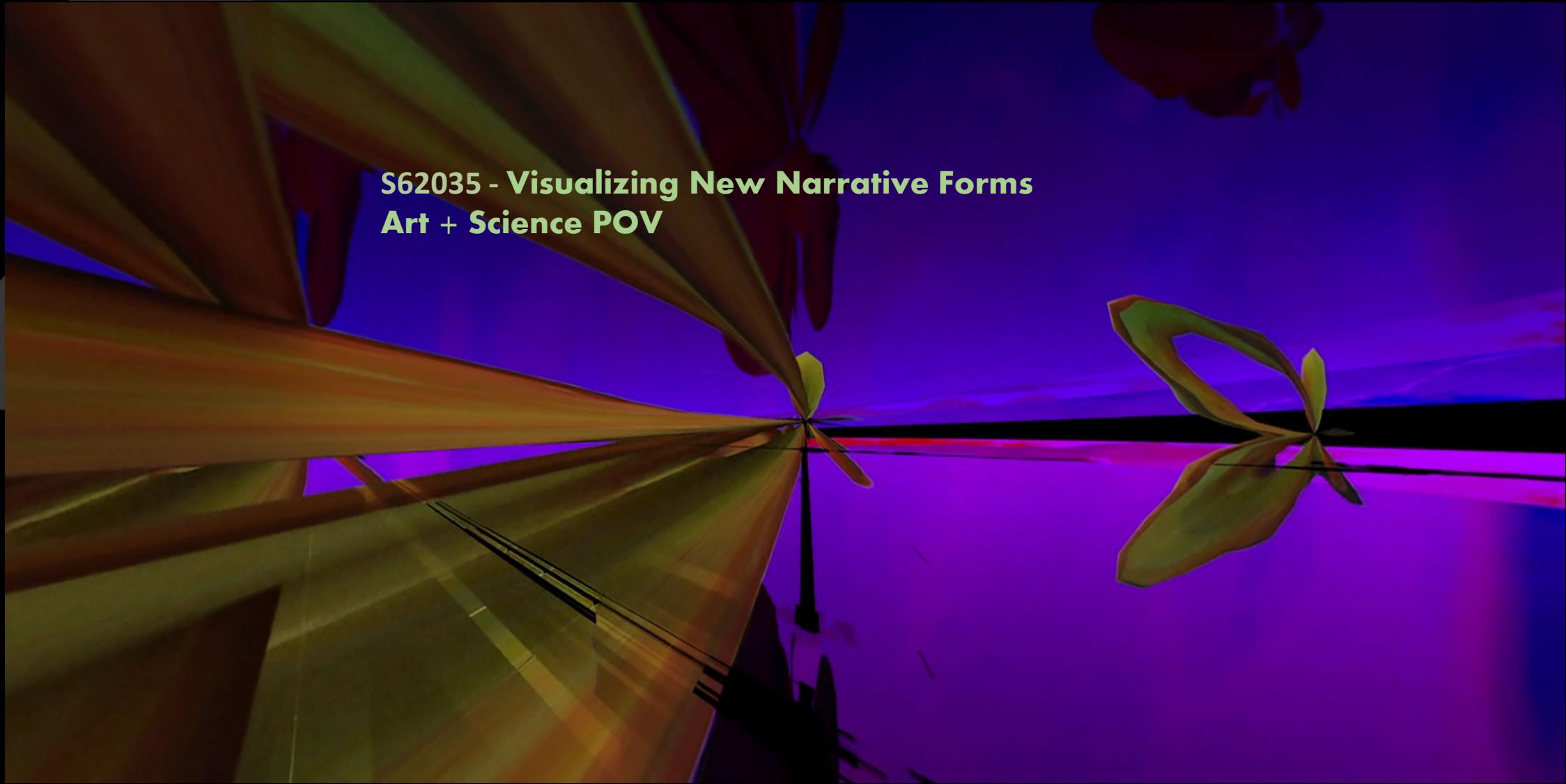
