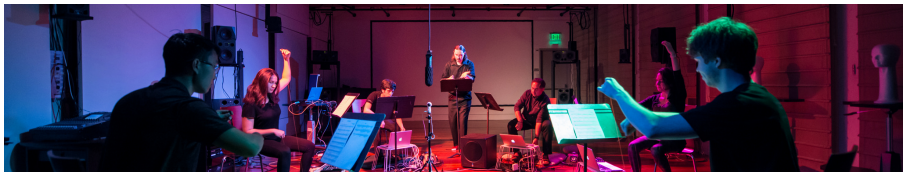
About SLOrk



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.

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

CCRMA Music at Stanford Stanford University

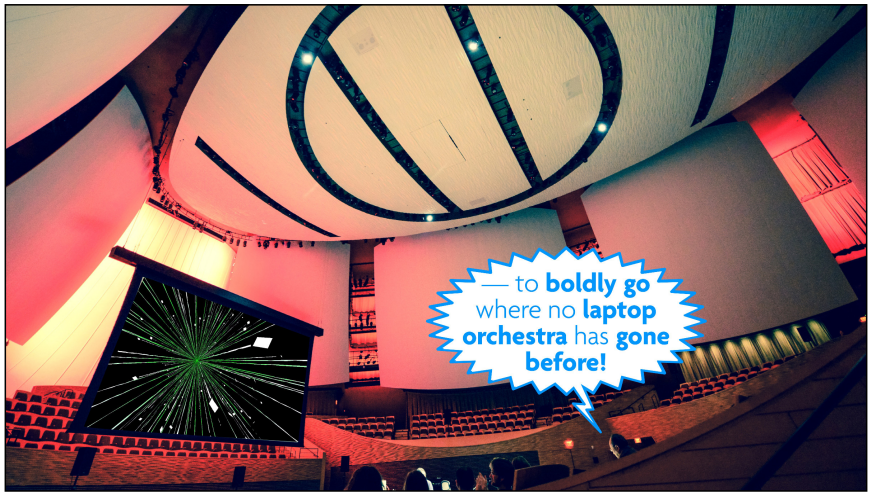
Stanford Laptop Orchestra (SLOrk)

presents

2019: A SLOrk Odyssey

— a concert of new frontiers —

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



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

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.

Discovery • Settle • Strangers • Kinship • Opportunism • Chaos
Glitch • Rebirth • Bustle • Rain • Civilization • Dust

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 Fallihee*
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.

artist bios

Ryan Smith is a senior majoring in Symbolic Systems. He is interested in sound, specifically everything about it.

Cara Turnbull is a second-year master's student studying Music, Science, and Technology at CCRMA. She completed her undergraduate studies at Ithaca College with a double major in double bass performance and sound recording technology. She is a member of the Neuromusic Lab at CCRMA, and is interested in music cognition and the relationships between performers and listeners. This fall she will begin a PhD in Musicology at Princeton University, with research focusing on music perception and cognition.

Hassan Estakhrian is a composer, performer (vocalist & multi-instrumentalist), and intermedia producer. He collides rock/funk/jazz with experimental/chamber music and incorporates electronics and various forms of media. Hassan's compositional aesthetic is represented by a variety of quirky creations and narratives—animal avatars flown across a 3D simulated environment with Wiimotes manipulating various parameters of music, a musical game with graphic scorecards, sci-fi rock operas with turkey sandwiches, a work framed around a sandbox, toys, and sea critters, and a mixed-chamber piece with prepared piano. Hassan is a doctoral candidate in music composition at Stanford and the recipient of The David R. Coelho Graduate Fellowship. More of his work can be explored at antennafuzz.com.

Dr. **Anne K. Hege** completed her Ph.D. in Music Composition at Princeton University where she studied embodied cognition theory and how it can be used to understand how to make musical multimedia meaningful. Hege's compositions have been recognized with awards such as The Elizabeth Mills Crothers Prize, The Gwen Livingston Pekora Prize in Music Composition, and a Mark Nelson Fellowship. She has composed for film, installation art, dance, and concert settings. Her works have been performed by the Princeton Laptop Orchestra, Ensemble Klang, NOW Ensemble, Newspeak, Flux Quartet, New York Virtuoso Singers, Princeton Chamber Singers, Piedmont East Bay Children's Choir, Voce in Tempore, Loadbang, Carmina Escobar, and Jason Calloway, among others. She performs original works in her performance duo New Prosthetics, as well as in the laptop ensemble Sideband. Currently, Hege teaches voice at Mills College in Oakland and directs Level IV of the SF Girls Chorus. Influenced by her deep listening practice, her latest compositions lie somewhere between ritual and music with some homemade instruments thrown in for good measure.

Elena Georgieva is a current masters student at Stanford CCRMA where she works on projects related to music, technology, and psychology. Elena is a singer and vocal producer and enjoys distorting vocals to create fun and engaging pieces of music. She performed with SLOrk last spring and is excited to be back working on the laptopera this year!

Camille Noufi is a vocalist and first-year PhD student at CCRMA fascinated by the power and nuance of the human voice. She draws upon signal processing, AI and human-computer-interaction techniques to study the nuances of vocal expression and perception. In addition to research, she continues to train and perform as a singer. She is thrilled to use the concept of a laptopera to combine the incredibly versatile mediums of voice, body, and laptop into a live musical performance.

Mark Sabini is a coterm studying CS and specializing in AI (though he sometimes dabbles in design). When Mark is not SLOrking or at Arrillaga Late Night, he has his hands full with studying ancient languages, constructing writing systems, and playing the piano. See more of Mark's work at marksabini.com.

Sidney Chen, bass-baritone, specializes in the creation of new music for voice. As a member of composer/choreographer Meredith Monk's Vocal Ensemble, he has performed in On Behalf of Nature, Monk's music theater work which toured internationally and was recorded for ECM Records. With the San Francisco Symphony he traveled to Carnegie Hall to premiere Monk's chamber work Realm Variations as part of the American Mavericks Festival. He was featured in the Other Minds Festival last season in Virgil Thomson and Gertrude Stein's Capital Capitals with pianist Sarah Cahill, and returns this month for the premiere of Brian Baumbusch's The Pressure, with a large ensemble of custom metallophones. In recent seasons he has premiered Ryan Brown's "medical oratorio" Mortal Lessons; collaborated with the Friction Quartet on an evening of commissioned works for vocal quartet and string quartet; toured to Denmark with San Francisco Lyric Opera's production of the little match girl passion by David Lang; and performed Berio's Sinfonia for eight voices and orchestra at the Mondavi Center. In 2009 he sang in Carnegie Hall's 45th-anniversary celebration of Terry Riley's In C, organized by the Kronos Quartet. He is a co-founder of The M6, a New York-based vocal sextet. In his hometown of San Francisco, he regularly performs with the new music chamber chorus Volti, and serves as the group's artistic advisor. He is also a member of the nine-man vocal ensemble Clerestory. For more information, visit sidneychenarts.com.

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 Empyrean 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 KopaldStein 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, and Volti. 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, the Berkeley Symphony, and ODC 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 of 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 *Ocarina* and *Magic Piano* apps, and leads CCRMA's Music:Computing: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. (artful.design)

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 in 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. (kunwookimm.com).

Nathan James Tindall is a software engineer at Plaid, Inc. He graduated in 2016 with a BS 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 contiguous member of group—in 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.