

on the corner of Lomita Dr. and Campus Dr.  
Stanford, CA 94305  
June 4-8, 10

## The Frankenstein GRID: Stanford's Monster of Modern Science

### **FORMS [June 5<sup>th</sup>]**

8 – 9pm **Liquid Loom** + sound environment:

- 1) LIQUID LOOM optokinetic sculpture (liquid crystal) by Cere Davis, 2018.

LIQUID LOOM reveals the hidden nanoscale world of electron flow via the kinetic behavior of liquid crystal media responding to a dynamic user-guided electrostatic field. This exhibit lifts the mysterious veil of complex technology and reveals the inherent beauty of materials on which our modern LCD screens are based.

- 2) music: "See you in a field," by Dr. Onn Brandman.

9 – 10pm video programming (looped):

- 3) SUPRALIMINAL by Greg Niemeyer, 5:30, 2017.

SUPRALIMINAL celebrates the world through wave view. It is inspired “Turing patterns” and wave synthesis: Turing theorized in 1953 that waves of chemical concentrations interacting within a living organism might define its subsequent growth, a notion that has since been borne out by research. SUPRALIMINAL demonstrates this fundamental process of complex forms emerging out of simple ones. The piece was originally created for the ZKM Panorama Lab. An interactive version will be released in the Fall, 2018.

- 4) KURAMOTO CYCLES by Nolan Lem, 13:13, 2016.

KURAMOTO CYCLES explores the rhythmic complexity inherent in networks of coupled oscillators. This dynamical system, known as Kuramoto Oscillators, model many of the synchronistic behaviors inherent in many of the biological and chemical systems found in nature (e.g. firefly synchronicity, bioluminescent algae, pacemaker cells, etc.). This piece examines the self-organizing behaviors that emerge as a result of their communicative interplay. The polyrhythmic complexities that emerge are a result of different groups of oscillators settling into unusual metrical regimes that suggest the musical dynamics of jazz, west-african, and tabla drums.

- 5) MANIFOLD by Yulia Pinkusevich, 13:58, 2016.

**MANIFOLD** is a video installation which considers the origins of life in our universe, while observing space and time through a post human perspective. This project was created in collaboration with Paisiz of Tbilisi Georgia.

6) ArtX student art feature: FOREST MOTHER MEETS THE BLOB by Ian Avery.

Music: Michael Betts, Ian Avery Bick

Video FX: Ian Avery Bick

Videography: Krista Kaija Bluesmith, Michael Betts

Dancers: Katie Shubat Celia Rath McKenna Leighton

Simone Hadley Cas Parong

The piece investigates how the historic, ritualistic aspects of womenhood shape the modern world and how they are shaped by it. Computer vision is used to detect continuous forms - blobs - and superimpose them back on the environment. The computer loosely follows the characters through their ritual, drawing a border around them. They are a discrete system of order within chaos.

NB Audio interludes: NEURAL ORDINANCE by Nolan Lem,

“neural ordinance is comprised of sounds that are a result of my computer being trained to produce industrial noises. In this type of deep learning, recurrent neural nets literally teach the computer how to produce sounds that are representative of machines themselves. As such, this piece focuses on a large corpus of field-recorded sounds that include audio related to industrial drones, server farms, consumer electronics, HVAC noise, etc. After processing these recordings, the computer ‘dreams up’ sound based off of its own idea of what industrial noise is. If we can treat the computer as a superlative machine, the neural network seeks to reify a sonic representation of what the computer itself thinks it sounds like. In this way, it shows the computer trying to listen to itself.

In this instance of the piece, the noise emanating from the speakers on the CCRMA stage were included into some of the training sets used in the synthesis. As a result, the output sound is a mixture of both real-life analog noise and the computer’s interpretation of the same. The sounds undulate, swell, and breathe to form an ecology of machine-interpreted awareness, one that suggests a strange convergence of the real and the digitally imagined, the sentient and the synthetic.

The title is taken from the term ‘noise ordinance’ which refers to the noise regulations that are typically enforced by city zoning codes. In this case, the neural network acts as a governing agency that imposes its own definition of what is constituted by ‘noise’.”

## **bios**

DR. ONN BRANDMAN grew up in the Bay Area and has been playing music since he was a 13. He is an assistant professor of Biochemistry at Stanford University. In his job, Onn tries to explain properties of cells that seem magical because we don't understand them. In his music, he tries to create magical experiences that are free from any explanation.

