Future Tense Symposium 3.0

presented by the
UCI Beall Center

April 27th, 2024

UCI Claire Trevor
School of the Arts

BEALL

PST ART

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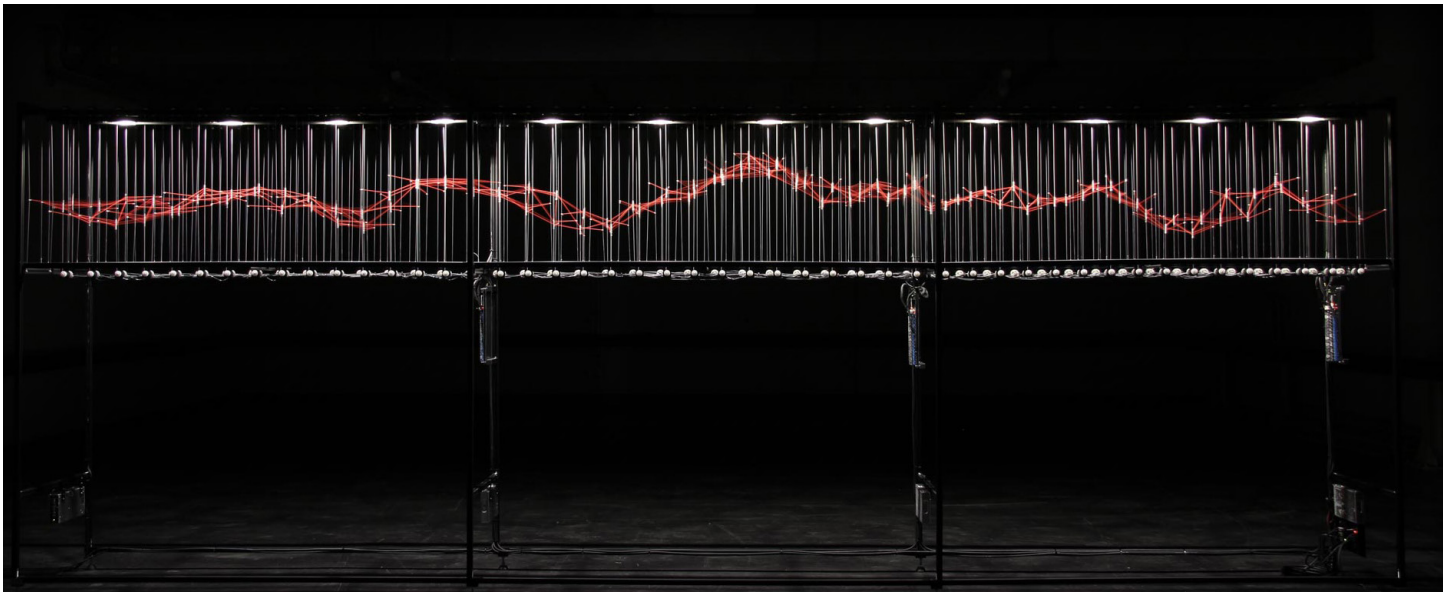
FRONT: Laura Splan, *Baroque Bodies (Sway),* 2024. Interactive interactive audiovisual installation including data-driven sound and 3D models with AI-generated imagery. Image courtesy of the artist. Commissioned by the Beall Center for Art + Technology's Black Box Projects residency program.

Future Tense: Art, Complexity, and Uncertainty

Exhibition on View: *August 24 - December 14, 2024, at the UCI Beall Center for Art + Technology and University Art Gallery*
Research Symposium: *April 27, 2024*



Future Tense: Art, Complexity, and Uncertainty, presented by the **UC Irvine Beall Center for Art + Technology**, is an exhibition and research project funded by the **Getty's 2024 PST ART: Art and Science Collide** initiative. Culminating three years of collaborative artist-scientist residencies, *Future Tense* presents emerging and established contemporary artists who engage a myriad of complex systems, including robotics, evolutionary biology, data surveillance, global warming, and bacterial intelligence. The exhibition will be on view at the UC Irvine Beall Center and UC Irvine University Art Gallery from August 24 through December 14, 2024.