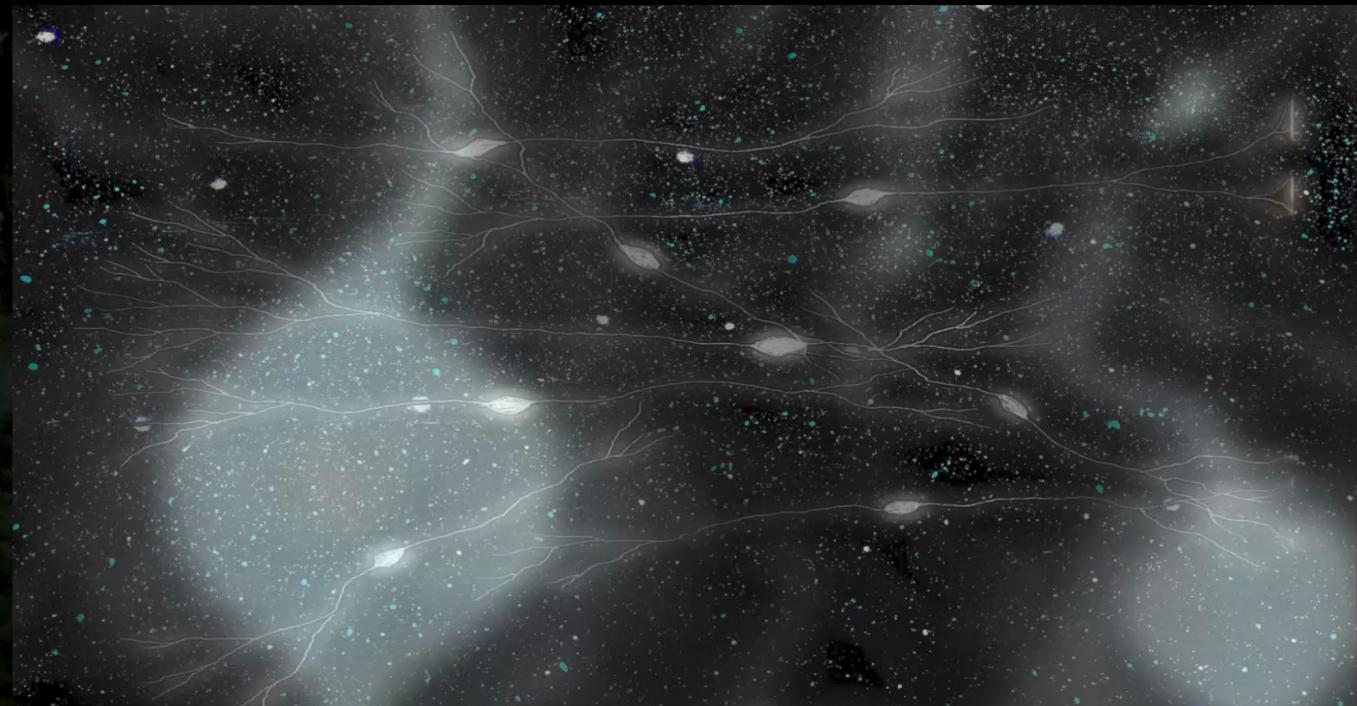




