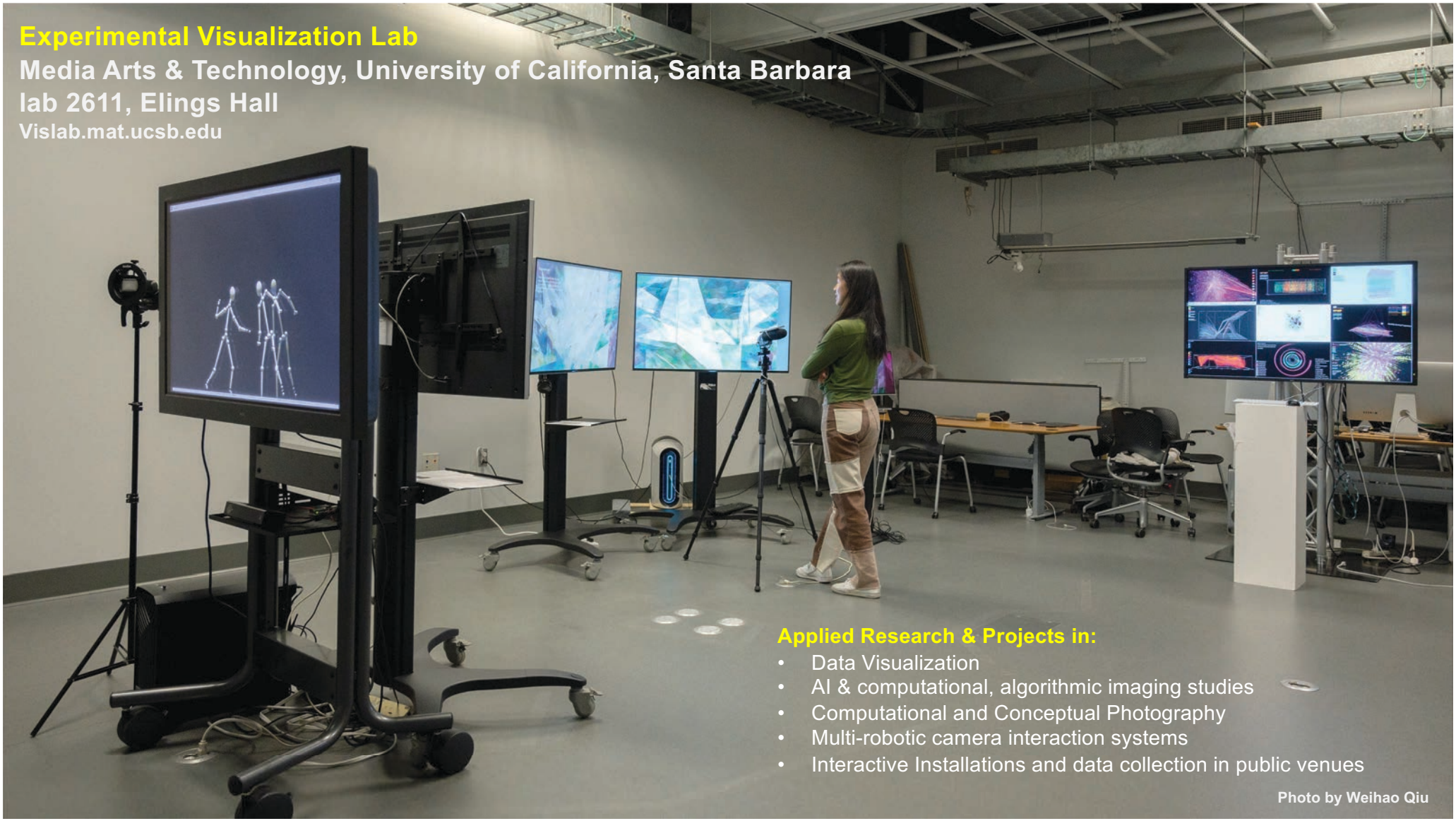

Experimental Visualization Lab
Media Arts & Technology, University of California, Santa Barbara
lab 2611, Elings Hall
Vislab.mat.ucsb.edu
Applied Research & Projects in:
• Data Visualization
• AI & computational, algorithmic imaging studies
• Computational and Conceptual Photography
• Multi-robotic camera interaction systems
• Interactive Installations and data collection in public venues
Photo by Weihao Qiu

# George Legrady Area of Specialization

I am an interdisciplinary digital media artist, scholar, and researcher.