Ralf Baecker, Theresa Schubert, Carolina Caycedo, David de Rozas, Fernando Palma Rodríguez, Julie Mehretu, and others will exhibit existing artworks that activate and reflect complexity. Chico MacMurtrie, Cesar & Lois, Laura Splan, Hege Tapio, and Gail Wight are producing newly commissioned, interdisciplinary works under the Beall Center's Black Box Projects residency, a program that facilitates collaborations between visiting artists and UC Irvine faculty.

The following pages provide an overview of the April 2024 *Future Tense* symposium, the third and final research event planned in preparation for the exhibition.

Ralf Baecker, *Interface I, 2016; Aluminum tubes, DC motors, strings, elastic bands, custom electronics, Geiger-Müller tubes dimensions variable*

Program Schedule | 9:30am – 3:00pm PDT

Virtual livestream: https://shorturl.at/esBP5

In-person: UC Irvine Colloquium Room, Room 3201 of the UC Irvine Contemporary Arts Center (navigation info here)

9:30 – 9:40 am	**David Familian** (UCI Beall Center), Opening
9:40 – 10:25 am	**Jeff Barrett** (UCI Logic and Philosophy of Science), Keynote Lecture *Emergent Meaning: On the Creation of Order from Randomness*
10:35 – 10:45 am	**Chico MacMurtrie**, *Future Tense* Resident Artist *Dual Pneuma – developed with the UCSD Jacobs School of Engineering*
10:50 – 11:00 am	**Laura Splan,** *Future Tense* Resident Artist *Baroque Bodies (Sway) – developed with Hannah Lui Park (UCI Pathology), Adam Lamson (Center for Computational Biology), and Danielle McPhatter*
11:05 – 11:20 am	**Pier Luigi Capucci** (Noema, LABA Rimini)**,** Guest Lecture
11:30 – 11:45am	**Joost Rekveld** (University of Ghent, Belgium)**,** Guest Lecture
11:45 – 12:00pm	**Open Discussion**
	Lunch (provided)
12:45 –1:05pm	**Caroline Jones** (MIT Department of Architecture), Guest Lecture *Cybernetic Histories: Admonitions for GenAI*
1:15 – 1:25pm	**Gail Wight,** *Future Tense* Resident Artist *Ostracod Rising – developed with the Hadly Lab at Stanford University*
1:30 – 1:40pm	**Cesar & Lois,** *Future Tense* Resident Artist *Hyphaenated – developed with the Treseder Lab at UCI*
1:45 – 2:00pm	**María Fernández** (Cornell History of Art), Guest Lecture *Gordon Pask's Maverick Machines*
2:10 – 2:30pm	**Ellen K. Levy,** Guest Lecture *20 Years of Art and Complexity*
2:30 - 2:55pm	**Open Discussion**
2:55 – 3:00pm	**David Familian** (UCI Beall Center), Closing

Jeff Barrett

Irvine, CA | UC Irvine Department of Logic and Philosophy of Science

Jeffrey Barrett will deliver an original lecture, "Emergent Meaning: On the Creation of Order from Randomness," in response to the projects included in the *Future Tense* exhibition. Writes Barrett, "It is tempting to think of order and randomness as mutually incompatible, but in the context of an adaptive dynamics, order may emerge from randomness. Lewis-Skyrms signaling games illustrate the creation of meaningful order from random interactions."

Jeffrey Barrett's research involves two general topics. First, he is interested in attempts to resolve the measurement problem in quantum mechanics. The measurement problem arises from the fact that the standard theory's two dynamical laws are incompatible: one is linear and the other nonlinear. Since they constitute contradictory descriptions of the time-evolution of physical states, they threaten to render the standard theory logically inconsistent if one is unable to specify strictly disjoint conditions for when each applies. The theory tells us that the linear dynamics is to be used in all situations except when a measurement is made in which case the nonlinear collapse dynamics is to be used; but since it does not tell us what constitutes a measurement, we do not know when to apply the linear dynamics and when to apply the collapse dynamics. Barrett is particularly interested in solutions to the measurement problem that drop the collapse dynamics altogether.