**S62035 - Visualizing New Narrative Forms**  
**Art + Science POV**



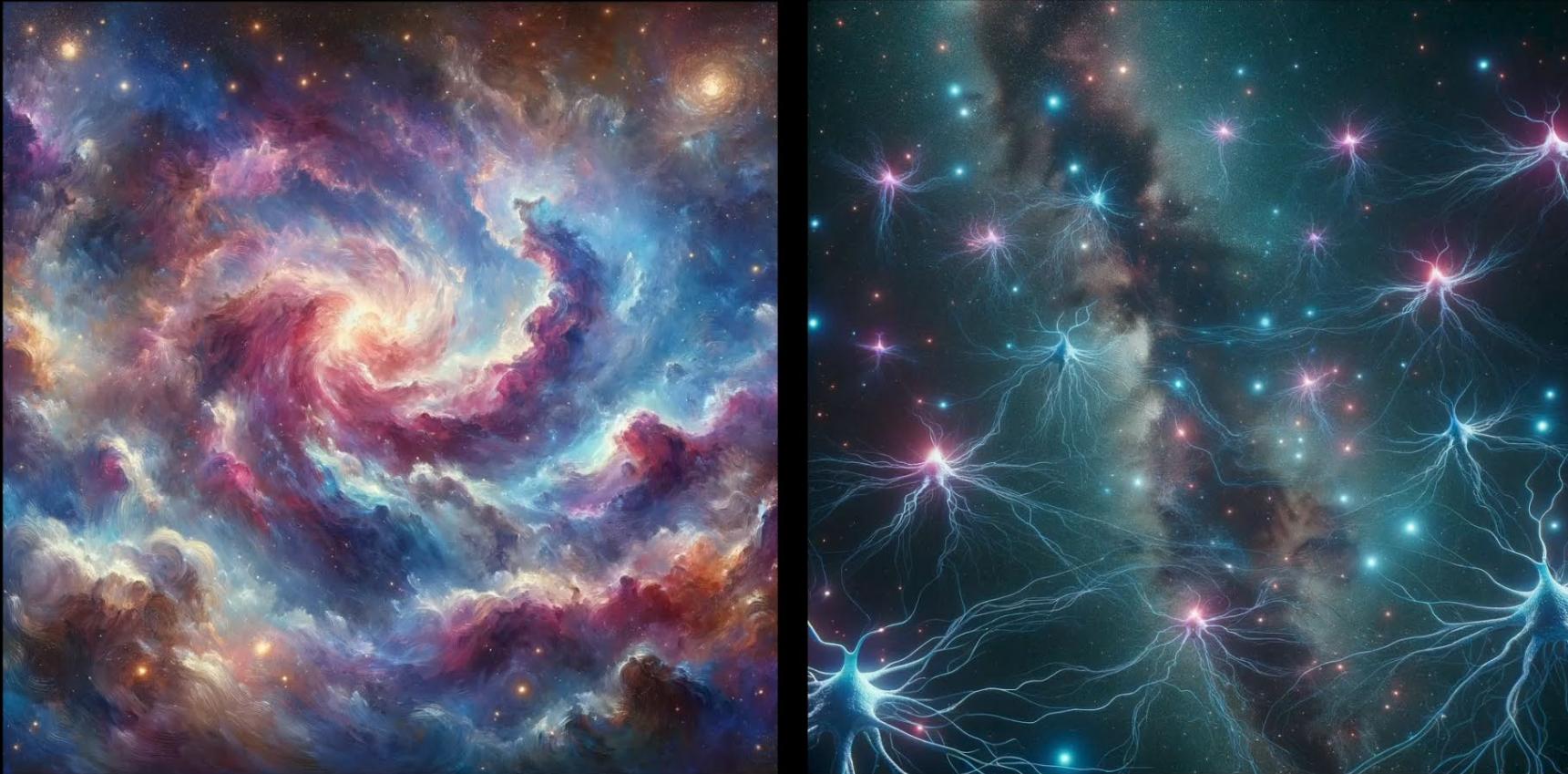


30 years ago, I created this *Living on the COMET* a multi-media oil painted pixilated animation exploring the universe and our place in it at the quantum and physical level



# USC Cinematic Arts

*Expanded Animation Research + Practice*



The speed of creation has rapidly increased but intentionality matters  
New narrative forms triggered by Quantum Physics, Sustainability and AI





For me personally Quantum physics represents not just a source of inspiration, but the patterns structures of existence that form non-linear narrative. The essence of our life through light, matter, scale consciousness and dreams.