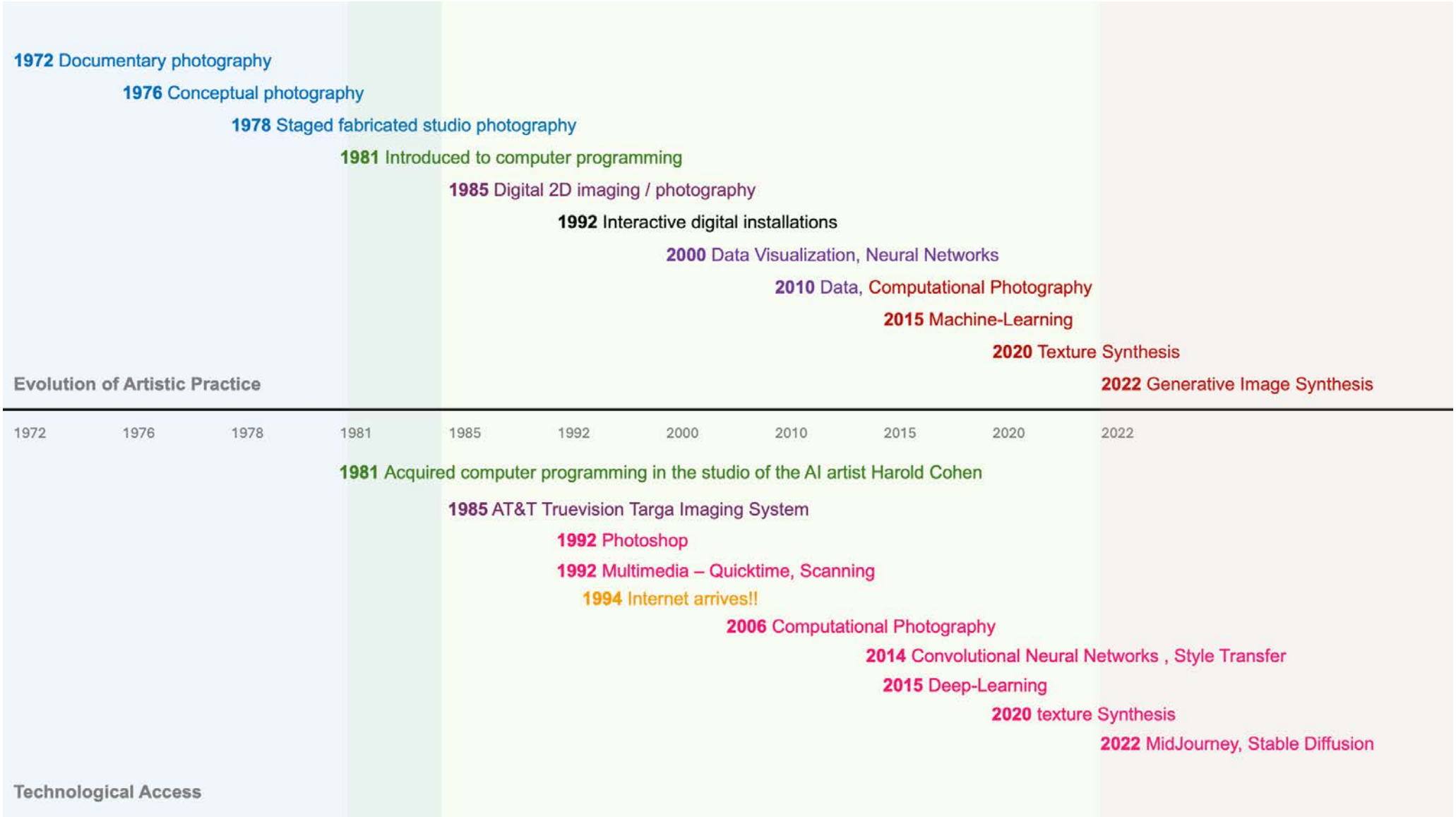
The overall focus of my artistic and academic research and practice is based on the study of *how image-generating technologies* (camera, computer imaging systems, software) *inadvertently redefine the data they process*, and how this affects the content and meaning of the images, objects, and time-based media that these image-generating machines produce.

Like the other senior MAT faculty, I belong to the first generation of media artists to integrate computational processes since the mid-1980s for creating "Born-Digital" visualizations.

**Areas of specialization**:

- Artistic, research projects and publications that explore algorithmic processes for photographic imaging and data visualization
- through semantic categorization and self-organizing systems
- interactive computational-based art installations, and
- mixed-realities narrative development.
- The approach engages both semantic and semiotic analyses of the optical-machine-software image, building on the longstanding tradition of the cultural critique of photographic representation.
- A key focus is the creative potential of such technologies for aesthetic coherence and expression.

https://www.georgelegrady.com


1972 Documentary photography
1976 Conceptual photography
1978 Staged fabricated studio photography
1981 Introduced to computer programming
1985 Digital 2D imaging / photography
1992 Interactive digital installations
2000 Data Visualization, Neural Networks
2010 Data, Computational Photography
2015 Machine-Learning
2020 Texture Synthesis
2022 Generative Image Synthesis
Evolution of Artistic Practice
1972
1976
1978
1981
1985
1992
2000
2010
2015
2020
2022
1981 Acquired computer programming in the studio of the AI artist Harold Cohen
1985 AT&T Truevision Targa Imaging System
1992 Photoshop
1992 Multimedia – Quicktime, Scanning
1994 Internet arrives!!
2006 Computational Photography
2014 Convolutional Neural Networks , Style Transfer
2015 Deep-Learning
2020 texture Synthesis
2022 MidJourney, Stable Diffusion
Technological Access

**MAT 200a Art & Technology**

Tues-Thurs 1:00pm-2:50pm – Experimental Visualization Lab, 2611, Elings Hall

- Special topics at the intersections of Art & Technology usually focused on the evolution of how artists have integrated technologies into their practice
- Fall 2024 Unique Opportunity: **Getty PST Art "*Art + Science Collide*",** over 70+ museums have been funded to create exhibitions both past and present that touch upon the intersections of art and science
- Most expansive art events in the world!
- Topics include: ancient cosmologies, indigenous sci-fi, environmental justice, AI, etc.
- Through review and analyses of the Fall 2024 Getty PST Art initiative, lectures, readings, research presentation, and a final project, the course will introduce contemporary and historical directions and methodologies of the intersections of art and technology.