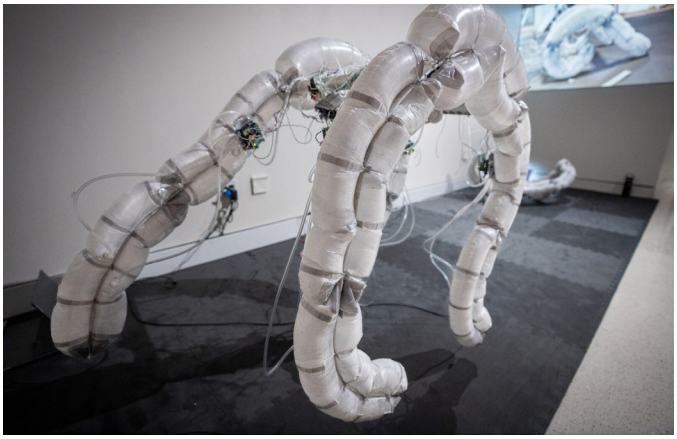
Second, Barrett is interested in using evolutionary game theory and self-assembling games to model basic features of empirical and mathematical inquiry. In particular, he has been modeling the coevolution of descriptive language and predictive theory in the context of Skyrms-Lewis sender-receiver games.

Jeff Barrett serves on the advisory board of the Future Tense project. Read more about his research here.

Text and image courtesy of Jeffrey Barrett.

Chico MacMurtrie, *Dual Pneuma*

Brooklyn, NY | *Future Tense* Resident Artist



Chico MacMurtrie, Dual Pneuma [Prototype], 2024; Tedlar fabric, hydraulic air pumps, proprietary robotic mechanisms. Dimensions varible.

Photo by Andrew Boyle for NeueHouse, 2019.

Dual Pneuma is a soft-robotic performer evoking a humanoid body with four limbs that allow it to shapeshift between a bipedal and quadrupedal form. Comprising a musculature of high-tensile fabric in the form of inflatable muscles, the artwork will move through the gallery, interacting with viewers and flexing its body in a manner between that of a human, animal, and insect. Various poses of the robot will be echoed in sculptural form, as MacMurtrie is developing a series of ceramic works cast directly from the robot itself.

Chico MacMurtrie marries traditions of soft sculpture and kinetic art, movements popularized concurrently in the 1960's in reaction to expanding globalized electronic networks. He imbues the machine form with human sensibility, with "supple" gestures that emerge from empirical rationality.[1] Through progressive developments in organic robotics, MacMurtrie arrives ultimately at a futurist technobody sensitive enough to approach.

MacMurtrie is developing Dual Pneuma *with support from Creative Capital and the UC Irvine Beall Center's Black Box Projects residency, in collaboration with the UCSD Bioinspired Robotics and Design Lab and Department of Mechanical and Aerospace Engineering. More of MacMurtrie's work can be found here:*

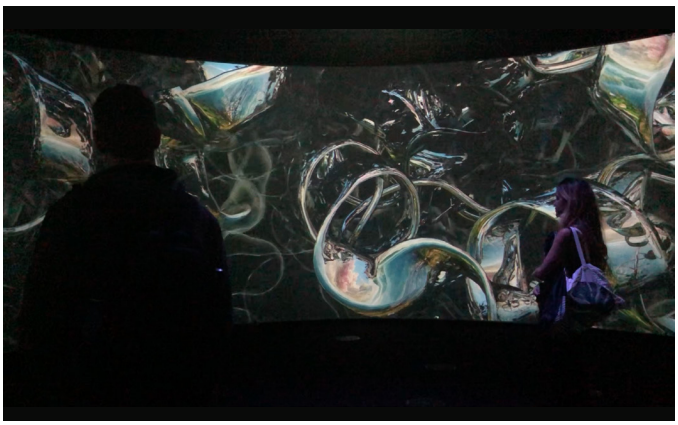
http://amorphicrobotworks.org/

1. MacMurtrie, Chico, "Chico MacMurtrie," Video Interview, September 11, 2010. https://www.youtube.com/watch?v=4ocqhT7gA2I

Laura Splan, *Baroque Bodies (Sway)*

Brooklyn, NY | *Future Tense* Resident Artist

"Laura Splan in her studio." Photo by Danielle Ezzo.



