**Stanford Laptop Orchestra (SLOrk)**

**presents**

**2019: A SLOrk Odyssey**

— a concert of new frontiers —

June 8, 2019, Saturday 7:30pm
Bing Concert Hall, Stanford University

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**Stanford Laptop Orchestra** (SLOrk) is a large-scale, computer-mediated ensemble that explores cutting-edge technology in combination with conventional musical contexts—while radically transforming both. Founded in 2008 by Ge Wang with students, faculty, and staff at Stanford University's Center for Computer Research in Music and Acoustics (CCRMA), SLOrk consists of laptops, human performers, controllers, and custom multi-channel speaker arrays designed to provide each computer meta-instrument with its own identity and presence. The orchestra fuses a powerful sea of sound with the immediacy of human music-making, capturing the irreplaceable energy of a live performance ensemble and its sonic presence. At the same time, the orchestra makes use of the computer's capabilities to experiment with sounds, instruments, and forms of musical expression. Offstage, the ensemble serves as a unique classroom that explores music, computer science, interaction design, composition, and live performance in a naturally interdisciplinary way.

Tonight's instruments are crafted using the following tools: ChucK, Max/MSP, Unity, Chunity (ChucK => Unity)—along with AppleScript, Arduino, bash, C++, Java, OpenGL, OpenSoundControl, Processing, Python, and pywinusb.

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**Special Guests**
Anne Hege, Shauna Fallihee, Sidney Chen,
Alice Del Simone, Nathan Tindall

**Ensemble**
Hassan Estakhrian, Elena Georgieva,
Hillary Hermawan, Kunwoo Kim, Camille Noufi,
Mark Sabini, Ryan Smith, Cara Turnbull

**Co-directors**
Matt Wright, Trijeet Mukhopadhyay, Jack Atherton

**Director**
Ge Wang

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SLOrk will return in 2020.
http://slork.stanford.edu/

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**About SLOrk**

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Aura (2019)
Kunwoo Kim

“Aura” embodies human qualities that are not subject to what or how, but why. We cannot indexically pinpoint these holistic traits, yet we can discover them with our third eye. As human relationships become established, our auras blend, harmonize, and remain as memories. We use SLOrk musical lanterns (SLanterns) that communicate with ChucK via WiFi to control music, light, and colors.

experiment019 (2019)
Ryan Smith

As its name suggests, “experiment019” is an experiment, conducted in an attempt to better understand and tap into the artistic potential of feedback.

Wrath of Chuck (2019)
Cara Turnbull

“Wrath of Chuck” is an audiovisual re-telling of the life of a SLOrk musician through the comical lens of Star Trek. The visuals consist of scenes from Star Trek (the original series) cut together with screen-captures of real-life SLOrk scenarios to playfully recount the daily struggles we all face when working with technology. We’ve all felt personally victimized by the “wrath” of whatever technology we’re using, and this piece is a lighthearted take on the (often painful) process of battling a particularly duplicitous software bug. The title of this saga is a play on a combination of the classic Star Trek film Wrath of Khan (in which Kirk is haunted by an old nemesis, Khan), and the name of SLOrk’s own sometimes-nemesis, Chuck (the programming language in which many of us compose our pieces).

Resilience (2019)
Jack Atherton

“Resilience” is a piece for laptop orchestra and one VR performer. A prequel to the longer, individual VR experience 12 Sentiments for VR (an aesthetic exploration of the emotional life cycle of a plant), it follows a group of seedlings as they search for a new home. The piece is an exploration of resilience through traumatic life events, finding peace and joy in small moments, and reconnecting with the ability to grow.

Once & Done (2019)
Hassan Estakhrian

All the sounds in “Once & Done” come from a type of material that has become ubiquitous in everyday life.

Touch (2019)
Mark Sabini & Hillary Hermawan

Being in touch with the world around us and being in touch with ourselves, all in the course of a lifetime.

Nomadic Hues (2019)
Trijeet Mukhopadhyay & Nathan Tindall

Nomadic Hues is an audiovisual odyssey in which souls align to imprint themselves on a new world, discovering meaning through unity and disparity.

The Furies: A Laptopera (Act III, 2019)
Composer, Librettist, Conception, and Instrument Builder — Anne Hege
Instrument Builder — Camille Noufi
Instrument Builder — Elena Georgieva
Electra — Shauna Fallah
Orestia — Alice Del Simone
Zeus — Sidney Chen
Furies — SLOrk