**MAT 200a Art & Technology**
Course Links &

**Course Syllabus**: https://www.mat.ucsb.edu/~g.legrady/academic/courses/24f200a/24f200a.html

**Getty PST Art Listing**: https://pst.art/en/exhibitions

**Student Forum**: https://w2.mat.ucsb.edu/forum/viewforum.php?f=92 (where work is to be posted)

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**Course Completion:**

- Attendance and participation in class meetings, field trips, lectures, etc.
- Posting of bi-monthly research results
- Final Project / Report


**M254 Arts & Engineering / Science Research** - Research methodologies in arts, science and engineering course through Science lab visits.

# Interrogating Methodologies

## Exploring Boundaries in Art & Science

## April 18-19, 2014

McCune Conference Room, 6020 HSSB
University of California, Santa Barbara

A multi-discliplinary symposium comparing methodologies from the natural sciences, social sciences, humanities, and the arts to interrogate questions at the heart of research methods and practices

### Schedule

**Friday, April 18**

| | | |
|---|---|---|
| 9:00 - 9:15 | **Symposium Day 1** | |
| | Introduction | George Legrady (MAT, UCSB) |
| | | Barbara Harthorn (CNS, UCSB) |
| 9:15 - 10:30 | **Keynote [ Video ]** | |
| | Introduction | Bruce Robertson (AD&A Museum, History of Art & Architecture, UCSB) |
| | *Problems in the Theory of Visualization* | James Elkins (Art History, School of the Art Institute of Chicago) |
| 10:35 - 12:00 | **The Big Picture: Visualizing Big Data [ Video ]** | |
| | Introduction | JoAnn Kuchera-Morin (MAT, UCSB) |
| | *Supercomputing the Universe* | Joel R. Primack (UC HiPACC, UCSC) |
| | *The Original Big Data: Geospatial Information* | Keith Clarke (Geography, UCSB) |
| | *The Big Picture: Discovering knowledge from pictures* | B.S. Manjunath (Center for Bio-Image Informatics, UCSB) |
| 12:00 - 1:00 | **Lunch** | |
| 1:00 - 2:30 | **Interrogating the Methodologies of Art & Science [ Video ]** | |
| | Introduction | Lisa Jevbratt (Art / MAT, UCSB) |
| | *Art\|Sci in the evolution of intelligence* | James K. Gimzewski (Chemistry & BioChemistry, UCLA) |
| | *From knowhow transfer to the sharing of methodologies: PhD research. Z-node* | Jill Scott (Swiss Artistsinlabs- ICS. University of the Arts Zurich) |
| | *Avoiding the Itch: Development of a Fluorescence Detection of Poison Oak Oil* | Rebecca Braslau (Chemistry & BioChemistry, UCSC) |
| | *Respondent* | Victoria Vesna (DMA, Art-Science Center, UCLA) |
| 2:35 - 3:50 | **Citizen Science: How does the Public Contribute to Science? [ Video ]** | |
| | Introduction | Marko Peljhan (MAT, UCSB) |
| | *Open science and wicked problems: how new ways of doing science can help tackle pressing global challenges* | Lina Nilsson (Teklalabs, Blum Center, UC Berkeley) |
| | *The Berkeley Atmospheric CO2 Observation Network--monitoring the heartbeat of the urban carbon cycle* | Virginia Teige (Beacon, Chemistry, UC Berkeley) |
| | *GalaxyZoo and the Zooniverse of Astronomy Citizen Science* | Joel R. Primack (UC HiPACC, UCSC) |
| 3:50 - 4:00 | **Coffee Break** | |
| 4:05 - 5:15 | **Asking the Right Questions, Avoiding the Wrong Ones, How Research Evolves [ Video ]** | |
| | Introduction | Marcos Novak (MAT, UCSB) |
| | *Panning for gold in the lab: Scientists as prospectors* | Dave Deamer (Biomolecular Engineering, UCSC) |
| | *Building on a chip? Scalar boundaries of multifunctional building enclosures* | M. Paz Gutierrez, (BIOMS, Architecture, UC Berkeley) |
| 5:30 - 6:45 | **Reception in Media Arts & Technology** | Allosphere, Experimental Visualization Lab, Translab |

(Elings Hall, 2nd Floor)

**Saturday, April 19**

| | | |
|---|---|---|
| 9:00 - 9:15 | **Symposium Day 2** | |
| | Introduction | John Weber (Institute of the Arts and Sciences, UCSC) |
| 9:15 - 10:30 | **Keynote [ Video ]** | |
| | Introduction | Patrick McCray (History, UCSB) |
| | *Symmetry and Beauty* | David Gross (KITP, UCSB) |
| 10:35 - 11:50 | **Art and Science: Sources of the Great Divide [ Video ]** | |
| | Introduction | George Legrady (MAT, UCSB) |
| | *From Congruence to Competition: Art and Science in the Early Modern Period* | Ann J. Adams (History of Art & Architecture, UCSB) |
| | *Between Art and Algorithm: Histories of the Engineer-Artists Nexus* | Patrick McCray (History, UCSB) |
| 12:00 - 1:00 | **Lunch (Hosted by Institute of Art and Science)** | |
| 1:05 - 2:30 | **Inviting Artists Into the Lab and Science into the Museum [ Video ]** | |
| | Introduction | John Weber (Institute of the Arts and Sciences, UCSC) |
| | *Visualizing the Universe* | Enrico Ramirez Ruiz (Astronomy, AstroPhysics, UCSC) |
| | *Blurring the Boundaries-beyond a one-sided love affair!: The Swiss artists-in-labs program* | Jill Scott (Swiss Artists in Labs) |
| | *LACMA's Art & Technology program in the late 1960s, its impact and how the newly activated Art+Tech program builds upon and differs from the original* | Amy Heibel (Technology and Digital Media, LACMA) |
| 2:35-3:30 | **Closing Reception: *Alice Aycock Drawings*** | Art, Design & Architecture Museum UC Santa Barbara |

