop using female genital fluids and invite the audience to advice on possible consumers (i.e.: CLARIFYING MIST: 7 times filtered G-spot moisture collected at full body orgasm). By presenting the work in progress of this performance, I have informed the audiences about powerful faculties of the organs that birth us into life, and evidenced empty gaps of scientific perspectives concerning the human body. As a result, I seem to be

crossing the boundaries of “performing” into “recruiting” participants for a social engagement event, embodying what this entails to deepen my research. This event is the Beauty Kit Female Farm, where I “upscale” the production level of the beauty bio-products.

This mobile “Farm” is eco-friendly cognitive-pleasure oriented. It adapts to the site-specific ecosystem of the space it inhabits, recycles and archives living materials (which are usually regarded as waste) and produces within a symbiotic niche of synergic mutualism. In June 2018 I will lead a group of 15 guest artists (coming from different continents) during the first research version of this farm at Cultivamos Cultura Portugal. Here they become “harvesters” of the “female abyss” (the female organs), as I, together with the farm facilitators, teach them the DIY technologies of a “female abyss farming technique” and the manufacturing of the beauty bio-products, in exchange of their genital fluids. The expected outcome of this experimental version, consists in a library of female fluids and the fabrication of a greater number of new products, which will allow me test the farm’s self-sustainable economic model for an open accessibility.

## **ISABEL BURR RATY**

Isabel Burr Raty is an independent filmmaker and performance artist, exploring the ontological crack between the organic and the artificially engineered, between the unlicensed knowledge of the relocated and the official facts. In so doing, she aims to dig up chapters left out of history books, blur the limits between fiction/reality and re-think the memory of the future. Isabel is based in Brussels, where she develops her second feature film set in Easter Island (supported by Media Fund). She is an associated researcher in a.pass.be. Her artistic research interweaves new media, body art, lectures, biology, agriculture and participatory performance proposing hybrid narratives and bio-autonomy practices that play with synthetic magic and compose in situ Sci-Fi. Isabel participates in collective art projects on a regular basis, having presented her works and collaborations in venues such as: KVS Theater, Constant\_V, ZSeene Art Lab, Beursschouwburg, Limal (Brussels); Palais de Tokyo Paris, ISEA Hong Kong and Cultivamos Cultura Portugal. Isabel has presented her artistic research at festivals and conferences such as Taboo Transgression Transcendence in Art and Science (Corfu Greece), Human Enhancement Clinic at Border Sessions (The Hague), Science Friction at the Aki Institute in Enchede University the Netherlands and FACTT at Humbolt University Berlin.

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## **JENIFER WIGHTMAN**

Trained as a Toxicologist, Jenifer Wightman is a research scientist specializing in greenhouse gas inventories and life cycle analysis of agriculture, forestry, waste, and bioenergy systems at Cornell University, funded by DoE, USDA, NYS DA&M, and NYSERDA. Her art practice began in 2002 and employs scientific tropes to incite curiosity of biological phenomena and inform an ecological rationality. Her art has been commissioned by NYC parks, featured at the Lincoln Center, BAM, and Imagine Science Festival, and is held in collections such as the Morgan Library, Library of Congress, Gutenberg Museum, Bodmer Museum, and the Danish Royal Library.

The story of Genesis is a perfectly reasonable hypothesis of creation given the available information. However, we have learned much since the invention of the Gutenberg Printing Press. The printing press is the beginning of contemporary science as it enabled broad and relatively inexpensive distribution of ideas that led to a true evolution of shared thinking. In 2014, I made a letterpress Addendum to the Gutenberg Bible updating the story of Genesis using contemporary science and data-visualization. This Addendum is founded in the tradition of story-telling and all the ways language playfully re/considers the world around us. I am in the process of hand-delivering this limited edition to Institutions that own one of the 49 remaining Gutenberg Bibles. To date 45 have been delivered with 40 formally accepted. This project convenes expert scientists, traditional paper and printing techniques, and world class libraries to add a scientific story of creation to the canon.

## INCUBATOR Lab: Re-imagining biotechnology through bioart practices

INCUBATOR Lab is a bioart research and teaching facility in the School of Creative Arts at University of Windsor in Canada. In 2018, INCUBATOR launched a state-of-the-art BSL2 theatre/laboratory facility where audiences can view live multimedia bioart performances through a glass wall. Founded in 2009 by Dr. Jennifer Willet, INCUBATOR Lab houses ongoing student and faculty bioart projects, and science and technology studies research and special events investigating the intersection of biotechnology, art and ecology.

This presentation will trace past and future INCUBATOR projects that engage in performative (re)imaginings of biotechnology as a technology of the body, as part of a complex ecology that implicates each of us in the life sciences. Biotechnology reinterpreted as a complex interspecies interaction challenges established traditions in bioethics and scientific method and economic notions of proprietary rights as applied to life. De-stabilizing these notions serves to open the biotechnological field towards alternative futures incorporating notions of creativity; sustainability; community, rural and indigenous knowledges; and bioethical considerations outside of current institutional modes. This research/creation trajectory argues for new conceptions of biotechnology as embodied, contingent and embedded in communities and ecologies; as a reflexive form of knowledge and production.

### JENNIFER WILLET

Associate Professor in the School of Creative Arts at The University of Windsor (Canada) is an internationally successful artist and curator in the emerging field of bioart. Her work resides at the intersection of art and science, and explores notions of representation, the body, ecologies, and interspecies interrelations in the biotechnological field. In 2009 she opened a bioart research and teaching lab INCUBATOR: Hybrid Laboratory at the Intersection of Art, Science, and Ecology, the first biological art lab in Canada. In 2018, Willet and INCUBATOR Lab launched a state-of-the-art BSL2 theatre/laboratory facility where audiences can view live multimedia bioart performances through a glass wall.

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## JOAN LINDER

Known for drawings packed with thousands, even hundreds of thousands of tiny, energized marks, Linder's large-scale images of quotidian subjects find inspiration from her immediate surroundings. Her most recent project, Operation Sunshine, explores the toxic chemical and radioactive waste sites on Buffalo / Niagara Falls. The work was exhibited in solo exhibitions at Mixed Greens Gallery, NY; the Albright Knox Art Gallery, Buffalo, The Faulconer Gallery, Grinnell College, IA. Other past notable exhibition venues include Kunstahallen Brandts, Odense, Denmark; the Aldrich Museum, the Gwanjgu Art Museum, the Bronx Museum, the Queens Museum, and The Museum of Fine Arts Boston. She has received residency fellowships at Yaddo, MacDowell, Villa Montalvo, and a Pollock Krasner Foundation grant. Linder is Chair and Associate Professor of Drawing in the Department of Art at the University at Buffalo SUNY and is co-curating an exhibition Hot Spots: Radioactivity in the Landscape, opening at the University of Buffalo Art Galleries in September 2018.

## Drawing Dirty Dishes & Toxic Waste Sites

In a culture is hyper-saturate with electronic imagery and I use the traditional materials of quill pen and bottled ink to create large-scale projects that explore pre-technological processes of observation of daily life through drawing. Creating life-size representations of everyday objects to put the observer and the observed on the same scale, I attempt to slow down the process of looking, and to encourage close scrutiny. The work is obsessed with ritual of daily activity, be it washing dishes or making drawings.

This presentation will focus on two bodies of work that derive from my perspective as an artist, mother and member of the community. Dirty dishes and toxic waste sites, are two distinct projects that bridge the personal and the political with a feminist perspective.

This talk will weave together how I use the process of drawing to archive, analyze and record daily ritual. Sink (2011-2013), records two years of dirty dishes in my kitchen sink. Operation Sunshine (2014-present) is an ongoing creative research project that explores history of toxic chemical and radioactive waste in the Niagara Falls area and the residue left behind from Manhattan Project era human radiation experiments that began in the 1940's in the United States.