Laura Splan: Manifest, *installation view, NYU Langone Medical Center Art Gallery, New York, 2017. (© Laura Splan. Photo by NYU Langone Art Program & Collection.)*

Baroque Bodies (Sway) is a sensory encounter exploring entanglements between molecular phenomena and the built environment. The project uses emerging epigenetic research on environmental influences on gene expression along with computational and digital technologies to connect micro and macro worlds. Working in collaboration with scientists and technologists, Splan is creating an interactive video projection installation with sound that invites visitors to explore a 3D animation combining models of nucleosomes with AI-generated landscape imagery.

Laura Splan is a transdisciplinary artist expanding intersections of "Science, Technology, and Culture."[1] She creates conceptually layered and technically crafted work, exploring the biological sublime while unraveling its entanglements with infrastructure. Her work embodies biomedical artifacts through sensory encounters that amplify tactility, light, and sound. Often incorporating raw biodata or the materials of her own body, Splan's interpolations shuttle between technological and organic systems, constructing an integrated posthuman landscape through translational acts.

Laura Splan is developing Baroque Bodies (Sway) *in collaboration with theoretical biophysicist Adam Lamson (Center for Computational Biology), epigenetic researcher Hannah Lui Park (UCI Pathology), and creative technologist Danielle McPhatter. More of Splan's practice can be viewed here:*

https://www.laurasplan.com/

1. Splan, Laura. 2023. "About." Laura Splan. https://www.laurasplan.com/about

Pier Luigi Capucci

Cervia, Italy | Noema, LABA Rimini

Since the '80s Pier Luigi Capucci has been concerned with the relationships among arts, sciences and technologies. His theoretical activity is concerned with technologies of representation and communication and with technoscience-based art forms. He has been professor at the Universities of Rome "La Sapienza", Bologna, Florence, SUPSI – University of Applied Sciences and Arts in Lugano, Urbino and Udine. Currently he is Director and Coordinator of the Scientific-Cultural activities at LABA (Free Academy of Fine Arts) Rimini. Since 2007 he has been working as a supervisor in the T-Node PhD Research Program of the Planetary Collegium (University of Plymouth), and from 2013 to 2018 he has been appointed as Director of Studies. He is in the Scientific Committee of AICA (Association Internationale des Critiques d'Art/ International Association of Art Critics, Paris), Italian section.

He has published the books Realtà del virtuale (Reality of the virtual, 1993; 2015); Il corpo tecnologico (The technological body, 1994); Arte e tecnologie (Art and technologies, 1996; 2013); art*science. The New and History (2018, in English) and Arte e complessità (Art and complexity, 2018); Dialogues across the seas: the ocean that keeps us apart also joins us. Charting knowledge and practice in the Anthropocene (2022). In 1994 he founded and directed the first italian online magazine, NetMagazine, later MagNet, on the relationships between arts, technologies and society. In 2000 he founded Noema, an online journal and network of projects on the relationships among arts, sciences, technologies and society. He is the founder and curator of the three-year art*science – Art & Climate Change research project on art and climate change.

Pier Luigi Capucci is a guest scholar to the Future Tense project. Read more about his research here.

Image and text courtesy of Pier Luigi Capucci.

Joost Rekveld

Ghent, Belgium | University of Ghent

Joost Rekveld is an artist who is motivated by the question of what we can learn from a dialogue with machines. In his work, he explores the sensory consequences of systems of his own design, often inspired by forgotten corners in the history of science and technology. These systems combine temporary dogmas in the form of procedures or code, with more open-ended elements such as material processes or networks of interactions that are too complex to predict. His films are an attempt to reach an intimate and embodied understanding of our technological world

Since February 2017, Joost has been affiliated to the School of Arts, University College Ghent as an artistic researcher.