AD&A MUSEUM UC SANTA BARBARA · ART, DESIGN & ARCHITECTURE · INSTITUTE for ARTS and SCIENCES · MAT Media Arts and Technology Graduate Program · CNS·UCSB Center for Nanotechnology in Society

http://interrogating-methodologies.org/

# Getty to Launch PST Art: *Art & Science Collide*

Getty Foundation supports the largest art event in the United States with nearly $20 million in grants

**Topics**
Art & Architecture

# SCIENCE COLLIDE

PST ART: *Art & Science Collide* will create opportunities for civic dialogue around some of the most urgent problems of our time by exploring past and present connections between art and science in a series of exhibitions, public programs, and other resources. Project topics range from climate change and environmental justice to the future of artificial intelligence and alternative medicine.

## Ancient Wisdom for a Future Ecology: Trees, Time, and Technology

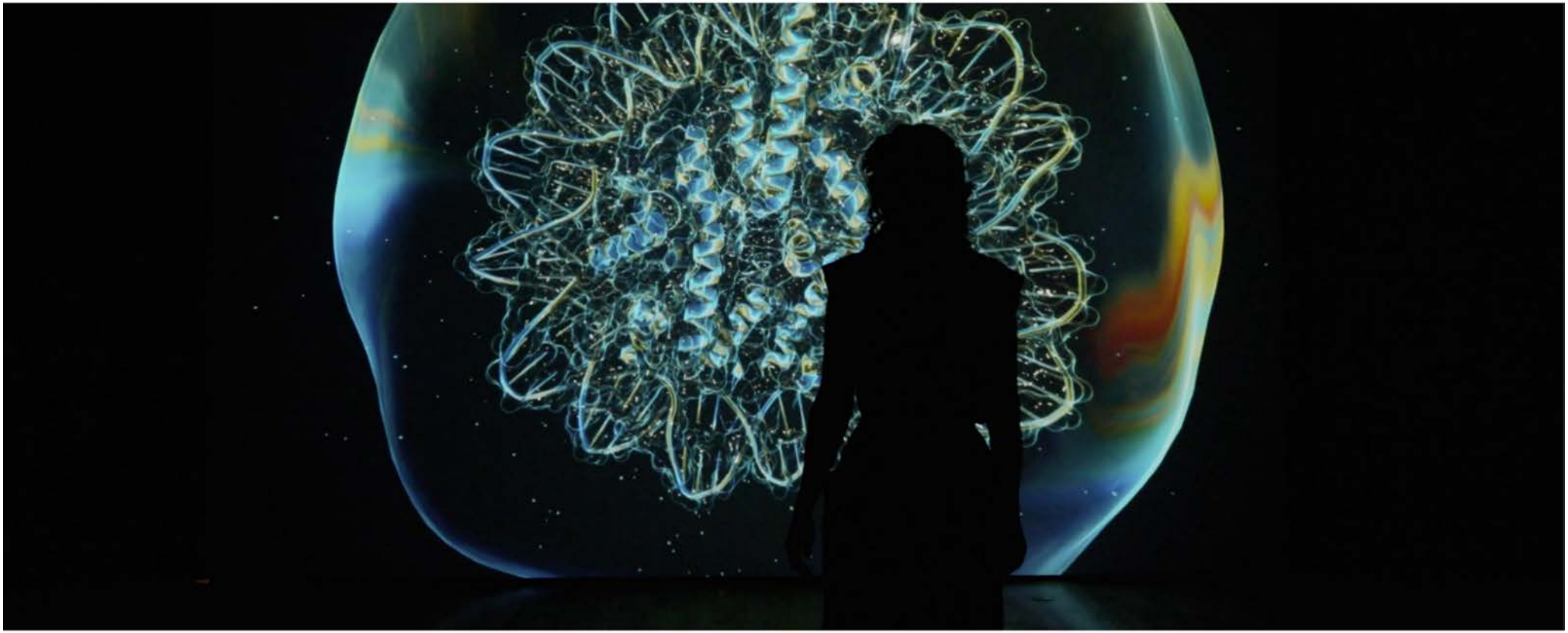
SKIRBALL CULTURAL CENTER

## Transformative Currents: Art and Action in the Pacific Ocean

VARIOUS LOCATIONS

## Blended Worlds: Experiments In Interplanetary Imagination

JET PROPULSION LABORATORY, AN OPERATING DIVISION OF CALTECH AND A FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTER FOR NASA, AND GLENDALE LIBRARY, ARTS & CULTURE PRESENTED AT BRAND LIBRARY AND ART CENTER



COMMISSION

## "Baroque Bodies (Sway)" in "Future Tense" at Beall Center for Art+Technology

**ON VIEW: IN "FUTURE TENSE" FOR GETTY PST ART (CLOSES DEC 14, 2024)**

2024
interactive audiovisual installation, motion tracking, 3D animation, sound, AI-generated imagery
16' H x 20' W x 25' D (for *Future Tense* exhibition) / Dimensions variable
Technology Collaborators: Danielle McPhatter (Lead Collaborator), Steven Dalton, Joseph Bradascio, Domhnaill Hernon
Science Collaborators: Hannah Lui Park, Adam Lamson
Commissioned by the Beall Center for Art + Technology Black Box Projects for Getty PST, a Getty Museum initiative


**fulcrumarts and 2 others**
Guggenheim Gallery at Chapman University

**fulcrumarts** [ON VIEW] Energy Fields: Vibrations of the Pacific
Co-presented by Fulcrum Arts and Chapman University
September 15, 2024 - January 19, 2025

Energy Fields: Vibrations of The Pacific presents a dynamic collection of works by artists from across the Pacific Rim and Oceania. The works explore vibration as a means of deepening our understanding of sense and perception and consider how vibrations and their resulting waves shape both the planet and human experience. Recognizing the Pacific as a zone of entanglement, where energetic forces resonate amidst Earth's most seismically active continental plates, the exhibition invites new understandings of how these forces shape scientific and cultural practices in the 21st century.