When I think about narrative, art and storytelling I think there are similar parallels to how we process and perceive the world around us.



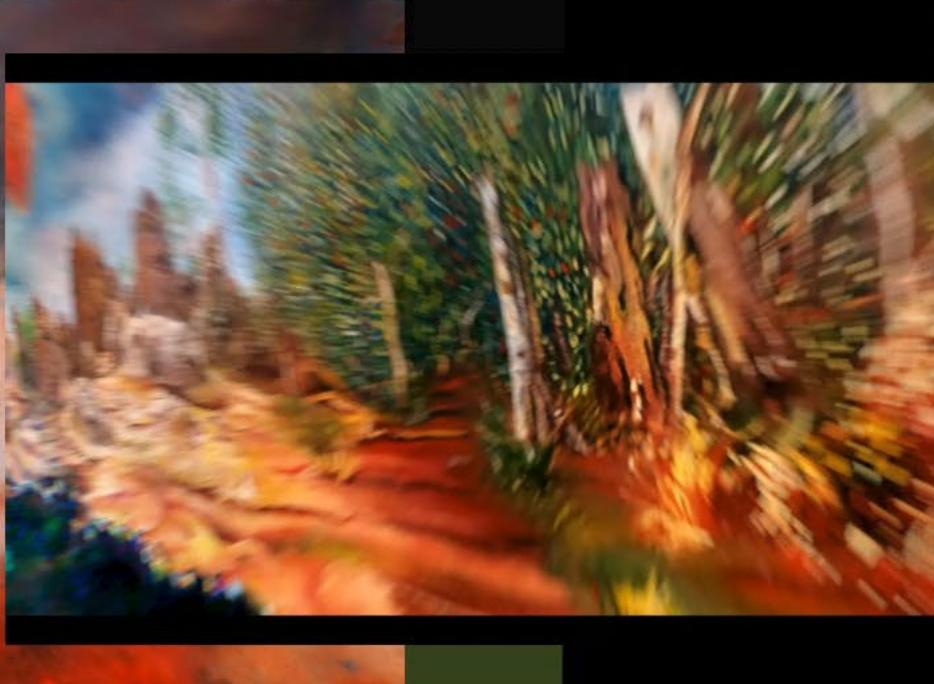


NeRF of a Hologram, Fourier Transforms, focus of attention, time travel, the physics of light



How this has informed the structures of my own work:

DIMENSIONS portals to alternate environments, mega fires in Australia, shifts in time dimensions, nature survives with or without us  
Immersive VR - Sustainability



**Frequencies** waves and particles the shifting illusion of matter energy and time, Painting, AR, AI



*Transience* the unconscious doodling, forming shapes in the mind, - potential to the actual moment realized -immersion in reality to the quantum level of dreams and consciousness



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*Expanded Animation Research + Practice*

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FACULTY



Kathy Smith  
Principal Investigator  
School of Cinematic Arts  
[Faculty Profile](#)

Bhella Guhan  
Co-Principal Investigator  
School of Cinematic Arts  
[Faculty Profile](#)

Marc Bloemberg  
Co-Principal Investigator  
Department of Physics and Astronomy  
[Faculty Profile](#)

Value Pernisian  
Collaborator  
Department of Physics and Astronomy  
[Faculty Profile](#)

STUDENTS



Violaine Crutch  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Ross Foul  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Dina Gareyev  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Katelyn McCallion  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)



Jessica Dutton  
Collaborator  
University Center for Research and Engagement  
[UCRE Website](#)

Diane Kim  
Collaborator  
Mellon Institute  
Wrigley Institute for Environmental Studies  
[WRIED Website](#)

Lisa Maren  
Collaborator  
School of Cinematic Arts  
[Faculty Profile](#)

Everett Lewis  
Collaborator  
School of Cinematic Arts  
[Faculty Profile](#)



Delaney McCallum  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Shengwei Zhou  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Tricia Saputra  
Undergraduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Brittany Smothers  
Undergraduate Researcher  
School of Cinematic Arts  
[Student Profile](#)