### BioFutures: Working with Art and Science in Various Communities

In this talk Kathy High will discuss various art and science interdisciplinary projects taking place in Troy, NY, USA, a relatively small post-industrial city, 200 kilometers north of New York City. High will discuss the development of the BioArt and Technology Laboratory inside RPI, a private, conservative engineering university - in relation to the building of NATURE Lab at a local non-profit community media arts organization called The Sanctuary for Independent Media.

These different communities — one from academia and the other an economically challenged neighborhood – both have the need for larger social and environmental justice considerations around our biological futures. They also have a need to turn attention to the ethical debates around allocating resources, and creatively exploring eco- and biological resilience to climate change.

How can a coupling of science and art create a stage for deliberations about these futures with regards to the welfare of our ecosystems? How can we collaboratively create and design engaged bioworks around remediation for the welfare our future?

### Speed, Anxiety and My Failed Gut

My arts practice has been focused on the gut microbiome of late. I am frustrated that we might be out of time to understand how we actually relate to these gut bacteria and yeast. We need to accelerate our approaches to interact with our future biome updates and - at the same time - how to combat the demands of life. All this speed is making me crazy, and I need to find a way to not work more (as we all do now) - but to work at a pace that suits

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## **KATHY HIGH**

Kathy High (USA) is an interdisciplinary artist, educator working with technology, art and biology. She collaborates with scientists and other artists, produces videos, performances and installations and considers living systems, empathy, animal sentience, and the social, political and ethical dilemmas of biotechnology and surrounding industries. She has received awards including Guggenheim Memorial Foundation, Rockefeller Foundation, and National Endowment for the Arts. Her art works have been shown at documenta 13 (Germany), Guggenheim Museum, Museum of Modern Art, Lincoln Center and Exit Art (NYC), UCLA (Los Angeles), Science Gallery, (Dublin), NGBK, (Berlin), Fesitval Transitio\_MX (Mexico), MASS MoCA (North Adams), Esther Klein Gallery (Philadelphia) and Para-site (Hong Kong). High is Professor in the Arts, and has a lab in the Center for Biotechnology and Interdisciplinary Studies at Rensselaer Polytechnic Institute, Troy, NY. She hosts bio/ecology+art workshops and is creating an urban nature center in North Troy (NATURE Lab) with community media organization The Sanctuary for Independent Media. She is an ongoing Vivo Art artist in resident with the Center for Microbiome Sciences & Therapeutic, DePaolo Lab, School of Medicine, University of Washington, Seattle.

my body, or more specifically my gut. An impossible task. What does that look like? How to do this? What models to adopt? What am I really asking with this frustrated request? I will discuss vulture gut biomes, and new organoid (colonoid) methods for studying gut health and speculative futures for our survival, our mental health, and our gut love.

**KIRA O'REILLY**

Kira O'Reilly is a London based artist; her practice, both wilfully interdisciplinary and entirely undisciplined, stems from a visual art background; it employs performance, biotechnical practices and writing with which to consider speculative reconfigurations around The Body. But she is no longer sure if she even does that anymore. Since graduating from the University of Wales Institute Cardiff in 1998 her work has been exhibited widely throughout the UK, Europe, Australia, China and Mexico. She has presented at conferences and symposia on both live art and science, art and technology interfaces. She has been a visiting lecturer in the UK and Australia and U.S.A in visual art, drama and dance. Most recent new works have seen her practice develop across several contexts from art, science and technology to performance, live art and movement work.

**Space Feminisms**

*What kind of "new figure of the living" can extreme environments "make available for our stories"? (Stengers, 2011).*

Drawing upon art history and feminist sciences studies, the aim of our talk will be to create cosmic- and feminist oriented chrono-spatialities conditioned by unmoderated scales of reality. Informed by a field trip at Biosphere 2 in Oracle, AZ, we will seek to invent new figures of the living endowed with the capacity to "womanise" design. Our presentation will take the form of a performative talk in context of which we will intervene into one another texts, to cause some unpredictable juxtapositions and generative disturbances across our writings and their reception. Our objective will be to invent the field of Space Feminism, that is, a field of inquiry that acts as both a critique of the representation and visibility of women in outer space and as a laboratory to formulate new questions and new forms of experimentation informed by feminist perspectives. We will invoke diverse, charismatic and marginal feminine embodiments that suggest alterities for knowledges and interfaces between artistic, cultural, scientific, and technological practices. We will ask what unruly lineages might be explored across their heterogeneous presences to offer unforeseen and unexpected perspectives and framings in regard to our spatio-temporal imaginings?

**MARIE-PIER BOUCHER**

Marie-Pier Boucher's work brings concerns with globalization, aesthetics, and politics to bear on the study of interplanetary habitation, environmental degradation, biotechnology, global health and architectural and urban infrastructures. Her specific focus is design for extreme environments such as outer space. Collaborator on Adaptive Actions, she co-edited Heteropolis (2013) and Adaptive Actions (Madrid) (2010) and participated in collective exhibitions (Tokyo Wonder Site (TWS), Japan, 2015; Leonard & Bina Ellen Art Gallery, Montreal, 2010; Biennale Madrid Abierto, Spain, 2010). She holds a PhD in Art, Art History and Visual Studies from Duke University (2015) and is currently a Mellon Postdoctoral Fellow at MIT's Center for Art, Science and Technology (CAST) + Program in Science, Technology and Society (2017-2019).

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## **LAURA BELOFF**

Laura Beloff (Finland/Denmark) is an internationally acclaimed artist and researcher who has been actively producing art works and exhibiting worldwide in museums, galleries and art events since the early 1990's. She has been a recipient of various grants, art residencies and awards. In 2014 she received with partners the largest art grant within Nordic countries from the Nordic Cultural Fund. Her artistic and research interests include practice-based investigations into a combination of information, technology and organic matter, which is located in the cross section of art, technology and science. The research engages with the fields of: art & science, biotechnologies, biosemiotics, and information technology in connection to art, humans and society. The outcome of the research and artistic practice is in a form of process-based and participatory installations, programmed conceptual structures and networked wearable objects, additionally to publications and papers. Additionally to her work as an artist she has worked in academic positions as a Professor in Oslo, Norway, Visiting Professor in Wien, Austria and currently as Associate Professor and Head of PhD School in Copenhagen, Denmark.

<http://www.realitydisfunction.org/>

### Plausible Bitch

Today, we acknowledge many issues, approaches and ways of being that are often divided to acceptable or non-acceptable categories when considering non-human organisms. These categories and issues have been in recent years increasingly framed by post-humanist theory. All this is happening for good reasons, e.g. critically looking at humans' long-term approaches in using natural resources and other actions that have had a drastic impact to other-than-human organisms and our planet as a whole.

The short talk will present questions that emerge when working with a living matter as an artist. The aim is not to present a politically-correct approaches, opinions and methods, but to address the complexity of issues present in this situation, such as history, role of art, intentionality and unintentionality, role of technology and science, cruelty, ethical regulations and expectations for right or wrong, among many others. A selection of issues will be approached with a personal perspective through a critical viewpoint to the author's own artistic projects.

### Empathy through atmospheres in art and science

The concept of atmosphere has taken unprecedented importance in recent years across different disciplines. From architecture to contemporary art to marketing and design, the staging of atmospheres and their effect in corporeal experience is more and more being taken into consideration when designing. Some architects even claim that quality architecture is about provoking these potentially active trajectories in space creating atmosphere. Marketing and design have long used their effects to elicit powerful human emotions into brand affiliation with the so called user centered brand experience. In contemporary art the staging of atmospheres can be significant in amplifying the sensitivity of the participant to bodily communicate with her or his lived body, therefore the experience of art becomes an embodied one and in a sense more meaningful than the art that suggests taking distance to experience through intellectual affordances. Triggering the experience of art through atmospheres resonates physically in the participant demanding an emotional response. Therefore, the artwork becomes a lived experience and somehow this can enable a true post reflection through empathy.

This presentation aims at presenting the possibility of staging atmospheres in contemporary art within the intercrossing of science in search of more meaningful, moving experiences beyond the fascination of technology and intellectual affordances.