For more info, visit 🔗energyfields.la

The exhibition is installed in two locations:
📍Guggenheim Gallery at Chapman Unversity, 1st & 2nd Floor
📍Packing Plant at Chapman Unversity
🎟️ FREE and open to all

Energy Fields is among more than 70 exhibitions and programs presented as part of PST ART: Art & Science Collide. This landmark regional event explores the intersections of art and science, both past and present. PST ART is

SCI-Arc

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Home — News — May 20, 2024

# SCI-Arc Unveils 'Views of Planet City' for PST ART: Art & Science Collide, Presented by Getty


OCTOBER 6, 2024–APRIL 12, 2026
CYBERPUNK:
ENVISIONING POSSIBLE
FUTURES THROUGH CINEMA
Examines the global impact and lasting influence of the science fiction subgenre cyberpunk on cinema culture

EXHIBITION

# Storm Cloud: Picturing the Origins of Our Climate Crisis

Sept. 14, 2024–Jan. 6, 2025 | "Storm Cloud" analyzes the impact of industrialization and a globalized economy on everyday life from 1780 to 1930, as charted by scientists, artists, and writers, and contextualizes the current climate crisis within this historical framework.

"Storm Cloud: Picturing the Origins of Our Climate Crisis" traces the rise of environmental awareness in the 19th century—an age of rapid industrialization in the English-speaking world as well as a period in which the sciences of geology, paleontology, meteorology, and ecology developed.

View the large print exhibition booklet >

Sept. 14, 2024–Jan. 6, 2025

MaryLou and George Boone Gallery

"Storm Cloud: Picturing the Origins of Our Climate Crisis," Photo by Elon Schoenholz. | The Huntington Library, Art Museum, and Botanical Gardens.


12 DAYS TILL THIS EVENT

# SENSING THE FUTURE: LIVE

OCT 5 2024

This afternoon of live performance reimagines works central to the legacy of Experiments in Art and Technology (E.A.T.), a non-profit organization founded in 1967 that paired artists from New York's avant-garde with the innovative scientific community at Bell Laboratories—a groundbreaking venture celebrated in the archival PST ART: *Art & Science Collide* exhibition ***Sensing the Future: Experiments in Art and Technology (E.A.T.)*** presented by the Getty Research Institute.

Performance still from Deborah Hay, solo, 1966. Photograph by Peter Moore; © Northwestern University. Getty Research Institute, Los Angeles (940003).

FREE

GETTY CENTER

1200 GETTY CENTER DRIVE, LOS ANGELES

4:00PM –

VISIT WEBSITE

8 DAYS TILL THIS EVENT

# PST ART WEEKEND OPENING CELEBRATION: BLACK QUANTUM FUTURISM AT DEBS PARK

OCT 4 2024

Join PST ART: Art & Science Collide at the Audubon Center in Debs Park for a kick-off performance and a celebration of the Northeast LA & Pasadena PST ART Weekend. Including food and beverage vendors such as El Ruso, the PST ART photo booth, DJs selected by NTS Radio, and outdoor activities led by USAL Project, this event will culminate in a musical performance by Black Quantum Futurism – a multidisciplinary collaboration between Camae Ayewa and Rasheedah Phillips that weaves quantum physics, Black temporalities, ritual, text, and sound to create counter histories and Black quantum futures that challenge exclusionary, mainstream versions of history and the future. They will be joined by celebrated flautist, composer, and conceptualist Nicole Mitchell. The performance begins at 8:00PM.

The Black Quantum Futurism event is the first in ***Quantum Vibrations***, a free, four-part music series that will explore the intersections of art and science through music and sound. Curated by USC Professor and Chair in Cross-Cultural Communication, Vice Provost for the Arts, and 2016 MacArthur Fellow Josh Kun, *Quantum Vibrations* borrows its title from legendary composer and music theorist Pauline Oliveros' idea of "quantum listening," or "listening in order to attune to our bodies, the earth and one another in an increasingly loud and noisy world." The series engages with world renowned artists who consider music in scientific contexts and use music to explore scientific questions and will include musical meditations on nuclear research, desert biomes, speculative world making, and non-human music makers.

Black Quantum Futurism: MirrorTimeMirror, Luise Flügge for Brueckenmusik (2023). Courtesy the artists.