CERE DAVIS grew up in west coast of the US fascinated with physics and real-world manifestations of dynamic imbalance. After researching volcanic lighting in Alaska and wintering over at South Pole, Antarctica she moved to the Bay Area of California in 2013. Inspired by her creative surroundings, she began using her creative energy and professional background in physics & engineering to explore her passion for creating improbable embodiments through fusing the worlds of sculpture, science and technology. Her works aim to inspire conversations which illuminate the magic and wonder of the physical world. She utilizes materials common to our everyday experience as a way of revealing what is hidden in plain sight and uses her exhibits, lectures and exploratory research to connect seemingly disparate fields of study. In doing so, she aims to broaden our normative utilitarian view of nature through re-framing phenomenon common to our everyday experience. Her work is best described as a form of neonaturalism, whereby inherent material properties are re-contextualized to reveal their natural response to surroundings. She aims to inspire creative learning through her interactive exhibits and offer a refreshing counterbalance to our increasingly isolating and sterile urban environments.

Cere has been awarded the People's Choice award in 2015 for Oakland Aeolian Day for her acousto-kinetic sculpture and in 2018 by the Awesome Foundation for her opto-kinetic sculpture, Liquid Loom. She produces, collaborates and participates in projects ranging from dance performance, science exhibits and art festivals. Her works have shown in galleries, science festivals, conferences and public outreach events throughout the USA and internationally. She a science educator, artistic director at Counter Culture Labs and science-artist at Chabot Space & Science Center, where she collaborates with scientists and artists to inspire scientific curiosity and participation through interactive art and critical making.

NOLAN LEM is an artist and researcher whose work reflects a broad range of influences and mediums. His work examines issues related to emergent dynamics, machine learning and perception, and the synchronization of auditory phenomena.

He has premiered his work and research at a number of spaces both in the US and abroad including the Hayden Planetarium at the Natural History Museum (Manhattan, NYC), Pioneer Works (Brooklyn, NYC), L'HOSTE Art Contemporain (Arles, France), and the Museum of Modern Art Buenos Aires among others. He has held residencies at IRCAM, MassMoCA, Cité

Internationale des Arts, and Pioneer Works. He holds degrees in saxophone performance, Electrical Engineering, and received his MFA at Columbia University where he studied at the Computer Music Center.

Nolan is currently a PhD candidate at Stanford University where he studies at the Center for Computer Research in Music and Acoustics.

GREG NIEMEYER is Associate Professor of Art Practice at UC Berkeley. He received his MFA from Stanford University before founding the Stanford University Digital Art Center in 1997. At Berkeley, he is involved in developing the Center for New Media, which focuses on the critical analysis of the impact of new media on human experiences. His creative work focuses on the mediation between humans as individuals and humans as a collective through technological means, and emphasizes playful responses to technology. His most recognized projects are Gravity (Cooper Union, NYC, 1997), PING (SFMOMA, 2001), Oxygen Flute (SJMA, 2002), ar (Pacific Film Archive, 2003), Ping 2.0 (Paris, La Villette Numerique, 2004), Organum Playtest (2005), Good Morning Flowers (SFIFF 2006, Townhouse Gallery, Cairo, Egypt, 2006), blackloud.org, sevenairs.org, and polartide.org.

YULIA PINKUSEVICH is an interdisciplinary visual artist born in Kharkov, Ukraine. She holds a Masters of Fine Arts from Stanford University and Bachelors of Fine Arts from Rutgers University, Mason Gross School of the Arts, graduating both universities with highest honors. Yulia has exhibited nationally and internationally including site-specific projects executed in Paris, France and Buenos Aires, Argentina. Yulia's work is represented by Kent Fine Art in New York City, she has been awarded residency grants from Autodesk Pier 9, Facebook HQ, Recology (San Francisco Dump), Cite des Arts International (Paris), Headlands Center for the Arts, Redux in Charleston, South Carolina, Goldwell Open Air Museum Las Vegas and The Wurlitzer Foundation in Taos. She was also the recipient of The San Francisco Foundations 2011 Phelan, Murphy & Cadogan Fellowship in the Fine Arts as well as Stanford University SiCA's Spark and ASSU Grants. Yulia is currently Assistant Professor of studio art at Mills College. She lives and works in Oakland, California.

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