

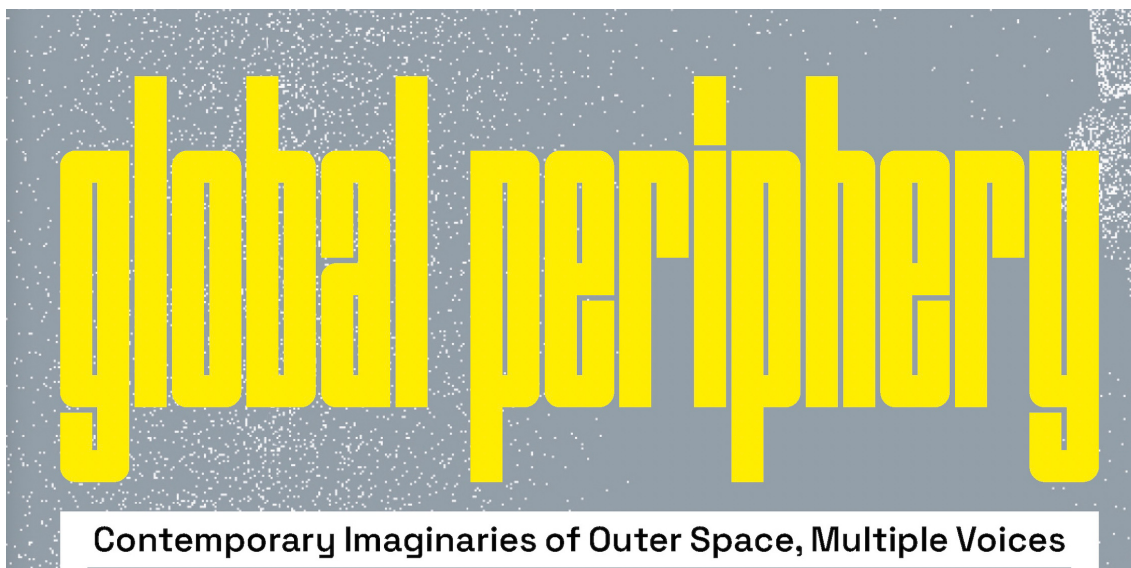
A Journey through Space Imaginaries

Global Periphery

Contemporary Imaginaries of Outer Space, Multiple Voices

23 - 24 septembre 2022

www.olats.org/global-periphery/



Global Periphery: a symposium and performance exploring contemporary imaginaries of outer space through examples of artistic creations and of space activities with voices from multiple continents and locations.

Cité Internationale des Arts
18, rue de l'Hôtel de Ville - Paris
14h00 - 19h00
Free upon registration

The current space competition —business, research, activities of all kinds— is world wide but the dominant narrative still comes from the USA. The space iconography is strongly NASA/Hollywood-driven.

What are the other narratives?

Who are the "others's voices"?

What do they say?

What can be said?

The *Global Periphery* event intends to contribute to give voice to some of those other voices, to work together, to hybridized, to raise questions.

Global Periphery deals with the contemporary imaginaries of outer space, the existing ones, through examples, experiences and activities of both artists and cultural players on the one hand and engineers, scientists and the space sector on the other.

Participants: Eleanor Armstrong (UK/SE), Fabiane Borges (BR), Davis Cook (ZA), Rohini Devasher (IN), Michelle Hanlon (USA), Eduardo Kac (USA/BR), Susmita Mohanty (IN), Marcus Neustetter (ZA/AT) and Team, Ale de la Puente (MX), Yoko Shimizu (JP/AT), Frédérique Ait Touati (FR).

Global Periphery is also about building together new imaginaries, with the ***Imaginary Futures*** project by Marcus Neustetter, an online/on site performance, semi improvised with 6 artists in South Africa and one performer in Paris.

Participants: Initiator and host artist Marcus Neustetter ; live performer in Paris Fatou Cissé ; performers in different parts of South Africa, Thulisile Princess Binda, Xolisile Bongwana, Miné Kleynhans, Aja Marneweck, Sifiso Teddy Mhlambi, Ciara Struwig.

Global Periphery co-curators: Annick Bureau and Marcus Neustetter.