FREE

USC AT THE AUDUBON CENTER AT DEBS PARK

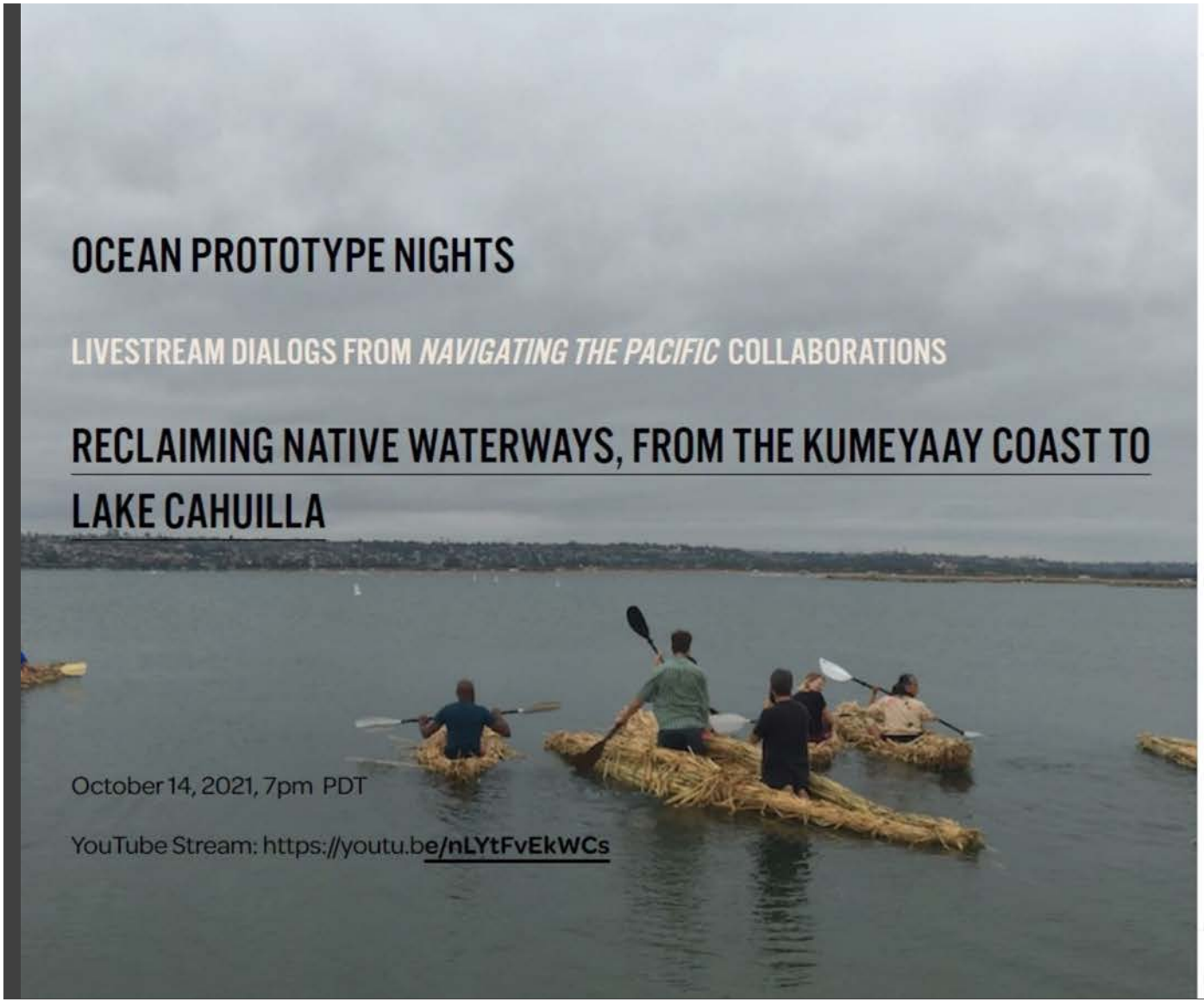
4700 GRIFFIN AVENUE, NORTHEAST LOS ANGELES, LOS ANGELES

6:00PM - 10:00PM

VISIT WEBSITE

FREE WITH RSVP HERE

https://www.blackquantumfuturism.com/ and https://pst.art/en/exhibitions/quantum-vibrations-public-programming




**pstinla** · Follow

**pstinla** Join a virtual dialogue on Thursday exploring art and science related to Indigenous waterways in Southern California. The talk is hosted by @ucsandiego and @birchaquarium in anticipation of their #PST2024 exhibition "Navigating the Pacific," which explores the techniques, past and present, used to see, sound, measure, and imagine the Pacific Ocean.

For this project, teams of artists, scientists, and humanities scholars are working together over three years to reframe Pacific research in the wake of colonial science. Their efforts will inform the development of new works in participatory design and action, digital design, drawing, writing, photography, and video. #ArtSci #SciArt #PSTinLA