Andreas Kratky  
Collaborator  
School of Cinematic Arts  
[Faculty Profile](#)

John Heideberg  
Collaborator  
Mellon Institute  
Wrigley Institute for Environmental Studies  
[WRIED Website](#)

Mario Apostolidis  
Collaborator  
School of Dance  
[Faculty Profile](#)

Scott Mahoy  
Researcher/Designer  
Physics, Chemistry & Pharmacy  
[Faculty Profile](#)



Adam He  
Graduate Researcher  
Physics, Chemistry & Pharmacy  
[Student Profile](#)

Xindi Zhang  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Sijia Zheng  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Daniel Chit  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)



Maks Napornowski  
Collaborator  
School of Cinematic Arts  
[Faculty Profile](#)

Dr. David Hanson  
Collaborator  
School of Cinematic Arts + Hanson Robotics  
[Hanson Robotics Website](#)

Sophia the Robot  
Collaborator  
School of Cinematic Arts + Hanson Robotics  
[Hanson Robotics Website](#)



Zapeng Shih  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

Charith Chandra Sali Balaji  
Graduate Researcher  
School of Cinematic Arts  
[Student Profile](#)

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HOME ABOUT TEAM N

**EXPANDED ANIMATION ART + SCIENCE COLLABORATORY**

**VISUALIZING NEW NARRATIVE FORMS THROUGH QUANTUM PHYSICS, AI, & SUSTAINABILITY**

A collaboration between  
(Expanded Animation Research + Practice)  
XA Program – School of Cinematic Arts,  
Department of Physics and Astronomy, the  
Wrigley Institute for Environmental Studies  
and Kaufman School of Dance

Collaborations Grant Team – Artists, Physicists, Dancers, Biologists, Neuroscientists, Roboticists, Computer Scientists, Experience Designers  
Our XA Faculty, College Faculty our students