Scientific Committee: *Susmita Mohanty* (Bangalore, India) - *Nina Czegledy* (Toronto, Canada & Budapest, Hungary) - *Nahum* (Berlin, Germany and Mexico)- *Miha Tursič* (Amsterdam, Netherlands and Ljubljana, Slovenia) - *Antti Tenetz* (Helsinki, Finland), *Ewen Chardronnet* (Paris, France)

Coordination/Production with Carine Le Malet

GLOBAL PERIPHERY SYMPOSIUM PROGRAMME

FRIDAY September 23rd

13h45 - 14h00: Doors open

14h00 - 14h15: Annick Bureau, Welcome and introduction address

14h15 - 15h30: Session 1: Space imaginaries

moderator: Annick Bureau

- Marcus NEUSTETTER and Team, *Imaginary Futures* - Part 1
- Frédérique AÏT TOUATI, How to deconstruct the imaginaries of space?
- Discussion

15h30 - 16h00: Break

16h00 - 17h00: Session 2: Perspectives from the Global South

moderator: Susmita Mohanty

- Fabiane BORGES, Subjectivity, Art and Space Science
- Davis COOK, Illuminating Africa's Space Heritage
- Discussion

17h00 - 17h15: Break

17h15 - 18h45: Session 3: Perspectives about Art, Culture, Science and Global Periphery

moderator: Annick Bureau

- Eleanor ARMSTRONG, Where is the place for space? Space Science in Cultural Contexts
- Discussion
- Round-table & Presentations with Bernard FOING, ITACCUS ; Rob LA FRENAIS, *Space Without Rocket* ; Participants to the *Imaginary Futures* workshop: Rouzbeh AKHBARI, Valentine AUPHAN, Marie-Pier BOUCHER, Arthur ENGUEHARD, Guillemette LEGRAND, Yanxu CHEN, Fatou CISSÉ and Marcus NEUSTETTER.
- Playing cards (round-table & audience participation)

SATURDAY SEPTEMBER 24th

13h45 - 14h00: Doors open

14h00 - 14h15: Annick Bureauud, Welcome and introduction address

14h15 - 15h15: Session 4: Space Culture

moderator: Annick Bureauud

- Eduardo **KAC**, *Adsum*, an artwork for the Moon
- Yoko **SHIMIZU**, Exploring new frontiers of art, space and biology
- Discussion

15h15 - 15h30: Break

15h30 - 16h30: Session 5: Space, Time and Observatories

moderator: Marie-Pier Boucher

- Ale **DE LA PUENTE**, Five missions to explore the center and its periphery
- Rohini **DEVASHER**, *One Hundred Thousand Suns*. How closely can we know our nearest star?
- Discussion

16h30 - 17h00: Break

17h00 - 18h15: Session 6: Whose Space is it?

moderator: Annick Bureauud

- Michelle **HANLON**, Why Do We Care About Bootprints on the Moon?
- Marcus **NEUSTETTER** and Team, *Imaginary Futures* - Part 2
- Discussion

18h15 - 18h30: Conclusion: the More-Than-Planet project with Miha **TURSIČ**, Lucas **EVERS**, Ewen **CHARDRONNET**

18h30: Drinks

GLOBAL PERIPHERY

Contemporary Imaginaries of Outer Space, Multiple Voices
23 - 24 September 2022

PARTICIPANTS

Frédérique Aït-Touati | Eleanor Armstrong | Fabiane Borges | Davis Cook | Rohini Devasher | Michelle Hanlon | Eduardo Kac | Susmita Mohanty | Marcus Neustetter | Ale de la Puente | Yoko Shimizu

> **Frédérique Aït-Touati - How to deconstruct the imaginaries of space?**

Always further: Plus Ultra. This is the motto that Bacon gives as a program for modern science, taking up the motto of the conquering emperor Charles V. Conquest of terrestrial space, conquest of nature, conquest of cosmic space: still today, to discover is very often to conquer, to explore is to appropriate space, other planets, distant resources. The race for space programs and habitable planets, under the guise of disinterested exploration or space tourism, very often reveals a thirst for the appropriation of resources and a desire for territorial expansion. But this relationship to space as a place to be conquered is beginning to be deeply shaken. It seems that the new thinking of the earth makes it possible to look at space differently. The appropriation of territories (and their resources) has indeed become a central issue in the time of the Anthropocene. Does our new awareness of the limits of the Earth invite us to further accelerate the search for other planets to conquer, or would it, on the contrary, be an opportunity to renew our imaginations of space? It is our collective history, human and terrestrial, which is also written in part through this effort to reinvent the spatial imagination.

Can we transform the affects of exploration? rediscover a thirst for discovering and exploring other worlds, freed from the thirst for conquest? Can we consider space other than a territory to be conquered?

From this program designed for a collective residence in Marfa (Texas) in October-November 2022 as part of the Villa Albertine, Frédérique Aït-Touati offers a reflection on the renewal of the spatial imagination.