His abstract films have been shown world-wide in a wide range of festivals and venues for experimental film, animation or other kinds of moving image. He had retrospectives at the Barbican in London and the Ann Arbor film festival amongst others, and in 2017 he was filmmaker in focus at the International Film Festival Rotterdam. Individual films were screened at hundreds of venues, including the ICA and the Tate Modern in London, The Centre Pompidou in Paris and the Moderna Museet in Stockholm. His film "#11, Marey <-> Moire" was the first Dutch film ever to be shown at the Sundance Film Festival.

He has realized several installations and was involved in many collaborative projects involving composers, music ensembles, theatre companies, dance companies and artist's labs. These included The Royal Opera (London) and electronic art and music laboratories such as IRCAM (Paris), STEIM (Amsterdam) and the V2 Institute for Unstable Media (Rotterdam).

Pier Luigi Capucci is a guest scholar to the Future Tense project. Read more about his research here.

Image and text courtesy of Joost Rekveld.

Caroline Jones

Boston, MA | MIT Department of Architecture

Caroline Jones will present a body of ongoing research entitled "Cybernetic Histories: admonitions for GenAI." Writes Jones: "In 1956, the phrase 'artificial intelligence' was coined by computer scientists who thought it would be good to have. They were, at the time, very dubious whether machines could ever be made that would possess such a cognitive capacity. Debates over whether machines are now 'artificially intelligent' continue to this day; what is historically interesting is that the phrase of our moment was initially utilized in the mid-1950s to hold off Cybernetics, the field of machine command, control, and communication that was taking off in contemporary culture. Touching on the fascinating work of a Chinese immigrant engineer who plunged into cybernetic art-making in 1960s New York (Tsai WenYing), my contribution will examine modes of interactive and responsive art at that time. Contrasting the seeming paradox of cybernetic art before computers with current infatuations with 'AI,' I approach how deeply layered machine learning programs and syn-bio / nanobots are all parasitic on the labors and autopoietic existence of already-living entities. I will compare the dominant aesthetic of screen-based vision tools that current algorithms favor, with the more spatialized responsive environments of early cybernetic art. So far, only human intelligence can tell us what we're learning from our machines."

Caroline Jones studies modern and contemporary art, with a particular focus on its technological modes of production, distribution, and reception. Trained in visual studies and art history at Harvard, she did graduate work at the Institute of Fine Arts in New York before completing her PhD at Stanford University in 1992.

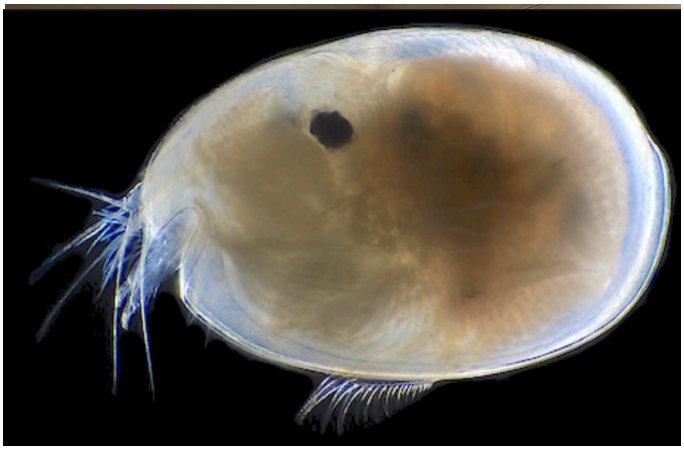
Caroline Jones is an advisor to the Future Tense project. Read more about her work here.

Image and text courtesy of Caroline Jones.

Gail Wight, *Ostracod Rising*

Stanford, CA | *Future Tense* Resident Artist

Photo courtesy of Silicon Valley Laureates Artist Laureate Awards, 2018.



A female Vargula Ostracod, length about 2.4 mm. Image courtesy of the artist.

Ostracod Rising suggests that the ostracod - a ubiquitous crustacean present in water and on land - is evolving with astounding speed.Taking the form of a large accordian book hovering in space, *Ostracod Rising* tells a story of the end of the Anthropocene and the advent of the Ostracovidous Epoch. Pages will include biological diagrams and information connecting the species to geological periods, both historical and imagined. Core samples that are being used to define the Anthropocene will form the basis of the timeline. Extending beyond the present, the ostracod will mutate and evolve into a world-building phenomenon.