### **LENA ORTEGA**

Lena Ortega. Artist, researcher and designer based in Mexico City whose main line of research are the concepts of atmosphere and embodied experience. The exploration of such notions has led her to experiment through various types of media that range from immersive installations to sound and light art. Member of the Art+Science interdisciplinary research group based in the UNAM with international projection. She holds a Masters in Visual Arts from the UNAM and a specialization in Media and Design for Printing from SFSU. She has been part of the official selection and honorable mention of animation and video contests and has taught at the Faculty of Arts and Design of the UNAM and recently at La Salle University. Currently finishing a PhD in Art History at the UNAM and venturing into sound art exploring the intersections between culture and nature.

[www.leenalee.net](http://www.leenalee.net)

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## LOUISE MACKENZIE

Louise Mackenzie is an artist and researcher, recently completing a PhD in fine art at Northumbria University, an Associate of the Institute of Genetic Medicine, Newcastle University and a member of the Cultural Negotiation of Science research group. Louise explores notions of human drive, progress, production and waste. Drawn towards the mechanisms upon which consumer-led society is founded, elements of her work focus on technical processes and, increasingly, biotechnology. Her current research investigates the use of life as material, specifically, the insertion of synthetic DNA into living organisms and the emotional weight of working with life in the laboratory. Louise was a finalist in the Bio Art & Design Awards 2015 and recipient of the New Graduate Award at Synthesis, Manchester Science Festival, 2013. She has spoken at Transimage Edinburgh, Leonardo LASER London, ISEA2016 Hong Kong, Bodily Matters, UCL London, and Sonic Environments, Brisbane. Her artworks have been exhibited at the National Library of Spain (Madrid), Lumiere (Durham), Summerhall (Edinburgh), BALTIC39 (Newcastle), Bond House (London), Basement 6 Collective (Shanghai) and National Taiwan University of the Arts (Taiwan).

### Pithos - (Re) considering biotechnology through myth and metaphor

The word *pithos* means vessel. Originating in ancient Greece, a *pithos* was a vessel that would have contained goods of economic value: wine, oil or grain. In a biotechnological era where living organisms are reformed as containers and bestowed with economic value, this paper asks what new forms of thought emerge when (re)considering the biotechnological artefact as vessel. *Pithos* (Mackenzie, 2016) is an ongoing project that traces biotechnology to the roots of craft (*techne*), questions patriarchal scientific language and attempts to unbind biotechnology from determinism through speculative performative discourse.

## The Project of a Philosophy of Nature from an Aesthetic-ontological Perspective

How to build a theoretical framework from a philosophical perspective that allows us to think the state of the matter in relation to the intertwining of arts, technology and life sciences? Why would this framework be significant not only to consider the ranges and limits of art and science movements, but also to contribute to the development of a project of a philosophy of nature?

To answer these questions my aim in this lecture will be to present the outline of the arguments that constitute the core of a philosophy of nature, from which it is relevant to traverse and ask about the biotech arts.

In this respect, I will state that a philosophy of nature for the XXI century has to think about nature not from a contemplative point of view (where, for example, romanticism is a paradigm), and not from a preponderant epistemological perspective (where, for example, philosophy of science is a paradigm of this kind of approach), but from a broader horizon that takes into account what ontologies have said about language in the past century as the principal path to ask the question about being.

Methodologically, I propose an experimental philosophy that can work with art, science and technology in the way that it experimented with language in the scope of, e.g., hermeneutics or post structuralism, that is, not only producing discourses, but at the same time traveling through literature to build the ontological concepts.

The question about art for the philosophy of nature is therefore not an aesthetical one, but an ontological one, meaning that it considers art as a way to produce the sensible world.

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## **MARÍA ANTONIA GONZÁLEZ VALERIO**

María Antonia González Valerio. PhD in Philosophy from the National Autonomous University of Mexico (UNAM) with postdoctoral studies in the area of aesthetics. Full-time professor of the Faculty of Philosophy and Literature and of the postgraduate programs in Philosophy, Philosophy of Science, Art History and Fine Arts UNAM. She works within the research line of ontology-aesthetics and the interdisciplinary line of arts, sciences and humanities, specifically in the field of art that uses bio-media. Head of the research group Arte+Ciencia (Art+Science) which gathers artists, scholars and scientists in an interdisciplinary work that produces education at an under and postgraduate level, specialized theoretical research, artistic creation and exhibitions.

*[www.magonzalezvalerio.com](http://www.magonzalezvalerio.com)*

At the same time, nature is not the realm of the natural, but what has been altered, whether materially or epistemologically, through science and technology.

The philosophy of nature intends to think about nature as the principal way to ask the question about being, and if nature is the result of transformations that go from science to technology to art, and if this kind of philosophy wants to act in an experimental way, then it has to investigate how and why art is working nowadays with nature, for example, the biotech arts; and it also has to investigate firsthand what are the scientific protocols that are being held.

In order to do that, the approach should not be a general one, or a panoramic perspective, but a very specific one, that actually allows us to build ontological concepts in this immanent manner that passes through art, science and technology.



### Art Making with Memory Matter

This project takes the form of a collaborative art/science research model. It is discursively located within the paradigms of memory, life sciences and visual arts. Within the process it allows the boundaries between aesthetics, philosophic and scientific disciplines to become significant in a relational network associated with the themes of remembering/forgetting, presence/absence, and concepts of self-identity.

This research is sustained by robust methods and practice in addition to unique ethnographic approaches within a molecular biology laboratory, a biomedical engineering laboratory, botanical gardens and museums, and neuroscience clinical and pathology contexts. Memory studies are a field of interdisciplinary inquiry that harmonizes intellectual strands from many domains, from anthropology, to philosophy and psychology. Recent discussions focus on distinctions between ‘types’ of memory; representation, materiality and the mind; and the dialectical relationship of memory and forgetting. This research contributes to their agenda, as art became an important agency to the memory-work required by contemporary life and culture, by challenging ontological assumptions that underpin much recent research on memory, including understandings of biological memory, and the role of it’s enhancement.

I use my practice-led arts research to enhance the skills of future generations of artists/researcher’s and to bridge the gap between technological development and different research areas such as the humanities, the visual arts and the life sciences. My presentation aims to stimulate debate on the current understanding on the nature, metaphors, containers and enhancement of memory and further encourage transdisciplinary arts-lead research.

### MARIA MANULA LOPES

Maria Manuela Lopes is a visual artist and researcher based in Portugal and the UK. Her current practice is transdisciplinary and based on issues of memory and self-identity informed by life sciences and medical research and presented in the form of time-based installations, occasionally including biological materials. She has been working and showing nationally and internationally and also teaching fine arts in Portugal since 1998. She has studied fine arts – sculpture at the FBAUP-Porto, Portugal and did an MA at Goldsmiths College in London. She is presently doing a practice based research degree at UCA Farnham, UK, working with representational strategies of Alzheimer’s disease in a neuroscience laboratory at Hospital Santa Maria and Molecular Medicine Institute in Lisbon. Maria is also assistant-Director of two residency programs: 1) ‘artists in Labs’ Ectopia – Lisbon, and 2) Cultivamos Cultura, an ecological oriented residency program in a farm in Alentejo. She has concurrently been presenting her work internationally at conferences and also publishing.

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## Rejection as Identification

“As we gaze into the mirror it (nature) holds up for us, we too easily imagine that what we behold is Nature when in fact we see the reflection of our own unexamined longings and desires.” by William Cronon

In the artistic research and practice that I have been developing over the last 20 years, I not only try to make some sense of the concepts I work with, use and develop for my artworks, but I also aim to experiment with new material, live, pulsing, changing material to express these concepts. At FEMeeting I will reflect on the possibilities of my works in relation to the concept of Identity and how it became the underlying idea that unites my entire body of work.

The works I will focus on are some of the most recent ones developed in collaboration with my life partner Luis Graça, a Medical Doctor, Professor and Principal Researcher in immunology.

The first work is called “Immortality for Two” and it involved immortalising Luis’ white blood cells, and vice-versa. This was achieved using a viral vector to introduce oncogenes in the cells.