Frédérique Aït-Touati lives and works in Paris. A director and researcher at the CNRS, she explores the links between science, arts and politics and makes theater a place of experimentation. After studying literature at the ENS de Lyon, she trained in directing in Cambridge, England, where she created her company in 2004, while pursuing a thesis in the history of science. She taught at Oxford University from 2007 to 2014 before returning to France to devote herself to research and theater. She is in residence at the Chartreuse de Villeneuve-lès-Avignon and at the Comédie de Reims from 2011 to 2013 for the Gaïa Global Circus project. From 2014, she was invited to the Nanterre-

Amandiers theater with SPEAP, the experimental academy she directs. It is at the Amandiers that she has created most of her shows since: in 2015, she designed with Bruno Latour and Philippe Quesne *Le Théâtre des négociations-Make it work*, a week-long performance with 200 students offering an alternative negotiation on the climate. The following year she staged the conference-performance *INSIDE* (on tour in Berlin, Frankfurt, New York, at the Kaaitheater in Brussels and at the Criée in Marseille) then *Moving Earths* with Bruno Latour, revived as a play for an actor at the Théâtre de l'Odéon in 2020. In August 2020, Tino Sehgal invited her to the exhibition *Down to Earth*, as part of the Berliner Festspiele. She also continues to teach at the École des Hautes Etudes en Sciences Sociales and at SPEAP, as well as abroad where she teaches regularly at NYU and Oxford. She has notably published *Contes de la Lune, essai sur la fiction et la sciences modernes* (Gallimard, 2011) et *Terra Forma, manuel de cartographie potentielle* (B42, 2019).

<https://frederiqueaittouati.com/> - <https://www.zonecritiquecie.org>

> Eleanor Armstrong - Where is the place for space? Space Science in Cultural Contexts

When we talk about space science research in public - in places like museums, on social media, in tv shows - choices are made about which information is most important. In this talk I will show how the places where space science is done are (or often not) represented, what this means for how people learn to think about space. I will then explore how we can imagine other ways of talking about what happens when doing science research in cultural contexts.

Dr Eleanor Armstrong (she/her) is a Postdoctoral Researcher at Stockholm University, where she studies the things people learn about science (and particularly space science and geology) beyond the classroom. Alongside her academic research, she is convenes *Space Science in Context* (on twitter: @SSIC_Tweets) a cross-discipline conference on the integration of space science and society. Dr Armstrong also works on incorporating themes of care, intimacy, and consent when talking about interplanetary sex tech futures through a design studio she co-leads *EXO-MOAN* (on instagram: @InSpaceNooneCanHearYouMoan). You can learn more about her work on her website or follow her on twitter. - <https://elliethetheelement.squerespace.com> - twitter: @EllieTheElement

> Fabiane Borges - Subjectivity, Art and Space Science

Implementation of a research nucleus in art and culture focused on the dissemination of space science and technology at INPE (National Institute for Space Research/Brazil)

In the current historical moment, we see a resurgence of interest in space as a way to expand production, transportation modes and earthly knowledge; this

requires more researchers and specialists committed to representing the regional interests of Latin America and the Global South, in such a way that these regions do not become just consumers or users of these advances. In this perspective, we present art and space culture as a transdisciplinary field between art/culture and science/technology that has the task of awakening creative, imaginative and innovative aspects of the space industry and seeking new hybrids in techno-scientific development. At the beginning of this text, we partially introduce the role of space art and culture in countries such as United States and China, as well as space technology development institutes such as NASA, SETI, MIT, ESA, ESO and AENC, and organizations such as CERN (European Organization for Nuclear Research), SSP/ISU (Space Studies Program / International Space University), or federations such as ITACCUS/IAF (Committee for the Cultural Utilisation of Space / International Astronautical Federation). These programs serve as reference for us because they have experience with transdisciplinary projects between art and science. However, in industrially precarious countries like Brazil, it is necessary to make a series of adaptations and rely on the inventive skills of its populations so that it is possible to innovate in this field and achieve new results, and not just repeat the already established pattern. It is through the alliance between technological knowledge, economic investment and imaginative power arising from cultural diversity, that it becomes possible to innovate aesthetically and technologically. In this perspective, a series of activities of space art and culture of evident relevance are being carried out at INPE, and we intend to use it as a parameter for the implementation of a research center in this area at INPE itself. Here we are analyzing, for example, the workshops on the construction of artistic satellites (ArtSat) with participants from all over Latin America (2020/2021), the production of the first Latin American album of space sound compositions (2021), the artistic residencies and exchanges of art and science researchers (2019-2022), the creation of the ArtSat category (artistic satellites) in the CubeDesign satellite competition (2021), and the organization of a summer course focused on space geopolitics or astropolitics (2022). This text analyzes the methodologies used for the construction of these projects at INPE, aiming at their wide applicability and the consolidation of the bases for the formation of an international reference platform.