S62035 - Kathy Smith



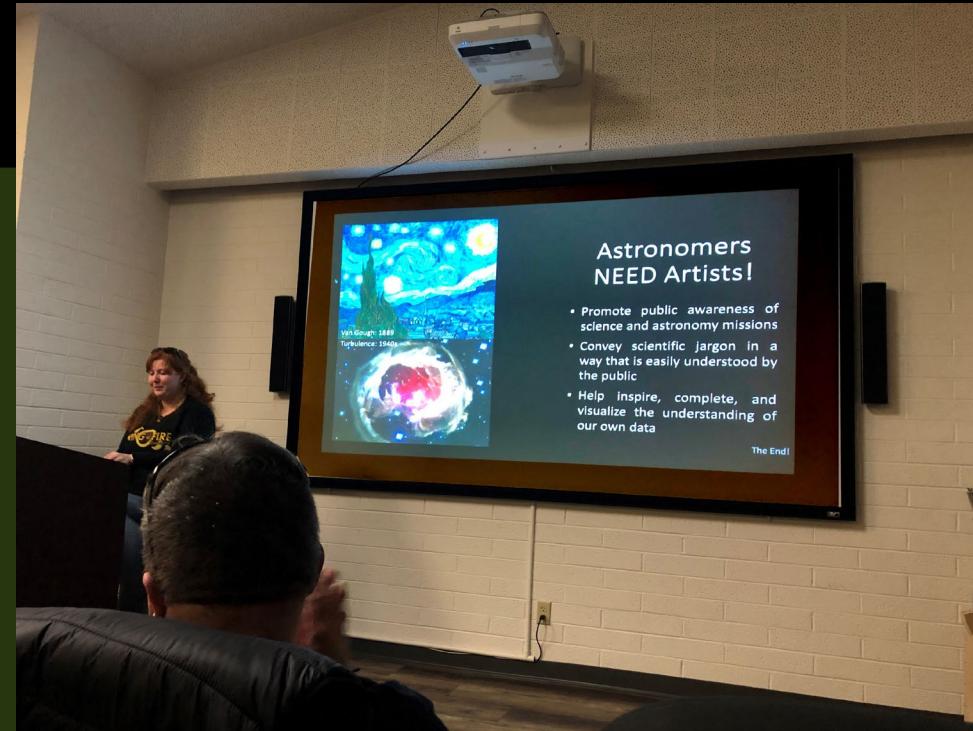
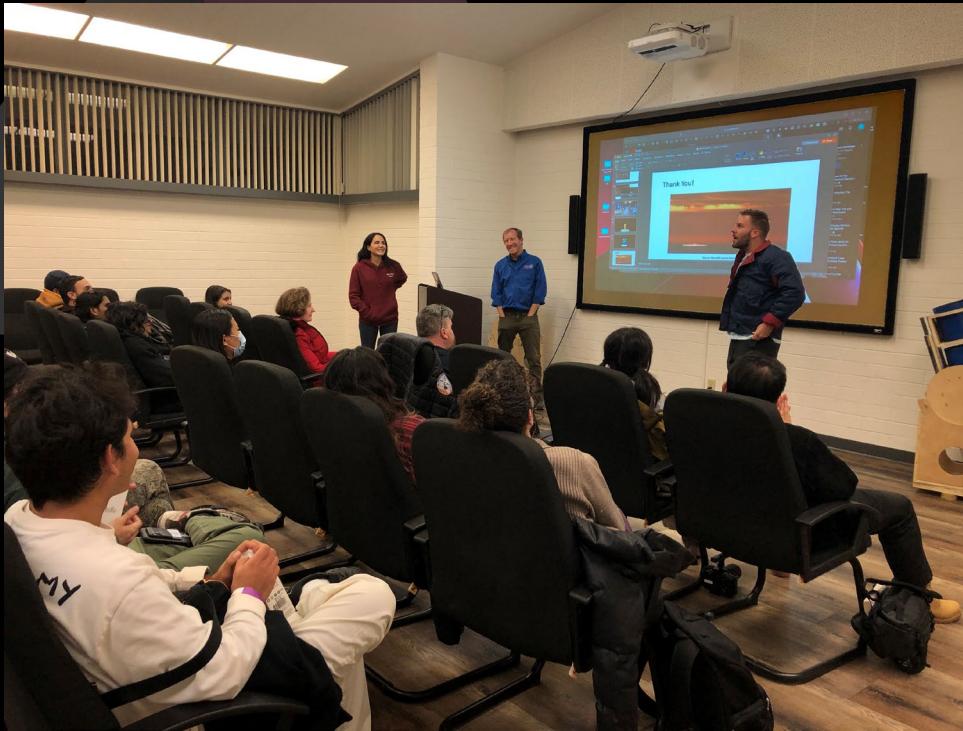
## USC Research Collaborations Fund Visualizing New Narrative Forms through Quantum Physics & AI



Field Trips spark interdisciplinary research at the student faculty level, brings a sense of community - Residencies Lowell Observatory & Wrigley



## USC Research Collaborations Fund Visualizing New Narrative Forms through Quantum Physics & AI



Field Trips spark interdisciplinary research at the student faculty level, brings a sense of community - Residencies Lowell Observatory Dr Kuehn and Dr Ryburn