Learn more in #LinkInBio

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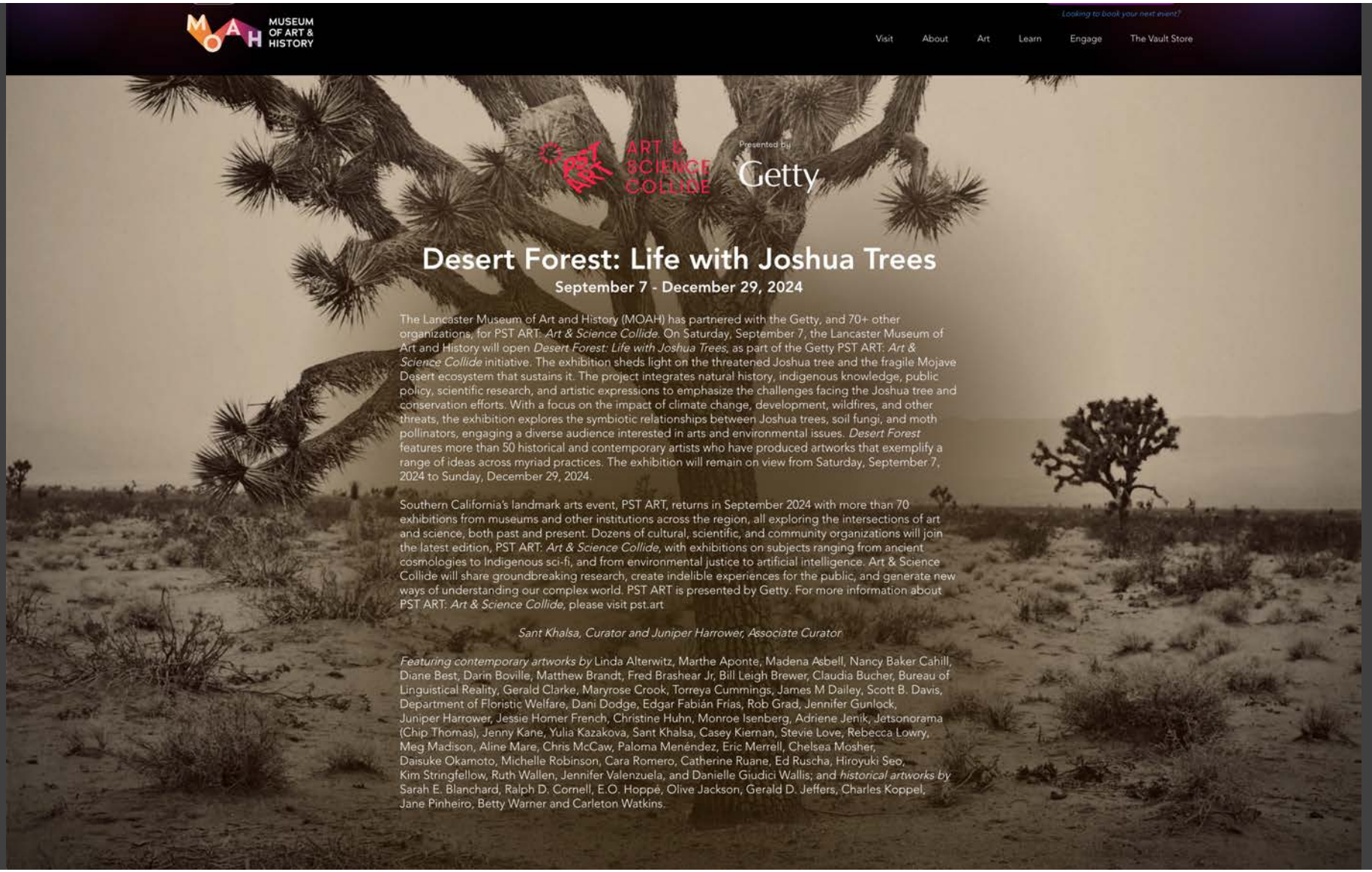
MUSEUM OF ART & HISTORY
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ART & SCIENCE COLLIDE
Presented by
Getty
Desert Forest: Life with Joshua Trees
September 7 - December 29, 2024
The Lancaster Museum of Art and History (MOAH) has partnered with the Getty, and 70+ other organizations, for PST ART: *Art & Science Collide*. On Saturday, September 7, the Lancaster Museum of Art and History will open *Desert Forest: Life with Joshua Trees*, as part of the Getty PST ART: *Art & Science Collide* initiative. The exhibition sheds light on the threatened Joshua tree and the fragile Mojave Desert ecosystem that sustains it. The project integrates natural history, indigenous knowledge, public policy, scientific research, and artistic expressions to emphasize the challenges facing the Joshua tree and conservation efforts. With a focus on the impact of climate change, development, wildfires, and other threats, the exhibition explores the symbiotic relationships between Joshua trees, soil fungi, and moth pollinators, engaging a diverse audience interested in arts and environmental issues. *Desert Forest* features more than 50 historical and contemporary artists who have produced artworks that exemplify a range of ideas across myriad practices. The exhibition will remain on view from Saturday, September 7, 2024 to Sunday, December 29, 2024.
Southern California's landmark arts event, PST ART, returns in September 2024 with more than 70 exhibitions from museums and other institutions across the region, all exploring the intersections of art and science, both past and present. Dozens of cultural, scientific, and community organizations will join the latest edition, PST ART: *Art & Science Collide*, with exhibitions on subjects ranging from ancient cosmologies to Indigenous sci-fi, and from environmental justice to artificial intelligence. Art & Science Collide will share groundbreaking research, create indelible experiences for the public, and generate new ways of understanding our complex world. PST ART is presented by Getty. For more information about PST ART: *Art & Science Collide*, please visit pst.art
*Sant Khalsa, Curator and Juniper Harrower, Associate Curator*
*Featuring contemporary artworks by* Linda Alterwitz, Marthe Aponte, Madena Asbell, Nancy Baker Cahill, Diane Best, Darin Boville, Matthew Brandt, Fred Brashear Jr, Bill Leigh Brewer, Claudia Bucher, Bureau of Linguistical Reality, Gerald Clarke, Maryrose Crook, Torreya Cummings, James M Dailey, Scott B. Davis, Department of Floristic Welfare, Dani Dodge, Edgar Fabián Frías, Rob Grad, Jennifer Gunlock, Juniper Harrower, Jessie Homer French, Christine Huhn, Monroe Isenberg, Adriene Jenik, Jetsonorama (Chip Thomas), Jenny Kane, Yulia Kazakova, Sant Khalsa, Casey Kiernan, Stevie Love, Rebecca Lowry, Meg Madison, Aline Mare, Chris McCaw, Paloma Menéndez, Eric Merrell, Chelsea Mosher, Daisuke Okamoto, Michelle Robinson, Cara Romero, Catherine Ruane, Ed Ruscha, Hiroyuki Seo, Kim Stringfellow, Ruth Wallen, Jennifer Valenzuela, and Danielle Giudici Wallis; and *historical artworks by* Sarah E. Blanchard, Ralph D. Cornell, E.O. Hoppé, Olive Jackson, Gerald D. Jeffers, Charles Koppel, Jane Pinheiro, Betty Warner and Carleton Watkins.