The process allowed for the generation of two immortal cell lines containing the complete genomic information of the couple. The project, through the action of the reciprocal immortalisation of cells from two people in love creates a poetic tension in the laboratory. This tension derives from the Fact that the laboratory is a place of exactness where love and emotions are often neglected.

The second project is in a way a sequel to the first one where the artist and the scientist achieve a form of immortality, a place outside their bodies, their minds and their time, together.

“Anti-Marta” involves the grafting and transplantation of small patches of skin between the couple that, though rejection, will trigger the generation of antibodies against each other. This work, then, focuses on the capability of our immune system to differentiate self from non self and generate molecules that will, for ever, prevent the acceptance/tolerance of the other without any interference from our rational or emotional brains. It is a profound definition of self performed by our bodies without the use of our mind.

### **MARTA DE MENEZES**

Marta de Menezes is a Portuguese artist with a degree in Fine Arts by the University in Lisbon, a MSt in History of Art and Visual Culture by the University of Oxford, and a PhD candidate at the University of Leiden. She has been exploring the intersection between Art and Biology, working in research laboratories demonstrating that new biological technologies can be used as new art medium. In 1999 de Menezes created her first biological artwork (Nature?) by modifying the wing patterns of live butterflies. Since then, she has used diverse biological techniques including functional MRI of the brain to create portraits where the mind can be visualised (Functional Portraits, 2002); fluorescent DNA probes to create micro-sculptures in human cell nuclei (nucleArt, 2002); sculptures made of proteins (Proteic Portrait, 2002-2007), DNA (Innercloud, 2003; The Family, 2004) or incorporating live neurons (Tree of Knowledge, 2005) or bacteria (Decon, 2007). Her work has been presented internationally in exhibitions, articles and lectures. She is currently the artistic director of Ectopia, an experimental art laboratory in Lisbon, and Director of Cultivamos Cultura in the South of Portugal.

<http://martademenezes.com>

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## MARY MAGGIC

Mary Maggic is a non-binary artist working at the intersection of biotechnology, cultural discourse, and civil disobedience. Their work spans documentary video, scientific methodology, public workshopology, performance, and large scale installation. Maggic's most recent projects Open Source Estrogen and Estrofem! Labgenerate DIY protocols for the extraction and detection of estrogen hormone from bodies and environments, demonstrating its micro-performativity and potential for mutagenesis, i.e. gender-hacking. They hold a BSA in Biological Science and Art from Carnegie Mellon University and a MS in Media Arts and Sciences from MIT Media Lab and have had the privilege to exhibit and/or perform at Haus der Kulturen der Welt (Berlin), OK Center (Linz), Haus der elektronischen Kunst (Basel), Jeu de Paume (Paris), Institute of Contemporary Arts (London), and Spring Workshop (Hong Kong).

## Toxic Queer

The capitalist-industrial trifecta (Petrochemical, Agro, and Big Pharma) has irrevocably altered our environments, our bodies, and bodies of non human species through the pervasive spread of hormonally active compounds. While definitions of "normal" and "natural" are under attack, so are the bodies and identities of those who do not fit the binary norm. Does this mean queers have no future in our toxic becoming?

Can we generate a productive alienation in a landscape we no longer know? The widespread alienation of our bodies and bodies of non-human species prompts us urgently to redefine the "new normal" the "new other" the "new breeder," to create spacious room for our toxic variance and for all the aliens living among us. For the Toxic Queer, Queer is perpetuity, Queer is ubiquity, Toxic Queer disrupts, perverts, destabilizes, Hegemonic Symbolic Order, Cis-Hetero and ultimately Reproductive Futurism.

### Collaboration as a creative inception: Performing arts, science and community

The lecture will provide different thematic lines to approach the hybrid languages of Scenic Art, as well as the importance of collaborative work in the creation of art involving science and technology.

The topics I propose revolve around the alleged possibility of generating dissident subjective matrixes from hybrid corporeal patterns by means of using of new technologies. Under this viewpoint, a technological device can be defined both as a catalyst of new language possibilities that may enrich the artistic event and as a device that can portray an expressive dimension impossible to achieve within the tools of traditional performance. The result on the scene is an aesthetic event where human and technological devices appear integrated, reciprocally re-scaling and multiplying their projections.

Prosthetics: increase the concept beyond the body-mind cartesian separation in order to address it from a wider point of view. Gesture: intuitive, and present values will be questioned from a corporeal technologized mysticism. Metaphor: symbolic relationships that evolve within the performance of technology as a character will be addressed. The magical, dreamlike, and spectral aspects that enable body, image, and space transformations in performance arts in the digital era, will be thought about.

The interest is to blur the boundaries between the technological and the human in order to explore the creative power of the synergy. In this sense I seek to reflect on how technology is involved in dramatic and scenic actions and how this participation can broaden the spectrum current aesthetic possibilities. Inter-disciplinary approach can shed light upon the knowledge that emerges from within these intersections. I will present some cartographies as approaches of theory and experiences.

### **MINERVA HERNÁNDEZ TREJO**

Minerva Hernandez.

Transdisciplinary artist. Her work revolves around collective memory, the relationship between body, technology, science, poetry and vitality. She studied Photography and Cinematography in Brussels, Belgium. She is an honorary member of the National System of Creators since 2010 and is part of the Art and Science research and creation group of the UNAM. She currently directs the transdisciplinary Bioscénica company, dedicated to creating, developing and producing proposals that combine arts, sciences and technology.

*<http://bioscenica.mx>*

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## Art and Technology for Environmental Sustainability

What are we, as artists, researchers and educators, able to do to contribute to a more sustainable world? Throughout this presentation I will question the active role we can play in facing the challenges of climate change. In this context, I will share the ARTiVIS project motivations and prospects for future activities.

The ARTiVIS collective has been working since 2010 to study the relationship between Art, Technology and Sustainability through the development of open tools – such as the DiY forest surveillance kit – and interactive experiences – such as Play with Fire, Hug@ree and B-Wind! – that reinforce the environmental awareness of individuals. The ARTiVIS Living Lab is a project that aims to build a space for research, production and artistic and scientific dissemination in the area of environmental sustainability in a context of immersion and direct intervention in the rural environment.

Located in the North of Portugal, the Living Lab will promote residences, workshops and other activities that propose to bring artists, scientists and the general public in contact with new technologies and their application with creative approach to issues related to environmental sustainability. This process has started with artistic residences for the creation of prototypes with doctoral students and a curated exhibition for these new pieces.

The link between scientific research and my artistic work has been an essential source of new knowledge, perspectives and practices that have been very positively reflected on the methodologies I apply and share with students.

The vision for my activity as a teacher, artist and researcher in the area of Multimedia Art follows and deepens the orientation

of opening the artistic creation processes to continuous and collaborative learning, both individually and in the understanding of Multimedia as an integrating field of different practical and theoretical knowledge that can be the basis for a coherent artistic practice. In this way, I intend to promote the contact of students and institutions I represent with new proposals emerging from open technology and modes of collaborative work, with transdisciplinary research and development processes in articulation with other national and international networks, and with an artistic practice focused on the creation of a discourse of appropriation of technology that aims at a critical use for the creation of a better world.

### **MÓNICA MENDES**

Mónica Mendes is a digital media artist, designer and professor at the University of Lisbon. She is currently coordinating the Multimedia Art PhD and collaborating in the Sustainability Sciences PhD of the University of Lisbon. She is also a researcher at LarSys / Madeira Interactive Technologies Institute (M-ITI), collaborator at Fine Arts Research Center (CIEBA) and a member of Food, Farming and Forestry College (F3). Additionally, she co-founded altLab, a hackerspace dedicated to independent experimentation in alternative media, and the Creative Coding Circle, an informal collective focused on creative programming. Interested in designing for a more sustainable world, Mónica created the ARTiVIS project, exploring real-time interactive systems at the intersection of Art, Science and Technology. The research has been carried out with multidisciplinary collaborations from research institutions, hackerspaces and local populations, and has taken place in community, culture and art events such as art residencies, meetings and workshops, conferences and exhibitions. Mónica holds a PhD in Digital Media (UT Austin-Portugal Program), a Master in Multimedia Educational Communication (Universidade Aberta) and a degree in Communication Design (Faculdade de Belas-Artes).