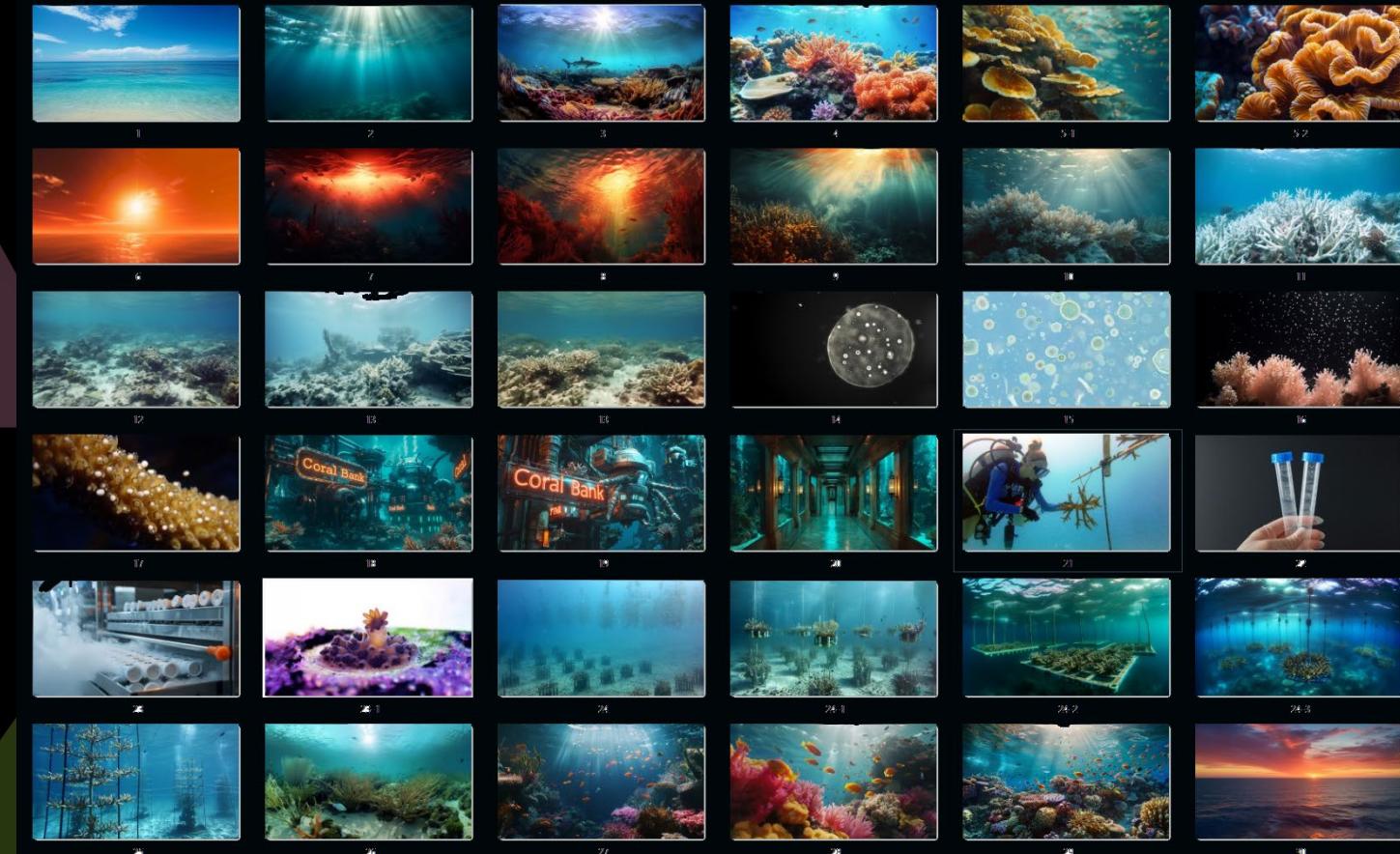
## USC Research Collaborations Fund Visualizing New Narrative Forms



**Sustainability & Site-Specific Installation** - CTXA 575 Professor Lisa Mann

## **USC Research Collaborations Fund Visualizing New Narrative Forms through Sustainability**

- Short script Dr. Anna Vinton
- Image movement or storyboard Sijia Zheng
- Wrigley & Mote Lab research images + prompts Sijia - additional animation Charith Chandra Sai Balne
- Layout and animation generation
- Editing and sound design
- Narration and score





## USC Research Collaborations Fund Visualizing New Narrative Forms through Sustainability & AI



Coral Banking Initiative - Wrigley Institute for Environmental Studies –Science Advisor Dr Anna Vinton