Fabiane Borges is a Clinical Psychologist, Researcher, Curator, Essayist. She researches the interrelation between Subjectivity, Art and Technoscience. She develops the SACIE / INPE – A research platform in Space Art and Space Sciences & artistic residencies held at the National Institute for Space Research. She has also done post-doctoral research in Art and Technology at PPGAV / UFRJ at NANO (Nucleus for Arts and New Organisms) and a doctoral internship at Goldsmiths University of London. She is a collaborator and researcher at the Diversitas / FFLCH / USP).

SACI-E: <https://sacieartscience.wordpress.com/>
TECNOXAMANISMO: <https://tecnoxamanismo.wordpress.com/>
PANDEMIC DREAMS ARCHIVE: <https://archivedream.wordpress.com/>
Youtube channel: <https://www.youtube.com/antennarush>
Instagram: https://www.instagram.com/antenna_rush/

> Davis Cook - Illuminating Africa's Space Heritage

Humans have forever been curious about what lies beyond our skies. As our knowledge has developed over time, fable and the imagined have been replaced by discovery and fact. In the twentieth and twenty-first centuries, activities in space – from observations via powerful telescopes, and exploration via the deployment of spacecraft and satellites into orbit, to the ability to capture and interpret data observed from space - have been growing exponentially.

Today, multiple countries and commercial organisations have mobilised significant investment into the space sector. Some countries have been better able to do this than others. The world's most dominant economies are well-equipped to invest in space research and development activities. Wealth, development and military sophistication have become the driving factors of this new space economy. The result is a widening gap - an orbital divide, if you will - between those who can and those who cannot yet make the investment in the space sector. For Africans, it can feel very much as if we are on the wrong side of this divide, watching from the side-lines as dominant players around the world jostle to lead the way in space-related development.

It might come as some surprise to learn that the African continent has, in fact, a very long history of contribution toward the global space sector. Much of what Africa has pursued and achieved in this field is unknown, downplayed and ignored. While several initiatives have been undertaken to address this challenge, their success is not yet reflected through a more visible and prominent presence of the African space sector on the global stage.

The main goal of this project is to elevate awareness around the rich space history of Africa, highlighting the role and importance that African space programmes have played in the growth and relevance of the global space economy, and to form part of an effort to popularise space related activities more broadly. This presentation will contain a summary of insights and personal stories gathered from in-depth interviews with various thought leaders and space sector experts, who have actively been involved in building Africa's space heritage. These insights will be complimented with findings obtained from desktop research, capturing an overview of the history of space programmes in Africa, along with the socio-economic impact that these initiatives have had. Lastly, an overview of the present state of the African space sector will be presented, along with vision for the future of space in Africa.

Davis Cook is the CEO at the Research Institute for Innovation and Sustainability (RIIS). With a long history in strategy consulting for corporates, government services and start-ups across more than 30 countries, Davis has been leading and advising global organisations since 2011. Davis has passion for the role that innovation plays in both business and social progress, and is intent on seeking out innovative ways to build a better world.

- RIIS Website: <https://www.enablinginnovation.africa>
- RIIS Facebook:
- RIIS LinkedIn: RIIS - Research Institute for Innovation and Sustainability: My Company | LinkedIn
- Karman Project Website: The Karman Project | For those who dare to dream of the stars
- Karman Project Instagram: The Karman Project (@thekarmanproject) • Instagram photos and videos
- Africa Earth Observation Challenge: Home - Africa Earth Observation Challenge (eochallenge.africa)

> **Rohini Devasher** - *One Hundred Thousand Suns* - How closely can we know our nearest star?

In this talk, artist Rohini Devasher takes us through her most recent work, *One Hundred Thousand Suns* a 4 channel film installation that brings into conversation the geometry of the Earth, Moon and Sun, alongside conjunctions of event and site.

Poetic, speculative and deliberately discrete, *One Hundred Thousand Suns* is another kind of rendering of the Sun. Assembled from data both historical and contemporary, it foregrounds the reality that the site, the observer, and the methods of observation and collection may produce multiple readings and avatars of data.

The trajectory of the Sun's observations, beginning with hand drawn sun spots on small disks of paper and glass photographic plates from the archives from the Kodaikanal Solar Observatory, data sets from NASA's Goddard Space Flight Center, to the artist's own data – including drawings, video and interviews with eclipse chasers, are navigated to explore the complexities of observational astronomy, and the ways in which 'seeing' is strange, wondrous, and more ambiguous than one might imagine.

Rohini Devasher has trained as a painter and printmaker, and works in a variety of media including, video, prints and site-specific drawings. Her films, prints, sounds, drawings, mappings the antagonism of time and space; walking the fine line between wonder and the uncanny, foregrounding the 'strangeness' of encountering, observing and recording both environment and experience.