Writes Wight of her practice: "visually, I attempt to construct biological allegories that tease out the impacts of life sciences on the living: human, animal, and other ... Recently, my imagination has fixed on the topic of deep time. I find myself craving a better understanding of the unknowable past."[2]

Her collaborations with scientists have explored such wide inquiries as the symbiotic relation between gut microbes and the mind, the effects of wind in color theory, and the alien timescapes of lichen.

Gail Wight's Ostracod Rising *is being developed with the Hadly Laboratory at Stanford, and with the United States Geological Survey. Read more below:*

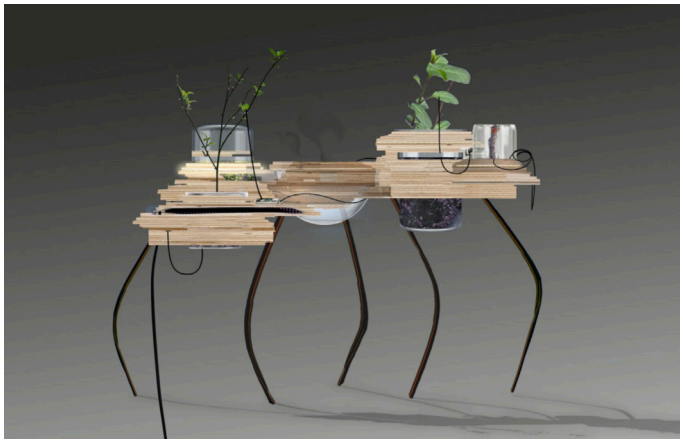
https://web.stanford.edu/~gailw/

1. Wight, Gail. 2023. "about this work." Gail Wight; works of art. https://web.stanford.edu/~gailw/Wight_Projects/about.html

Cesar & Lois

Campinas, Brazil – San Marcos, CA | *Future Tense* Resident Artist

Photo courtesy of Cesar & Lois.



Cesar & Lois, Hyphaenated Prototype [Sketch]*, 2024; Mycellial networks, bio-sensors, historic oil drilling equipment. Image courtesy of the artist.*

Hyphaenated, developed by artist collective Cesar & Lois specifically for installation in Future Tense, is an experiment-as-artwork intended to capture interspecies signalling. The sculpture will comprise a central vesicle of water and multiple pods of live biomatter. Water vapor released from the vesicle will humidify the soil pods. Sensors within each pod will detect resultant changes in mycellial electric signalling and will display live data on an embedded monitor. Lights distributed throughout the sculpture will synchronize their pulse to the rate of mycellial signalling.

Cesar & Lois is a collective of artists and researchers probing humanity's relationship to nature and unfolding intersections between technological, biological and social systems. Run by media artists Cesar Baio (Brazil) and Lucy HG Solomon (California), the collective involves a web of additional artists and scientists in their multidisciplinary experiments.[1] Formed in the summer of 2017, Cesar & Lois look towards microbial organisms as models for "decentralized [cognition], equitable distribution of resources, and collective engagement," often seeking to cultive a "fungal colonization of human knowledge systems." [2]

Cesar & Lois's Hyphaenated *project is being developed with the UCI Treseder Lab. More of their work can be accessed here:*

https://cesarandlois.org/

1. Cesar & Lois. 2023. "About; Thinking and Living Together" Cesar and Lois. https://cesarandlois.org/about/
2. The League of Imaginary Scientists, 2023, "The [ECO]Nomic Revolution: when microbiological logic determines everything," Video Interview, March 19, 2018. https://www.youtube.com/watch?v=q-EELFUJrlI

María Fernández

Ithaca, NY | Cornell History of Art & Visual Studies

María Fernández's presentation on Gordon Pask's Maverick Machines will offer an introduction to Pask's electrochemical computers with reference to contemporary art.