## **CTXA 523 Visualizing New Narrative Forms**



**CTXA 523 Science Visualization Production & AI – Kristie Capozzoli**

## **CTXA 423L Section 19722R Visualizing Science Production**

Exploring Science concepts and stories through VFX and AI  
Professor Maks Naporowski  
Spring Fridays 9:00am - 11:50am

USC School of Cinematic Arts  
*Expanded Animation Research + Practice*  
Contact Arlyn Villaruz: [avillaruz@cinema.usc.edu](mailto:avillaruz@cinema.usc.edu)  
Photo by Nick Scurato October 14 Eclipse at the Grand Canyon

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## Visualizing New Narrative Forms



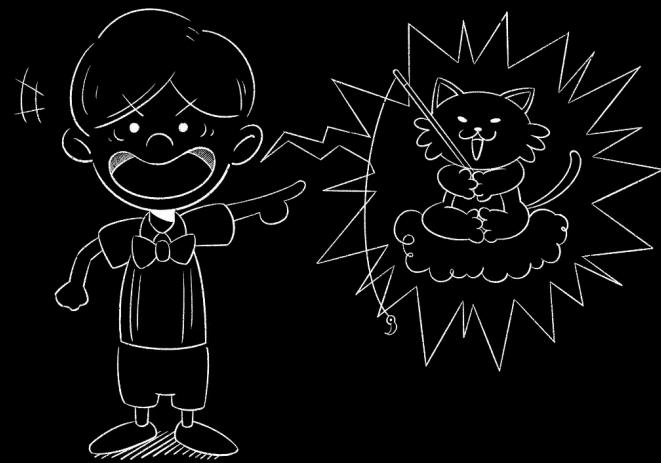
## Image Movement

Making of **through CTXA 579 AI Dream Narratives – Sijia Zheng**



## Visualizing New Narrative Forms

"I saw a cat sitting on a cloud,  
fishing in the sky!"





## Visualizing New Narrative Forms



CTXA 579 Stages by Katie Luo AI inspired partly generated

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## Visualizing New Narrative Forms

### CTXA 588 Animation for Virtual Characters, Robotics & AI



Dr David Hanson + Sophia the Robot



## Visualizing New Narrative Forms





## Visualizing New Narrative Forms



- New narrative forms triggered by Quantum Physics, Sustainability & AI
- Importance of interdisciplinary collaboration practice and research across art and science
- AI SDKs tools and Apps driving new forms of creative process narrative structure and production
- Students lead the way research pulse of the University
- Artists Scientists and indigenous communities inspiring innovation new forms of storytelling
- Stay authentic, ethical and respectful
- Still advocate for original data sets
- Intentionality and ideas driving new forms of AI creation
- Save the planet
- More art science and spirituality - mutual respect

**Thank you**

**NVIDIA**

SCA graduate students Charith Chandra Sai Balne, Sijia Zheng, Shengwei Zhou, Xindi Zhang, Jane Zhang, Kat O'Donahue, Nicolas Magaloni, Katie Luo

XA Program Faculty and Staff

Dr Kyler Kuehn Lowell Observatory

Wrigley Institute for Environmental Studies, Dr Jessica Dutton, Dr Joe Arvai, Dr Anna Vinton, Dr Carly Kenkel, Allison Agsten

Dr David Hanson, Mengna Lei & Sophia the Robot – Hanson Robotics

NVIDIA NeRFs, OpenAI DALL·E 4 Stable Diffusion ComfyUI Pika Labs Kaiber and MidJourney

NVIDIA GTC Conference Team, Jammie Garcia, Kate Murphy, Margaret Albrecht, Pooya Ghobadpour

NVIDIA GTC 2024

## Questions

<https://XAartsscience.usc.edu>

<https://expandedanimation.usc.edu>

[AI Dream Lab](#)

[Journeys in Expanded Animation](#)