Her work has been shown at the Open Data Institute London (2022), Rubin Museum, New York (2021-22), the Sea Art Festival, Busan (2021), Goethe Institut Mumbai (2021), Vienna Academy of Fine Art (2021), the Kunst Leuven City Festival (2021) the 14th Sharjah Biennial (2019), Kaserne Basel (2019) Museu d'Art Contemporani de Barcelona (MACBA) (2018), 7th Moscow Biennial (2017), the Spencer Museum of Art USA (2018,16), MAAT Museum of Art and Technology, Lisbon (2016), ZKM, Karlsruhe (2016), Bhau Daji Lad City Museum in Mumbai (2016, 2018) Singapore Art and Science Museum (2016), Whitechapel Gallery, London (2016), and the 5th Fukuoka Asian Art Triennial (2014), the 1st Kochi Biennale (2012), among others.

Devasher has been an artist in residence at Cove Park 2022-23 as part of the City as a Spaceship Collective, The Open Data Institute (ODI), London (2021- 22), Five Million Incidents, 2019-2020 supported by Goethe-Institut / Max Mueller Bhavan in collaboration with Raqs Media Collective (2019), The Owners Cabin Residency, (26 days on board an Oil Tanker from Fiji to Singapore 2018), Spencer Museum of Art, Kansas USA (2016), The Anthropocene Curriculum: The Technosphere Issue, HKW Berlin (2016), Fukuoka Asian Art Museum (2014) and the Max Planck Institute for The History of Science, Berlin (2012). Recently concluded projects include One Hundred Thousand Suns a new 4 channel film installation commissioned by Data as Culture (DaC) the art programme of the Open Data Institute (ODI).

www.rohinidevasher.com - @rohinidevasher

> **Michelle Hanlon - Why Do We Care About Bootprints on the Moon?**

The 2020s will be recognized as the decade humans transitioned into a truly space-faring species that utilizes space resources to survive and thrive both in space and on Earth. It is up to us to make sure that we make this transformation sustainably and successfully. The first step to assuring the future is to protect the past. The fact of the matter is that humans would not have made it to the Moon without contributions from diverse cultures throughout our short history. We would do well to remember that as we work to fill in the current gaps in space law. This presentation will use the Outer Space Treaty as a springboard for discussion of how we can universalize space exploration and resource utilization to better all of humanity.

Michelle Hanlon is Co-Director of the Center for Air and Space Law at the University of Mississippi and Editor-in-Chief of the Journal of Space Law, the world's oldest law journal dedicated to the legal issues arising out of human activities in outer space. Michelle is a Co-Founder and President of For All Moonkind, Inc., a nonprofit corporation that is the only organization in the world focused on protecting human cultural heritage in outer space. She was instrumental in the development of the One Small Step Act in the United States. For All Moonkind has been recognized by the United Nations as a Permanent Observer to the United Nations Committee on the Peaceful Uses of Outer Space. Michelle is the President of the National Space Society,

> Eduardo KAC - *Adsum*, an artwork for the Moon

In this presentation, artist Eduardo Kac will discuss his artwork *Adsum*, specially conceived for the Moon and currently (2021-2022) orbiting the Earth aboard the International Space Station. Kac will discuss the materiality of the work, its symbolic implications, and its relationship to our closest celestial neighbor. Ultimately, Kac will present his vision for what he calls "cislunar culture".

Eduardo Kac is internationally recognized for his groundbreaking work in contemporary art and poetry. In the early 1980s, Kac created digital, holographic and online works that anticipated the global culture we live in today, composed of ever-changing information in constant flux. In 1997 the artist coined the term "Bio Art," igniting the development of this new art form with works such as his transgenic rabbit GFP Bunny (2000) and *Natural History of the Enigma* (2009), which earned him the Golden Nica, the most prestigious award in the field of media art. GFP Bunny has become a global phenomenon, having been appropriated by major popular culture franchises such as Sherlock, Big Bang Theory and Simpsons, and by writers such as Margaret Atwood and Michael Crichton. In 2017, Kac created *Inner Telescope*, a work conceived for and realized in outer space with the cooperation of French astronaut Thomas Pesquet. Kac's singular and highly influential career spans poetry, performance, drawing, printmaking, photography, artist's books, early digital and online works, holography, telepresence, bio art, and space art. Kac has also authored or edited several books, including *Telepresence* and *Bio Art -- Networking Humans, Rabbits and Robots* (University of Michigan Press, 2005). Kac's work has been exhibited internationally at venues such as New Museum, New York; Pompidou Center, Paris; MAXXI-Museum of XXI Century Arts, Rome; Mori Art Museum, Tokyo; Reina Sofia Museum, Madrid; Power Station of Art, Shanghai; and Seoul Museum of Art, Korea. Kac's work has been showcased in biennials such as Venice Biennale, Italy; Yokohama Triennial, Japan; Gwangju Biennale, Korea; Bienal de Sao Paulo, Brazil; and Bienal de Habana, Cuba. His works are in major collections such as Museum of Modern Art-MoMA, New York; Tate Modern, London; Victoria & Albert Museum, London; Museum Les Abattoirs—Frac Occitanie Toulouse, France; Valencian Institute of Modern Art-IVAM, Spain; Museum ZKM, Karlsruhe, Germany; and Museum of Contemporary Art of São Paulo, among others. Kac was elected as full member to the IAF (International Astronautical Federation) Technical Activities Committee for the Cultural Utilisation of Space (ITACCUS). - <https://www.ekac.org>