Fernández's research and teaching concern three areas and their intersections: the history and theory of digital and new media art, Latin American art, and feminist media art, with attention to postcolonial/decolonial theories. She is the author of Cosmopolitanism in Mexican Visual Culture (Texas University Press 2014), for which she won the Arvey Book Award by the Association for Latin American Art in 2015. With Faith Wilding and Michelle Wright she edited Domain Errors: Cyberfeminist Practices (Autonomedia, 2002). Recently, she edited the volume, Latin American Modernisms and Technology, which explores diverse engagements of Latin American intellectuals and artists with modern technologies, mechanical, electronic, digital and imaginary (Cornell Institute for Comparative Modernities and Africa World Press, 2018). Her essays have appeared in multiple journals including Leonardo, Art Journal and Third Text as well as in edited collections. She is now writing a book on the work of the British cybernetician, Gordon Pask and investigating the contributions of women artists working in new media to posthumanisms and new materialisms.

Fernández has taught courses in the history and theory of digital art, Latin American as well as feminist media arts. Recent seminar topics include: Feminist Postumanisms, Latin American Modernisms and Technology, and BioArt (with Angela Douglas, Depts. Entomology, Molecular Biology & Genetics).

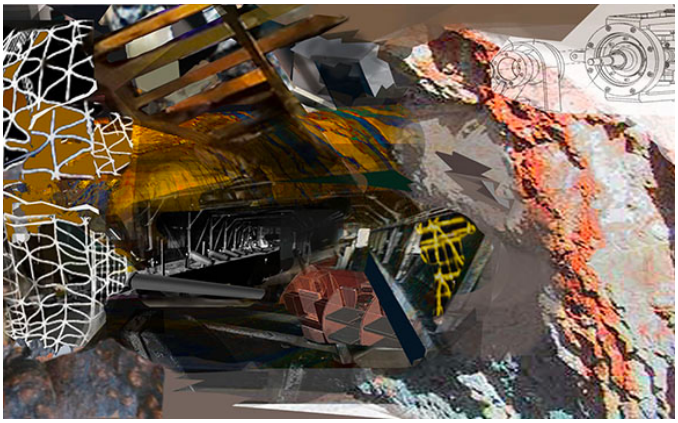
María Fernánsdez is a guest scholar to the Future Tense project. Read more about her work here.

Image and text courtesy of María Fernández.

Ellen K. Levy

New York, NY

Photo courtesy of Ellen K. Levy.



Ellen K. Levy, Extraction, *2020, Acrylic and gel over print, 40 x 60".*

Ellen K. Levy, co-curator of the 2003 exhibition, *Complexity*, will speak to historical development in complexity art witnessed over the past two decades.

Ellen K. Levy, PhD, is a multimedia artist and writer known for exploring art, science and technology interrelationships since the mid-1980s. Levy highlights them through exhibitions, educational and curatorial programs, and publications. She was President of the College Art Association (2004-2006) before earning her doctorate (2012) from the University of Plymouth (UK) on the art and neuroscience of attention. She then was Special Advisor on the Arts and Sciences at the Institute for Doctoral Studies in the Visual Arts. She was a Distinguished Visiting Fellow in Arts and Sciences at Skidmore College (1999) and taught transdisciplinary classes (e.g., the New School, Cooper Union, Brooklyn College, Banff). She received an AICA award and an arts commission from NASA following a solo exhibition at the National Academy of Sciences (NAS) (1985). With Charissa Terranova, she is co-editor of D'Arcy Wentworth Thompson's Generative Influences in Art, Design: From Forces to Forms (2021, Bloomsbury Press). Levy and Barbara Larson co-edit the "art and science since 1750" book series of Routledge Press.

Ellen K. Levy is an advisor to the Future Tense project. Read more about her work here.

Text and images courtesy of Ellen K. Levy.

Presented by the UCI Beall Center for Art + Technology, with generous support from the 2024 Getty PST ART: *Art and Science Collide* initiative.

With many thanks to our contributors:

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Carolina Caycedo
Cesar & Lois
David de Rozas
Estate of the Harrison Studio
Lynn Hershman Leeson
Chico MacMurtrie
Julie Mehretu
Fernando Palma Rodríguez
Clare Rojas
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