<http://monicamendes.info>

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## A rock of one's own: Lithic intimacy in art and science

While rocks are fluid and agential, "lithic intimacy runs slow and deep" (J. J. Cohen). Mineral forces operating without and within human bodies might be experienced as relationships based on transcorporeal reciprocity.

In my talk I will explore those art projects which might be viewed as expressions of lithic intimacy in their individual specificity of the organic-mineral corporeal experience and with the singularity of the encounter. I will explore work of Jennifer Robertson who weaves minerals into unpredictable textures, Ilana Halperin's investigations of body mineralogy and earth anatomy, and Katie Paterson's intervention into a grain of sand and a Campo del Cielo meteorite. A concept of a rock of one's own will allow me to trace these women artists' intimate mineral bodily practices and the possibilities of mutual desires.

### **MONIKA BAKKE**

Monika Bakke is Associate Professor in the Philosophy Department at the Adam Mickiewicz University, Poznań, Poland. She writes on contemporary art and aesthetics with a particular interest in posthumanist, transspecies and gender perspectives. She is the author of *Bio-transfigurations: Art and Aesthetics of Posthumanism* (2010, in Polish) and *Open Body* (2000, in Polish) co-author of *Pleroma: Art in Search of Fullness* (1998), and editor of *Australian Aboriginal Aesthetics* (2004, in Polish), *Going Aerial: Air, Art, Architecture* (2006) and *The Life of Air: Dwelling, Communicating, Manipulating* (2011). From 2001 till 2017 she was working as an editor of a Polish cultural journal *Czas Kultury* [Time of Culture].

### **Efflorescence of Nonlife**

With the contemporary need to go beyond the biological comes the efflorescence of nonlife. It is not an attempt to overcome death/life distinction but rather to allow taking nonlife into consideration. In my presentation I am going to discuss my current theoretical work (a book in progress) on nonlife forces operating in the organic and nonorganic contexts and expressed in art projects and natural history museum displays.



*Reconnaissance.*

For nearly two decades I have been working in the interdisciplinary fields of art & science & technology. In the previous decade due mostly to cultural political reasons I focused a considerable amount of my curatorial practice on the circulation and propagation of experimental films and videos by Canadian women artists for Central Europe and beyond. This was an alternate form of science. One of the main reasons for the tours was that contemporary art information (especially technologically supported art such as video) from the West was difficult to obtain east of Vienna. The notion in the early nineties that contemporary women artists working in technological media are faced with contradictions was especially true in East Europe. It was important to demonstrate the pluralism characteristic both of Canada and the viewpoints of the participating women artists. The artists utilized their art form as a tool of social investigation and exploration of identity. My primary aim was to show that women could produce even with a very small budget independent art videos - a new art format for the audience.

Thus in 1991 I curated Vista Videos by Seven Canadian Women Artists presented in seven cities in six countries. Then in 1993 I curated Shifting Paradigms a selection of the work of ten Canadian women shown in five countries. Taste of Landscapes - by 8 Canadian women was shown in Videomedija99, Novi Sad, Yugoslavia. All of this was possible because in the nineties financial support was available for touring even small scale Canadian contemporary art in Central and East Europe, partly I assume because few people braved the conditions these tours posed.

In addition we co-curated in on-going collaboration with Iliyana Nedkova "The Crossing Over" (co) workshop/media residency nomadic project that had six editions in Bulgaria, Yugoslavia, Slovenia between 1996-2000. Crossing Over was

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established as an alternative framework for Eastern Europeans to develop, produce and present experimental individual or collaborative video-shorts. Up until 2000 more than 80 experienced artists and emerging video makers many of them women have benefited from these activities. And there was Cyberknitting by women in the Bahaus and so on.

A memento from my Ex Orient Lux text, Bucharest, 1993:

Women artists display heterogeneity of experience in their work, ranging from lyrical discourse to scrutiny of pragmatic details. The plurality of these virtues - an attainment of multiple roles, yet adaptability to change- show the strength often portrayed as disunity or weakness - by which women have historically survived. The vigor of this plurality was evident in Bucharest at the festival of Ex Oriente Lux. Studying the video installations of Romanian Judit Egyed or Lia Perjovschi revealed the various elements of the female experience. The work of these artists showed a profound interest for investigating the relationship between genuine cultural expressions compared to its false pretense. It was here in the unheated Dallas Auditorium (in snow covered Bucharest) that my Shifting Paradise compilation was presented and it was here that several young women came up to me and said: I can and will also do it!

### **NINA CZEGLEDY**

Nina Czegledy, artist, curator, educator, works internationally on collaborative art& science& technology projects. The changing perception of the human body and its environment as well as the paradigm shifts in the arts informs her collaborative projects. She has exhibited and published widely, won awards for her artwork and has initiated, researched, lead and participated in forums and symposia worldwide.

### A Feminist intervention in the history of anatomy

This paper outlines the methodologies of my practice as an artist and researcher working across the arts, sciences, and humanities. The central focus of my cross-disciplinary research is my desire to interrogate the history, methods, and foundational ideas of anatomy as a discipline. Essentially, I am interested in the ways in which anatomical knowledge is enacted and conveyed and how concepts of anatomy appear meaningful to us in the 21st-century. My work is an appeal made in an era that is defined by posthuman discourses for us to critically question our apparent naturalization of anatomy.

Conceptually, my work aligns with critical posthumanist theory which, far from being an attempt to move on from the human and humanism by announcing their end, is a call to give thoughtful attention to the conditions and assumptions of humanism. In practice, I bring the critical approaches of cultural studies and media theory into my studio-based research to enable my artwork to become a way of actively thinking through, and engaging with, ideas visually. This provides a powerful method of research when combined with my practical skills of 'making' anatomy (i.e. drawing on my previous work in body dissection and in the constitution of visual material for the discipline). The resolve in my work is to expose certain elements of posthumanism that are already at play within our traditional practices of anatomy and its visualization; and once realized, to use these elements to raise questions, and hopefully also some doubts, about the ways in which we understand our being in the world.

In discussing the ways in which I work, the key example I provide in this paper is my current research on adipose tissue (aka fat). The research is realized as artworks and critical texts and is intended to operate as a feminist intervention in the history of anatomy. Here, I adopt a critical posthumanist stance toward the science of anatomy, not only as a way to denaturalise the anatomical framework through which we humans increasingly tend to see and understand ourselves, but also to open up the possibility of introducing fat as a critical organ of posthumanism.

### NINA SELLARS

Nina Sellars is a visual artist and researcher who works across the disciplines of art, science and humanities. Her practice is focused on the way anatomy shapes our understanding of the body, identity and subjectivity. Sellars' interest in anatomy has taken her from working in classical art studios and wet anatomy labs to working in physics labs and medical imaging facilities – here she critically engages with the cultural implications of anatomy. Essentially, her research questions how concepts of anatomy appear meaningful to us in the 21st century – an era defined by discourses of the posthuman. Sellars' artwork has been exhibited widely, including most recently at the Museum of Contemporary Art, Sydney, Australia – *New Romance: Art and the Posthuman* (2016); ArtScience Museum, Singapore – *Human+: The Future of Our Species* (2017); Perth Institute of Contemporary Art – *HyperPrometheus* (forthcoming, 2018). In 2017, Sellars was artist in residence at SymbioticA, biological arts laboratory, The University of Western Australia, to further her research on human adipose tissue (aka fat), assisted by funding from the Australia Council. Previously, Sellars was a Research Fellow at the Alternate Anatomies Lab, an arts and robotics lab directed by the performance artist, Stelarc, at Curtin University, Perth, WA (2014 – 2016).