> **Susmita Mohanty**

Co-Founder & CEO, Earth2Orbit - Co-Founder & Principal, LIQUIFER Systems Group
Susmita Mohanty is the only space entrepreneur in the world to have started companies on 3 different continents. She is the CEO of Earth2Orbit, India's first private start-up and her third venture. She has co-founded two other companies, MOONFRONT in San Francisco [2001-2007] and LIQUIFER in Vienna [2004-ongoing]. Prior to turning entrepreneur, she worked for the International Space Station (ISS) Program at Boeing in California and did a short stint at NASA Johnson working on Shuttle-Mir projects. Educated in India, France, and Sweden, Susmita holds multiple degrees including a PhD. In 2017, she was featured on cover of Fortune Magazine.
More @ www.themoonwalker.in - www.liquifier.com - www.earth2orbit.com - www.madsalon.org

> **Marcus Neustetter & Team - *Imaginary Futures***

In the process of exploring a collective understanding of our relationship to space, the *Imaginary Futures* project brings together an experimental dialogue of creative producers from different disciplines and contexts to look at what our shared peripheral perspective of a space-future might look like.

Marcus Neustetter, Artist, curator, initiator and artistic director of *Imaginary Futures* performance

Interested in cross-disciplinary practice, site-specificity, socially engaged interventions and the intersection of art and activism, Neustetter has produced artworks, projects, performances and installations across the globe. Searching for a balance between poetic form and asking critical questions, his media fluctuates in response to concept and context. Ideas often circle the intersection of art, science and technology in an attempt to find new perspectives on his process.

> **Ale de la Puente - Five missions to explore the center and its periphery**

We have a mission: to explore the center.

Is there a center, even when everything is in motion? The center is only observable outside its own domain. Then the mission is: To be in orbit, searching in the periphery.

How to get there? Which way will we return? Where to come back? When everything seems to change, emerging in one form and vanishing in another.

The talk will approach my artwork dealing with the notions of space, time, and the

center through five space-time missions.

Ale de la Puente is an artist with a diverse background and continuum studies, including boatbuilding, navigation, astronomy, physics, and philosophy. She is known for her

poetic and conceptual explorations of time and space across a wide field of mediums, ranging from installations and sculptures to drawings, photography, and video, including art&science expeditions in search of symbolic natural phenomena, how we signify them, and how we relate to the given meaning.

She collaborates with the Institute of Astronomy and the Institute of Nuclear Sciences of UNAM (Universidad Nacional Autónoma de México), Roscosmos, Kosmica Institute, and the National Institute of Archeology and History.

She has exhibited her work nationally and internationally including, Museo de Arte e Historia de Guanajuato, Laboratorio de Arte Alameda, Museo de Arte Carrillo Gil, Museo de Arte Moderno MAM, (Mexico); Polytechnic Museum (Moscow); KSEVT (Slovenia); Rubin Center (EUA); Centro Cultural Montehermoso, Vitoria-Gasteiz; Museo Reina Sofía, Madrid, (Spain); Bass Museum of Art, (Miami, Florida); Tokyo Wonder Site, (Tokyo, Japan) Mosaicon Gallery, (Lodz, Poland); TCNJ Art Gallery, New Jersey; MALBA, (Buenos Aires, Argentina); Museo de Arte del Banco de la República, (Bogota, Colombia); amongst others. Her work is part of public and private collections.

www.aledelapuenteartist.com - IG @aledelapunte

> Yoko Shimizu - Exploring new frontiers of art, space, and biology

The beautiful mechanism of biology and nature provide inspirations for the future of humanity. These inspirations help us build global awareness of our home planet and explore creativity in the far reaches of outer space. How can we better understand nature, our mother planet, and the universe that we live in? Can we learn from nature and co-create with space?

As an artist and biochemistry researcher, Yoko Shimizu develops innovative technologies and artworks that combine science and art - working with companies, government agencies, museums, and universities around the world. She is also a co-founder and co-director of Beyond Earth, exploring new frontiers of art, space, and biology.

In this presentation, we explore the latest projects on how biological research drives innovation in creative space projects. From the Space Art DNA Capsule that stores high-resolution artworks in DNA aboard the International Space Station to large-scale sculpture designed for spaceflight inspired by aquatic organisms using AI, we look into the future of creative expressions.