Tonight is the premiere of Act III of The Furies, an opera for laptop orchestra. Based on the Greek tragedy, Electra, Act III begins when the Furies, tasked with the responsibility of maintaining moral order, descend upon Electra and her sibling Orestia after they have murdered their mother. The Furies, comprised of the laptop orchestra ensemble, offer a brutal redemption to the criminals. The ritual continues into a duet between Orestia and Electra as they explore their grief and their guilt. The act ends when Zeus arrives to rein in his Furies and offer a bargain to the criminals. Is a lifetime of shame and guilt worth not feeling absolutely alone? Using the six channel hemispherical speakers, GameTrak tether controllers, networking, voices, movement, and a rope, the laptop orchestra and the soloists enact a ritual to explore how we hold our communities together amidst legacies of violence.
Soprano Shauna Fallihee has been featured with numerous Bay Area ensembles including San Francisco Choral Society, Masterworks Chorale, San Francisco Composers Chamber Orchestra, Open Opera, West Bay Opera and the Old St. Mary’s Cathedral Noontime Concert Series. Deeply dedicated to the performance of new music, Shauna has performed world premieres and contemporary works with Eureka Ensemble, Facing West Shadow Theater, NothingSet Ensemble, San Francisco Composers Chamber Orchestra, Opus Project, Wild Rumpus, Ensemble Mik Nawooj and enjoyed a decade with new music chamber choir Volti.

An active educator, Shauna is on the voice faculty at Holy Names University, City College San Francisco, and the Piedmont East Bay Children’s Choir. She is a Master Teacher Trainer for The Dailey Method, an alignment-based Barre and Cycle fitness program. Shauna’s unique program Embodied Singer integrates movement, meditation, and traditional vocal pedagogy.

Alice Del Simone, a Bay Area native, received her B.A. in Vocal Performance and B.S. in Plant Science from UC Davis in 2014. There, she was awarded the David S. Saxon Award for Excellence in Early Music Performance and the Fannie Kopalstein Award for Excellence in Music Performance. Del Simone enjoys performing varied repertoire including appearances as Cis in Britten’s Albert Herring at the Miami Summer Music Festival, in the Ensemble in Jake Heggie’s Dead Man Walking with Opera Parallèle, and as a soloist under Esa-Pekka Salonen with Philharmonia Orchestra, the UC Berkeley Chamber Chorus, andVolti. She is currently a member of Volti, San Francisco Renaissance Voices and the soprano section leader at St. John’s Presbyterian Church, Berkeley, and has recently performed with Left Coast Chamber Ensemble, Berkeley Symphony, and NOVA among others. Del Simone teaches theory and vocal pedagogy with the Piedmont East Bay Children’s Choir where she also serves as Program Director, and she maintains a small private voice studio.

Hillary Hermawan is a senior studying Symbolic Systems and a budding designer and drummer currently recruiting for her band-slash-collective. Her hobbies include drinking green tea, thrift shopping, and advertising her hand in marriage in the local papers. See more of Hillary’s work at hillaryhermawan.com.

Matthew Wright is a media systems designer, improvising composer/musician, multi-instrumentalist, father, computer music researcher, and the Technical Director of CCRMA. His research centers on real-time mapping of musical gestures to sound synthesis along with modeling in the perception of musical rhythm.

Ge Wang is an Associate Professor at Stanford’s CCRMA, specializing in artful design. He is the creator of the ChucK music programming language, the founding director of SLOrk, and the Co-founder of Smule. Ge designed the online CCRMA Music Piano app and Artful Design research group and the CCRMA VR Lab. A 2016 Guggenheim Fellow, Ge is author of Artful Design: Technology in Search of the Sublime—a 488-page photo comic about shaping technology, and how technology shapes us—published by Stanford University Press. (artfuldesign.com)

Jack Atherton is a PhD student at CCRMA studying design for human flourishing. His work investigates how to improve human lives through music, creative self-expression, and community. Currently, his research practice focuses on creating new ways to make music in virtual reality. In the long run, he hopes to encourage average people to practice amateur art-making and design as a part of how they lead a fulfilling life.

Kunwoo Kim is a graduate student at CCRMA, researching in designing aesthetic lenses of human values to various audiovisual media. He is expanding his design into social, philosophical, and ethical dimensions of virtual reality. He aspires to provide future directions and artful methods of imbuing human nature and music into this immersive medium. (kunwookim.com)

Nathan James Tindall is a software engineer at Plaid, Inc. He graduated in 2016 with a B.S in Symbolic Systems with a Concentration in Computer Music and an MS in Computer Science with a concentration in Systems. When he is not coding, he can be found using tiny spoons and stair stepping to infinity and beyond. He is excited to return for the second reprise of Nomadic Hues.

Trijeet Mukhopadhyay is an interaction designer and new-media artist. His work in this space includes design of musical experiences, sound design, and installation art. Sonically, he’s interested in exploring the boundaries between organic and synthetic, the duality between audio and visuals, and the cross-representation of data in different media. Fun fact: Trijeet currently holds the record for the longest standing continuous member of the group—his six years at Stanford he has never not been a member of the ensemble. Unfortunately, all good things come to an end, and this is his last concert with the group. Trijeet holds a bachelors in Computer Science, and is a masters candidate in Human-Computer Interaction at Stanford. More of his work can be explored at trijeetm.com.