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## **POLONA TRATNIK**

Polona Tratnik, Ph.D., is Dean of Alma Mater Europaea – Institutum Studiorum Humanitatis, Faculty and Research Institute for Humanities, Ljubljana, where she is a Professor and Head of Research as well. She also teaches courses at the Faculty for Media and Communication at Singidunum University in Serbia, at the Academy of Fine Arts and Design of the University of Ljubljana, at the Faculty of Education of the University of Maribor and at the Faculty for Design of the University of Primorska. She used to be the Head of the Department for Cultural Studies at the Faculty for Humanities of the University of Primorska. In 2012 she was a Fulbright Visiting Scholar, as well as a Guest Professor at the University of California Santa Cruz. She was a Guest Professor also at the Capital Normal University Beijing (China), at the Faculty for Art and Design Helsinki TAIK (Finland), and at the Universidad Nacional Autónoma de México (Mexico City). She is president of the Slovenian Society of Aesthetics (since 2011) and an Executive Committee Member of the International Association of Aesthetics. She has authored seven monographs and one proceeding as single author, including the *Hacer-vivir más allá del cuerpo y del medio* (Mexico City: Herder, 2013), *Art as Intervention* (Sophia, 2017) and *Conquest of Body. Biopower with Biotechnology* (Springer, 2017). Polona Tratnik is a pioneer bio artist exhibiting worldwide at shows such as Ars Electronica festival and BEAP festival in Perth.

## **Convergences and Divergences of Art, Science, and Philosophy**

For the artists working in the field of art, science, and philosophy it is commonly understandable that these activities converge or even traverse from one to another. Art enters the field of science, performs it, questions it, subverts it and aesthetically opens some related issues to public. The projects in the field address the relevant philosophical issues. Art and philosophy are interested in the doing and objectives and effects of science. The need for art and philosophy is however not so much comprehensible from the perspective of science. Even if the discourse on art, science, and philosophy marks the entrance of the 21st century, these social practices are usually not perceived as equally relevant by the majority of the public. Art is often understood as a didactic tool for science or its promoter and not as an autonomously relevant social activity with its independent modes and objectives. Even philosophy is aimed to be comprehended as a supportive activity for scientific research, e.g. as ethical considerations that serve to indicate the proper ways, in particular within the implementation of the calls for research by the European Commission.

As regards the mergence of art, science, and philosophy, one can find references to Renaissance practices. Yet today the projects conceptualized and produced in this field are much more complex and transdisciplinary on the one hand, while on the other the field is marked with the Modern autonomization and diversion of art, science, and philosophy, where as well lie the grounds for the hierarchical comprehension of these three.

In my presentation I want to introduce my current research about the concept of “Nonhuman Subjectivities” and “Nonhuman Agents”, discussing artistic strategies towards a multispecies performativity. There is a particular interest by a great number of international artists to stress the nonhuman subjectivity in their artistic practice, by de-centring the human in favour of a multispecies perspective. Very fresh is their approach with a direct interest to engage matter – be it bacteria, fungi, or slime mould (on a micro level), and plants, animals and biosphere (on a macro level). I want to draw attention to what I posit as a new artistic paradigm in connection with a postanthropocentric approach, which I discuss also under certain aspects of posthumanism.

## **REGINE RAPP**

Regine Rapp is an art theoretician and curator. Her specific fields of research for 20th and 21st century art are installation art, image text theory, artist books, and art & science collaborations. She worked as Assistant Professor for Art History at the Burg Giebichenstein Art Academy Halle until Autumn 2013. She is co-director of Art Laboratory Berlin, which she co-founded in 2006. Regine curated over 30 exhibitions (exhibition series on Time and Technology, Synaesthesia and macro/microbiologies) and has published several books. Concurrent to the exhibition Sol LeWitt. Artist's Books in 2011 she conceived and realised the international Sol LeWitt\_Symposium at Art Laboratory Berlin. Together with Christian de Lutz she developed the international transdisciplinary conference Synaesthesia. Discussing a Phenomenon in the Arts, Humanities and (Neuro-)Science, 2013 at Art Laboratory Berlin. Her publication [macro]biologies & [micro]biologies. Art and the Biological Sublime in the 21st Century reflects theoretically Art Laboratory Berlin's last series from 2014-15. In 2016-17 together with Christian de Lutz she conceived the series Nonhuman Agents with exhibition, workshops, performances, and an international interdisciplinary conference (Nov 2017), which is now published online.

*<http://www.artlaboratory-berlin.org>*

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Scattering the dots: on re-appropriating space, undoing hierarchies, and rethinking the living (and the existing otherwise)

“The world always exceeds our conception of it (Shotwell, 2016)”. What to do when the sciences and the humanities lose their ability to fully grasp, and sometimes even speak of, phenomena that have inevitably become too complex, too diffuse to be simplified through a model or a formula, or to be seized and summarized by one discipline?

Today we appear to have hit a particular socio-cultural, political and epistemological conjuncture: despite the recent breakthroughs in science and technology, it has become increasingly clear that neither one, nor the other are able to fully assess nature’s transformations and readjustments caused by human and natural action. For instance, the proliferation of technology and the overspecialization of disciplines have made it more difficult, not easier to seize these phenomena (Arbesman 2014). In addition, the visionary, yet puzzling, endeavors of recent scientific research have proved to affect nature, culture, and society in too many intricate ways (Tsing 2015). It follows that even if old categories are still dominating our conception of the world, emergent categories (like the naming of new types of bacteria, the discovery and identification of new species carrying substantial variations away from the “norm”, or new digitized, yet vividly perceived creatures materializing thanks to AR technologies) are challenging our traditional understandings of nature and culture.

In this paper – the early stages of a new project titled “emergent”—I wish to reflect on ways in which we can better comprehend and eventually cope with the new complex categories and reconfigurations that form and unform the world, with the new entities that mockingly dance before our old fashioned/ inflexible eyes. My goal is not to create new categories but to pose a series

of open questions, highlighting the necessity to conduct collaborative research between artistic practices and scientific research. For Donna Haraway, we should go beyond crossing the boundaries in search of meaningful collaborations and in doing so, “step outside one’s comfort zone”. I believe we should go beyond and create a space for reflection through and, importantly, with the arts – not with the arts as an addition or an afterthought – that will convey (not explain or illustrate) the dynamic forces converging into, and traversing, new and difficult-to-study categories and phenomena. The arts here are not simply meant to illustrate, but to transmit, and make sense of complexity without relying on given disciplinary and instrumental containers.

This means not only to exceed and step outside given disciplinary boundaries, or designated spaces such as the lab or the gallery, but also to physically occupy -virally- public spaces and unexpected corners. This has enormous implications for the ability of science to communicate concepts outside of traditional academic circles and for the general public to comprehend them. Importantly, it is an opportunity for the arts and the sciences to join forces by re-appropriating space, undoing hierarchies, and rethinking the living (and the existing otherwise).

### **ROBERTA BUIANI**

Roberta Buiani is an interdisciplinary artist, media scholar and curator based in Toronto. She is the co-founder of the ArtSci Salon at the Fields Institute for Research in Mathematical Sciences (Toronto) and a co-organizer of LASER Toronto. Her research-creation work is mobile, itinerant and collaborative, exploring how scientific and technological mechanisms translate and transform the natural and human world, and what happens when they are taken outside of their traditional context and relocated through artistic and cartographic practices. Her work was exhibited in Toronto at the Ryerson University Faculty of Architecture and Artscape Youngspace; and was featured at Transmediale, the Hemispheric Institute Encuentro, Immigrant Movement International (Queens), and RPI among other. Recently, she has launched a series of curatorial experiments in “squatting academia”, aiming at repopulating abandoned spaces inside the university with collaborative works in art and science and at filling formal spaces of research with site-specific installations and performances. She teaches communication and cultural studies at York University.