Yoko Shimizu is an artist and key researcher at Ars Electronica Futurelab with a background in biology and chemistry. She began her career as a creative director and consultant for corporations, and later founded her lab, where she developed innovative technologies and installations that combine science and art. Yoko works with companies, government agencies, museums, and universities around the world. She is also a speaker and lecturer at international events, conferences, and educational institutions. Yoko is a co-founder and director of technology and design in Beyond Earth. beyond-earth.org -- @beyondearth.art - yokoshimizu.com -- @yokoshimizuart

Imaginary Futures

Performers

Marcus Neustetter | Fatou Cissé | Thulisile Binda | Xolisile Bongwana | Miné Kleynhans
| Aja Marneweck | Teddy Mhlambi | Ciara Struwig |

Marcus Neustetter, Johannesburg/Vienna

Artist, curator, initiator and artistic director of Imaginary Futures performance
Interested in cross-disciplinary practice, site-specificity, socially engaged interventions and the intersection of art and activism, Neustetter has produced artworks, projects, performances and installations across the globe. Searching for a balance between poetic form and asking critical questions, his media fluctuates in response to concept and context. Ideas often circle the intersection of art, science and technology in an attempt to find new perspectives on his process.

Fatou Cissé, Dakar

Performer, she began her career very early alongside her father, a choreographer and participated in several master classes with various choreographers from the continents. She was assistant choreographer of the CIE 1er Temps of the choreographer Andreyana Ouamba for 14 years, then finalized the creation of her company in 2012. She traveled all over the world for meetings, workshops and shows.

Fatou collaborated a lot with the Ker Thiassane, experimental villa on digital artistic practices, ecology and urban planning.

In 2019, she created the urban scenographic concept "La ville en mouv'ment", Les arts dans la rue, which invites performers from the visual and performing arts to recycle, collaborate and exhibit, with the inhabitants.

Thulisile Binda, Johannesburg

Through dance, Thulisile Binda grapples with complex and enduring themes of the physical and the psychological in equal measure. She seeks to interrogate the placement of a women's body in contemporary society. Her work is known for its striking blend of raw physicality and unique musicality, alive with responsive fluidity and driven by the inherent narrative of the body.

Xolisile Bongwana, Johannesburg

Eastern Cape born Xolisile Bongwana is an accomplished dancer and singer, who is also well-versed in composing, directing, acting and choreography. His two-decade award-winning career presents a powerful self-expression from personal narratives of connecting to his ancestry to participation in large international productions.

Miné Kleynhans, Bloemfontein

Miné Kleynhans is a visual artist whose artworks typically employ humour and satire to tease out the rich intersections between magical thinking, social ritual, consumer culture, personal and collective fantasies and game playing. This interest and direction is not only evident in her studio practice, but also in her collaborative engagements and approaches to larger programs and projects she manages.

Aja Marneweck, Cape Town

Aja Marneweck is a puppeteer, educator and theatre maker specializing in puppetry and multimedia performance. She is currently a senior lecturer and convenor of the Laboratory of Kinetic Objects/Puppetry Arts (LoKO) at the Centre for Humanities Research at the University of the Western Cape where she applies her ability to transform and animate beyond her personal creative practice.

Teddy Mhlambi, Bloemfontein

Performance artist and choreographer, Teddy Mhlambi has a passion for developing and exploring new ways of collaborative expression across various arts forms. Working with diverse cross-disciplinary artists he fuels his own experience and knowledge, which in turn is expressed in his performances and his teachings.

Ciara Struwig, Johannesburg

Ciara Struwig is a visual artist and tinkerer. She searches for meaning in the traces of things, and the stories that ephemeral evidence can tell. Her studio process balances medium and meaning in sensitive explorations of expression that draws from the experiences of life and the larger questions that surround our existence, but finds form in crafted and refined objects and images.

Workshop participants

**Rouzbeh Akhbari | Valentine Auphan | Marie-Pier Boucher | Pierre Bourdon | Yanxu Chen
| Arthur Enguehard | Guillemette Legrand |**

Rouzbeh Akhbari is an Iranian-Canadian artist working in video installation and film. His practice is research-driven and typically sits at the intersections of storytelling, political ecology, and postcolonial studies. Through a delicate examination of the violence and intimacies that occur at the borders of lived experience and constructed histories, he uncovers the minutiae of power that regiments the world around us. Akhbari trained as a sculptor at OCAD University and holds a graduate degree in Visual Studies from the School of Architecture, Landscape and Design at the University of Toronto. He is currently a Ph.D student of Human Geography in the same university.