# PST ART Is Celebrating the Ties That Bind Art and Science. Here Are 10 Must-See Shows

From a show on Latin American computer art, to a spotlight on cyberpunk, to Cai Guo-Qiang's A.I.-assisted fireworks.


Experiments in Art and Technology performance inside the Pepsi-Cola Pavilion, 1970. Photo: Shunk-Kender. © J. Paul Getty Trust.

**Min Chen** • August 29, 2024 • Share This Article

https://news.artnet.com/art-world/pst-art-2024-shows-to-see-2529345

OCT 5

## Art & Light In Focus

NORTON SIMON MUSEUM
3:00PM – 5:00PM

OCT 5

## Opening Reception | What Water Wants

CLOCKSHOP
4:00PM – 6:30PM

OCT 5

## The Alex Theater Presents: Blended Worlds, Experiments in Interplanetary Imagination a collaboration with JPL, Hosted by Reggie Watts

NASA'S JET PROPULSION LABORATORY (JPL) AND GLENDALE LIBRARY, ARTS & CULTURE AT THE ALEX THEATER
6:00PM – 9:30PM

OCT 6

## Annea Lockwood & Bob Bielecki: Wild Energy

FULCRUM ARTS CO-PRESENTED WITH CHAPMAN UNIVERSITY
9:00AM – 7:00PM

OCT 6

## Autry Museum Annual Block Party

AUTRY MUSEUM OF THE AMERICAN WEST
10:00AM – 5:00PM

OCT 6

## Behind the Scenes: Moore Laboratory of Zoology Tour

OXY ARTS
12:00PM – 1:00PM

FIND OUT MORE →

OCT 5

## Annea Lockwood & Bob Bielecki: Wild Energy

FULCRUM ARTS CO-PRESENTED WITH CHAPMAN UNIVERSITY
9:00AM – 7:00PM

OCT 5

## Invisibility: Powers and Perils Curatorial Walkthrough with Yael Lipschutz

OXY ARTS
12:00PM – 1:00PM

OCT 5

## Collective Visualization with Hillary Mushkin

ARMORY CENTER FOR THE ARTS
1:00PM – 2:30PM


OCT 5

## Opening Doors | Tesla: A Radio Play for the Stage

CALTECH
2:30PM – 4:30PM

OCT 5

## Sensing the Future: LIVE

GETTY CENTER
4:00PM –

OCT 5

## Opening Reception | Transformative Currents: Art and Action in the Pacific Ocean

OCEANSIDE MUSEUM OF ART
5:00PM – 7:00PM

## Getty Art + Science Collide Positive Impact

- The most expansive art event in the world
- Nearly all museums, academic institutions in the LA region participating
- $20 million will have significant impact
- Bring forth new artistic works, visibility to new artists
- Address current themes of environment, gender identity, indigenous cultures, racial inequality
- Topic of Art & Science discussed in the same context for the general public
- History of the intersections of Art & Technology brought into the foreground

## Concerns of Curatorial Process

- Curators are specialists in one field, otherwise they are generalists, and most are not trained in science, so what will be determining factors by which themes are addressed and which artists are to be featured?

- To what degree will institutions, curators, artists, pressured by the desire to have the funding, result in exhibitions and artworks that over time will not stand scrutiny

- To what degree will commercial galleries (a business based on markets) have an influence?

- To what degree will current trends (which change over time) have an influence

- To what degree will innovative but obscure, artists and artistic works who are outside of mainstream art have their contribution to “Art + Science” be wiped out by the 420 million Tsunami

## To What Degree will Art + Science Actually be Addressed?

- “Art + Science” suggests the equal participation, collaboration of two different disciplines
- What will the balance of art and science be in determined in the various exhibitions given that the institutions are art museums?
- Will most be artists **using** technology?
- Or, artists **looking** at technology, engineering or science?
- Artists **inspired** by technology?
- Artists and scientists, engineers, or technologists **collaborating**?
- Which exhibitions will result in true art+science **hybrids**?

## C.P.Snow's Famous "The two Cultures and the Scientific Revolution" (1955)

A good many times I have been present at gatherings of people who, by the standards of the traditional culture, are thought highly educated and who have with considerable gusto been expressing their incredulity at the illiteracy of scientists. Once or twice I have been provoked and have asked the company how many of them could describe the Second Law of Thermodynamics.

The response was cold: it was also negative. Yet I was asking something which is the scientific equivalent of: *Have you read a work of Shakespeare's?*[6] I now believe that if I had asked an even simpler question – such as, What do you mean by mass, or acceleration, which is the scientific equivalent of saying, *Can you read?* – not more than one in ten of the highly educated would have felt that I was speaking the same language.

So the great edifice of modern physics goes up, and the majority of the cleverest people in the western world have about as much insight into it as their neolithic ancestors would have had.[6]

https://en.wikipedia.org/wiki/The_Two_Cultures

glegrady@ucsb.edu
vislab.mat.ucsb.edu