<http://atomarborea.net>

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## Recipes for earthly survival

My presentation will consider how modes and materialities of cooking, tasting and digesting, can reveal new insights into ecological interdependencies, disrupting anthropocentric narratives of production and consumption. Drawing on my current PhD research, working with algae organisms, I will explore how ecologies are performatively enacted through a variety of material-discursive practices involving food. Considerations include how practices of cooking transpose material ecological relationships to produce and metabolise meaning across various states of transformation. Engaging with notions of de-naturing in methods of cooking-with nonhuman organisms, my aim is to facilitate discussion around the potential for these practices to further challenge bifurcations between nature and culture. Concepts of symbiosis, reciprocity and exchange are crucial to my performance practice and this investigation into symbolic and material reconfiguring of cycles of carbon.

### **SARAH BLISSETT**

Sarah Blissett is an artist, writer and dramaturg, currently studying for a PhD in Performance Studies at the University of Roehampton. She holds a BA from the University of Cambridge and an MA from the Royal Central School of Speech and Drama. Her research explores Food and Ecology in Performance, through an investigation into algae organisms and ecosystems as 'active ingredients' in planetary ecology. Ecological and philosophical issues of multispecies entanglement and trans-corporeal relations are core to this food-based practice, where material/semiotic subjects are digested in a variety of ways. Her work considers the implications of these ideas through performance studies research, which draws on Poetic Biopolitics, Ecomaterialism and Posthuman Feminism.

Rosi Braidotti's conceptualisation of cartography as "a theoretically based and politically informed reading of the process of relation" (Braidotti 2011: 4), will inform how I examine different cooking methods as embedded in processes of energy-exchange. Questions around cartography, as a form of relationality, are crucial for investigating the potential for methodologies to reconfigure boundaries regarding practice, research and sites of performance encounter. Practice-based aspects of the work will invite participation in recipes, shaped by a range of ecologies, and different modes of encountering food for humans and nonhumans. Traces of seaweed, salt, soil and ash become part of exploring transformative states of matter and environment.



### Transgression Revisited: From Body to Body Parts to Body Waste

This paper/talk will show how the fast feminist manifesto introduced in my book *Fast Feminism* directs my film texts in *Shooting Theory* and my recent work on female sexuality: “The Ugly Gaze” .

The operative principles in *Fast Feminism* are that I never write about anything I haven’t done, and that I locate my enactments within a philosophical discourse. The underlying contention is that feminism needs to be infused from non-obvious philosophical locations; the most non-obvious site is the work of Paul Virilio, the hypermasculinist philosopher and technologist of speed.

Fast feminism is situated simultaneously as a complement to speed theory and as an accident of speed theory. An accident of any system, whether ecological, technological or philosophical, is the unknown inherent in the original substance. Fast feminism is inherent in Virilio’s speed in three registers: The fierce speed style that profoundly critiques the world, quickly, and breaks intellectual scholarship. The recurrent messianic moment that Virilio never fully hides: “if you save one man, you save the world.... The world and man are identical”. And in Virilio’s positioning of the body: “I am a materialist of the body, which means that the body is the basis of all my work”; “when I talk about speed, I am talking about bodies.” Of course, the body has always been central in feminist philosophy and practice, but the coupling with speed is fast feminism. While fast feminism is the accident of feminism and hypermasculinity, like any invented substance it can inadvertently give rise to its own accident, its own unknown on which it both thrives and disintegrates.

Fast feminism is a feminism of affect—of intensity and

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## SHANNON BELL

Shannon Bell, a Canadian performance philosopher who lives and writes philosophy-in-action, is a Professor of Political Science at York University, Toronto, Canada. Her books include: *Fast Feminism* (2010), *Reading, Writing and Rewriting the Prostitute Body* (1994), *Whore Carnival* (1995), *Bad Attitude/s on Trial* co-authored (1997, republished 2017), *The Book of Radical General Semantics* co-edited (2016), *Subversive Itinerary: The Thought of Gad Horowitz*, co-edited (2013) and *New Socialisms* co-edited (2004). Bell is currently working on shooting theory—video-imaging philosophical concept such as Heidegger's 'stillness', Husserl's 'epoché', Bataille's 'waste' and 'expenditure', Weil's 'attention', Deleuze's 'deterritorialization', Virilio's 'vision machine' and 'accident' and Levinas' 'elemental'.

<http://www.yorku.ca/shanbell/>  
<https://vimeo.com/user1866723>

influence. As a feminism of affect, there is no way of predicting what women influenced by Fast Feminism will do as a result of that influence. Fast feminism has taken me to what I term shooting theory—theory-in-action. In a sense the illegitimate offspring of Fast Feminism—Shooting Theory—is the evacuation of the body to images of the philosophical/theoretical. The body drift is to images. I will show the most recent of the now fifteen shooting theory film/texts – “Contemplating the Hyperreal,” shot in Las Vegas February 2018. According to Contemplative Photography images can be decomposed into their primary forms: color, light, texture, pattern. When they are seen and imaged according to one or more of these forms a new object/image emerges. In this film/text the form is pattern, and what better place to repurpose objects than in the heart of the simulacrum – Las Vegas.

Yet the remainder of the body returns, as post-hysterical and most recently as the sublime gaze of the ugly. This section of the paper/talk, drawing on Lacanian psychoanalysis and autobiographical experiences with being seen through the lens of ugliness, examines what constitutes the ugly gaze and how the I/eye on its side of the screen can counter the ugly gaze with a sublime gaze (a form of object a); this serves to create a dissensus “between the sensuous presented and a way of making sense of it” as a site of fast feminist visual politics.

### Aesth-ethics: Reflecting on the hybrid wet lab in research-creation and innovation practices in a Canadian university setting today

Frankenstein, a novel written by Shelley one hundred years ago, depicts the story about a scientist of the same name, who creates a living “monster” in his home laboratory. Often people make the mistake of associating the monster as Frankenstein rather than as the scientist. The novels’ exploration of the monsters’ emotional struggles and its’ desire for love and acceptance by Frankenstein (and humans in general) is often overlooked- yet- it is arguably one of the most glaring ethical dilemmas presented in the story.

This talk will draw from my decade year long journey to create a wet lab for research creation projects initiated by myself, grad students, faculty and visiting artists in the humanities and fine arts at Concordia University in the form of a parable to Frankenstein. The story will explore some of the real-world forms of resistance, mangled practices and contradictory value sets encountered by the protagonist on her own journey as “Frankenstein”. The talk will consider how the current climate of innovation research production raises concerns about the long term sustainable value of pursuing such spaces of research in light of an aesth-ethical practice of relation. What happens to the living biological agents applied in the research-creation project when it is finished, discarded and/or neglected by its maker? Might microorganisms require sustained relations during and after their lifespan just as the monster required it of Frankenstein? How might (or might not) hybrid art-sci wet lab spaces both challenge and offer new forms of co-creation and relations between humans and non-human agents within the academic and artistic worlds of research-creation? These questions fuel the concept of aesth-ethic: a philosophical and artistic reflection on the role of “the maker” (artist, scientist, researcher) and the research-creation and production of living microorganisms in academic research today.

### TAGNY DUFF

Tagny Duff is an artist and scholar working across media art and microbiology, with a particular interest in microbial interaction and scientific practices from a cultural point of view. Duff has exhibited biological art works nationally and internationally in venues such the Science Gallery in Ireland (2011) and Espace Multimedia Gatner, France (2015). She has published numerous peer-reviewed articles on the overlap between art and science methodologies and approaches including the recent publication “Mangling Methods Across Performance Research, Biological Arts and Life Sciences” published by Media-N Journal of the New Media Caucus. Duff is Associate Professor in the Department of Communication Studies at Concordia University and since 2009 is the director/founder of Fluxmedia, a network for researchers engaging in collaboration across art and the life sciences and Speculative Life Lab at Milieux Institute for Arts, Culture and Technology at Concordia University.