Valentine Auphan graduated from the École nationale supérieure des Arts Décoratifs de Paris in graphic design and multimedia. She has a multidisciplinary practice and aspires to continue her studies with a PhD in design and sciences. Her subjects of reflection concern the links between these two disciplines. Indeed, her diploma project deals with the representation of the exoplanetary ground in collaboration with the Observatoire de Paris. Through an immersive artistic installation of mapping on a dome, she tries to make us forget our own temporality and spatiality to better "look at ourselves from the inside". Globe-trotter, she is inspired by her travels and practices telescope tourism. Thus, in the clarity of the night, she observes the astronomers and revisits their interpretations that will change the future. Her plastic research, a true archeology of light, invites to daydreaming, to share with others through the story and experimentation.

Marie-Pier Boucher is Assistant Professor of Media Studies at the Institute of Communication, Culture, Information, and Technology + iSchool at University of Toronto, Mississauga. She works on the artistic exploration of science and technology, with a specific focus on the design of environments built to support life in extreme environments.

She leads the research program "Outer Space and the City" (funded by the Social Sciences and Humanities Research Council of Canada), a project in which Rouzbeh Akhbari, doctoral student in human geography, participates.

Pierre Bourdon, After studying digital creation at Estienne ESAIG, Pierre Bourdon is now finishing a transdisciplinary post-master cursus at the CNAM with an internship at the Chaire arts et sciences, LadHyX (Ecole polytechnique). From the conception of digital experiences to the integration of analog mediums and scientific culture, he evaluates the possibilities of an unruly and cross-disciplinary design. He also maintains a personal practice, especially with his diploma project « Citadelle » started 2 years ago. This alternate reality experience offers participants to reveal a corporation behind the construction of ultra-connected physarum polycephalum incubators. This never-ending and unsolicited experience is the essence of his research in arts and sciences, allowing him to bend the existing modal boundaries that regulate the course of an immersive experience.

Yanxu Chen, Yanxu defended her PhD thesis in physical oceanography at Ecole Normale Supérieure during the 2022 summer. Her research is explicitly related to mesoscale eddies — the "weather" system of the ocean, and technically how to represent these features in numerical modeling. Apart from fluid mechanics, Yanxu is also interested in the artistic investigation of "metaphysics", where she believes both logics (mathematics) and poetry can penetrate differently, though there is always the question of uncertainty. She plays a Chinese musical instrument — Guqin on a daily basis, of which she tries to explore the poetic side of imagination and combine with installation of water waves.

Arthur Enguehard, Interested in cultural incarnation and relational practices as an active way of building identities as well as objects, Arthur Enguehard addresses in his work the issue of "the Earth" as an environment. After studying Geosciences and specialized in Climatology at ENS in Paris Arthur committed to informal and militant education on various terrains and with divers publics. He is a leader of the activist and education groupe "PePaSon" working on listening bodies. Now he follows a PhD program at SACRe-ENS (ENS-ENSAD) and builds artworks and conceptual geographies in order to explore how geosciences "dispositifs" could be used to experience continuously the Earth as a common and shared living environment.

Guillemette Legrand is a designer and artist who uses multimedia installations, experimental presentations, films, and textile-making to mythologise the machine gaze, and materialise different imaginations of the human-machine continuum. In 2020, she initiated the research group Techno-Mythopoeia, which seeks to readjust the relationship between scientific knowledge and the representation of the Earth within our collective imagination, using cosmogram-making as an instrument for artistic research and practice. Her work has been exhibited at the V&A (London, UK), V2_Lab for the Unstable Media (Rotterdam, NL), the 4th Istanbul Biennale (Istanbul, TR), LUMA (Arles, FR), Design Museum (London, UK), among other international locations. Guillemette is one half of the practice Legrand Jäger.

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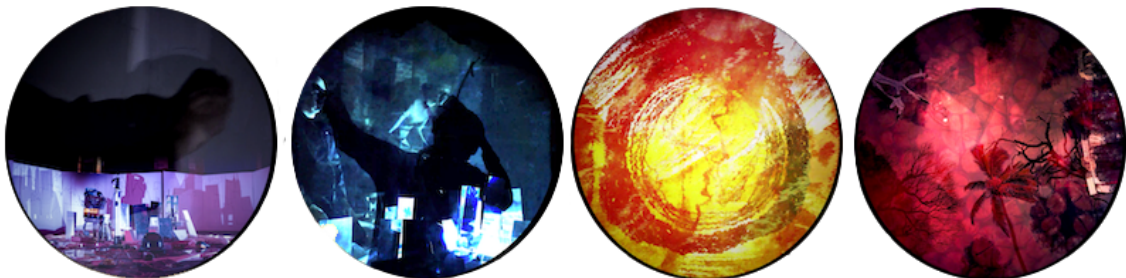


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