<http://www.fluxnetwork.net>

<https://speculativelifebiolab.com>

<https://tagnyduff.blog/>

<https://tagnyduff.com>

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## The Unsettling Eros of Contact Zones: Queering Evolution in the CandidaHomo ecology

*Candida albicans* is a yeast; one species of the hundreds that thrive in the ecologies of the human body. Human bodies are complex and fluid ecologies: warm, moist viscosities and dry, exposed topographies, and hundreds of bacterial species. *C. albicans* has adapted to almost every ecological niche, inhabiting the mouth and the gastrointestinal tract, settling under foreskins, between toes, and (in)famously the vagina. We have co-evolved; *Homo sapiens* provides myriad ecological niches for *C. albicans*. We (*Candida* and *Homo*) are in relentless re-orientation, responding to changes in pH, temperature, moisture and nutrients, tentatively traversing the affordances of each other's bodies. We are animated by chemical transmissions and constant reproduction, transfigured by sensation.

### TARSH BATES

Tarsh Bates is an artist/researcher interested in the aesthetics of interspecies relationships and the human as a multispecies ecology. She has worked variously as a pizza delivery driver, a fruit and vegetable stacker, a toilet paper packer, a researcher in compost science and waste management, a honeybee ejaculator, an art gallery invigilator, a raspberry picker, a lecturer/tutor in art/science, fantasy, art history and gender & technology, an editor, a bookkeeper, a car detailer and a life drawing model. Tarsh is a postdoctoral research associate at SymbioticA, UWA, supported by The Seed Box, an international environmental humanities collaboration based at Linköping University in Sweden and funded by Mistra and Formas. She is particularly enamoured with *Candida albicans*.

This interdisciplinary research project combines scientific experimentation, art-making, evolutionary ecology and queer theory to posit the human body as a queer ecology. The sexuality, performativity and community of *C. albicans* within this ecology are explored through the apparatuses of science, art and evolutionary and queer theories. Three aspects of queer being-in-the-world, i.e., sexuality, gender, and kinship, are woven through three aspects of evolutionary theory, i.e., sexual, natural and kin selection, to form heterotopic alliances and learn how to eat better together.

### From the Singular to the Collective: Anticipatory Art Science

This talk will be looking back and forward at the same time – moving the narrative lens with micro / macro ideas that are at once personal and collective reflections. It meant to show that paths not trodden can be most exciting for the individual acting as a reflector of the collective shifts and transformations. Singular experiences are further extended with the audiences becoming the performers with immersive on / offline environments that move the attention from self-center to the group dynamic.

Neuroscientists agree that we use around 5% of our brain and that most of what we do is actually unconscious, although some even believe its' closer to 1 - 2%. Regardless, it is clear that scientists are faced with increasing complexity that cannot be addressed with traditional methodologies. This is the important role that artists can play as we are trained to think in comprehensive ways and encouraged to break the rules.

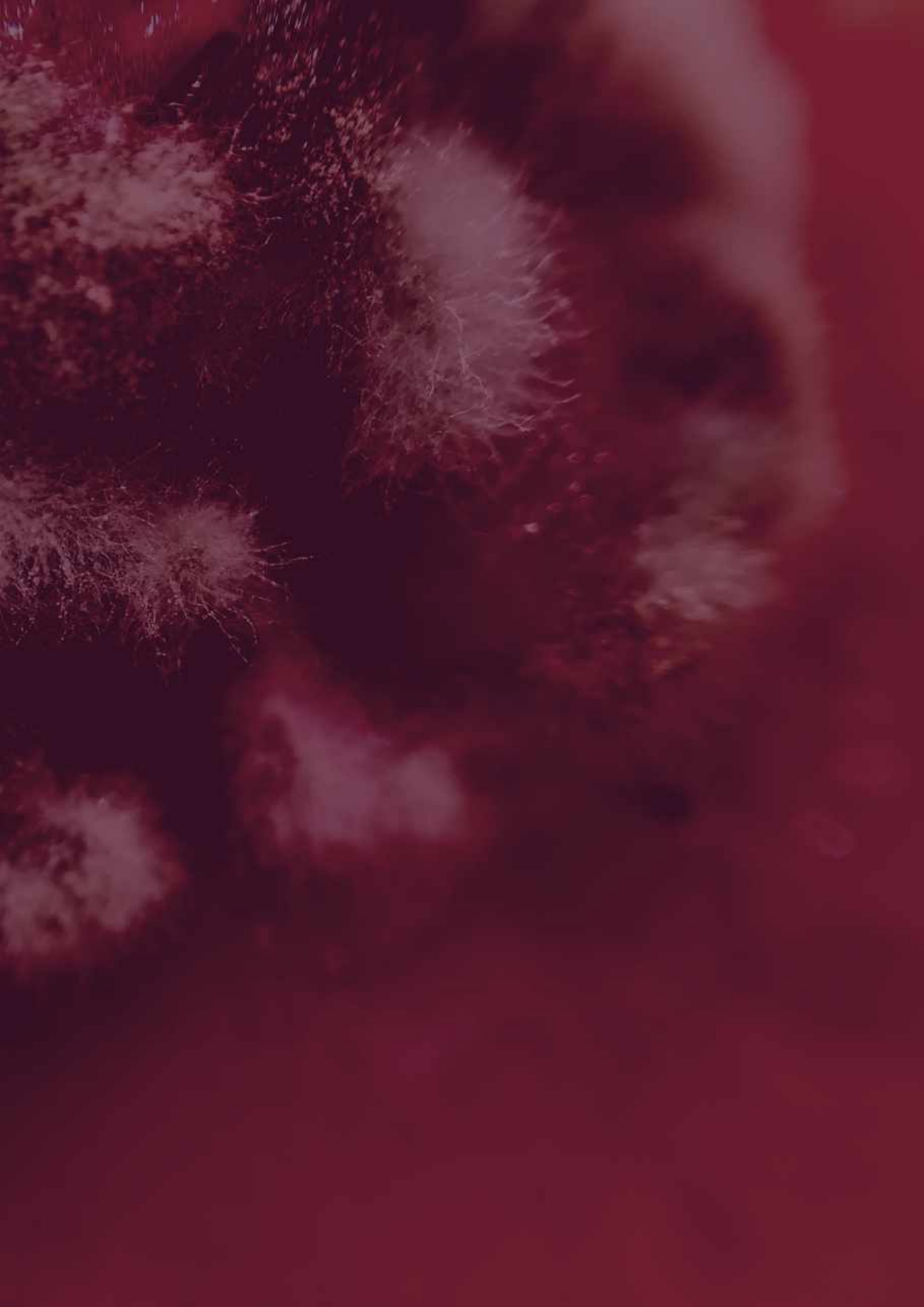
As Anticipatory Design / Art Scientists, we should sharpen our senses and put up what John Cage called our "antennae's to the future", offering an alternate vision to what is being fed through our media daily. There are many possible futures and, at this juncture, collaborations with many other disciplines are crucial in order to envision how to retain biodiversity and sustainability.

It is an exciting time, it is a dangerous time, certainly an unpredictable time, but we can sense, project, point the way ahead to prepare ourselves for a new paradigm. Dramatic shifts can happen in a nanosecond -- this is the nature of self-organized criticality.

### VICTORIA VESNA

Victoria Vesna, Ph.D., is an Artist and Professor at the UCLA Department of Design Media Arts and Director of the Art|Sci Center at the School of the Arts (North campus) and California NanoSystems Institute (CNSI) (South campus). Although she was trained early on as a painter (Faculty of Fine arts, University of Belgrade, 1984), her curious mind took her on an exploratory path that resulted in work can be defined as experimental creative research residing between disciplines and technologies. With her installations she investigates how communication technologies affect collective behavior and perceptions of identity shift in relation to scientific innovation (PhD, CAiiA\_STAR, University of Wales, 2000). Her work involves long-term collaborations with composers, nano-scientists, neuroscientists, evolutionary biologists and she brings this experience to students. She is the North American editor of *AI & Society* journal (Springer Verlag, UK) and in 2007 published an edited volume – *Database Aesthetics: Art in the Age of Information Overflow* (Minnesota Press) and another in 2011 — *Context Providers: Conditions of Meaning in Media Arts* (co-edited with Christiane Paul and Margot Lovejoy) Intellect Ltd, 2011. Currently she is working on a series *Art Science & Technology* based on her online lecture class.

<http://victoriavesna.com>



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