

**Soohyun Kim** is a master's student at CCRMA, Stanford University, whose main research interest lies in human-AI interaction for music production and performance. He is also a music producer and recording/mixing engineer trained in South Korea, who participated in multiple popular music production works. As a musician, he is a guitarist and singer.

**Yikai Li** is a second-year Ph.D. student in the computer science department at Stanford University, specializing in Affective Computing. His research interests center around understanding how visual and auditory signals evoke human emotions. His long-term research goal is to develop a machine that can comprehend human emotions and help experience-based content retrieval and generation.

**Tristan Peng** is a coterminal master's student at CCRMA and a computer science major in human-computer interaction. His research interests span across the academic spectrum, and various projects have led him through various disciplines including computer science, music, genetics, English, psychology, and more. Beyond SLOrk, his other musical pursuits encompass classical and jazz music through piano, saxophone, and voice.

**Daniel Rebelsky** is a cotermin student studying computer science and music and is aiming to have the shortest performer bio.

**Connor Settle** is a second-year coterm in AI and computational biology. At least, that's what is says on his resumé. In reality, he's a stressed out burgeoning scientist trying to find a balance between being a tech bro and a monk. His main research interests are human perception and attaining enlightenment. SLOrk has been an excellent space to learn and express the intersection between technology and art, and he's excited to perform some fun creations!

**Marise van Zyl** is.

**Ge Wang** is an Associate Professor at Stanford University's Center for Computer Research in Music and Acoustics (CCRMA). He researches the artful design of tools, toys, games and interactive AI systems. Ge is the architect of the Chuck music programming language and the director of the Stanford Laptop Orchestra. He is the Co-founder of Smule and the designer of the Ocarina and Magic Piano apps for mobile phones. A 2016 Guggenheim Fellow, Ge is the author of *Artful Design: Technology in Search of the Sublime*, a photo comic book about how we shape technology—and how technology shapes us.

Dr. **Matthew Wright** is a media systems designer, improvising composer/musician, computer music researcher, father of an energetic 5-year-old, alopecia survivor, and the Technical Director of Stanford's Center for Computer Research in Music and Acoustics (CCRMA). His research has included real-time mapping of musical gestures to sound synthesis, helping develop and promote the Sound Description Interchange Format (SDIF) and Open Sound Control (OSC) standards, computer modeling of the perception of musical rhythm, and musical creation with technology in a live performance context. As a musician, he plays a variety of traditional plucked lutes, Afro-Brazilian percussion, and computer-based instruments of his own design, in both traditional music contexts and experimental new works.

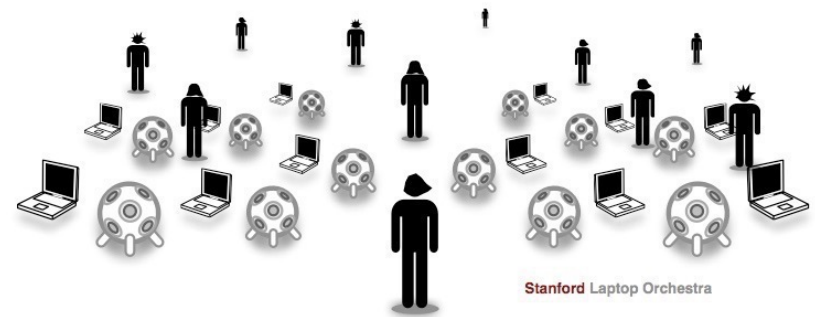


**The Stanford Laptop Orchestra (SLOrk)** is a large-scale, computer-mediated ensemble that explores cutting-edge technology in combination with conventional musical contexts—while transforming both. Founded in 2008 by Ge Wang with students, faculty, and staff at Stanford University's Center for Computer Research in Music and Acoustics (CCRMA), SLOrk consists of more than 20 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 intimacy. At the same time, the orchestra makes use of the computer's capabilities for new sounds and interactions—to imagine and realize new instruments for musical expression. Offstage, SLOrk serves as a unique classroom that explores music, computer science, artful design, composition, and live performance in a naturally interdisciplinary way.

**Next SLOrk Concert:** June 10, 2023, Bing Concert Hall | <https://slork.stanford.edu/>

## Stanford Laptop Orchestra (SLOrk) presents SLOrktastic Chamber Music 2023

Thursday May 4, 2023, 7:30pm  
CCRMA Stage, Stanford University  
(in-person & live-streamed)



### Ensemble

Analiese Bancroft | Celeste Betancur | Kelly Cochran | Dominic DeMarco  
Terry Feng | Abhinav Garg | Max Jardetzky | Donghun Daniel Kim | Soohyun Kim  
Yikai Li | Tristan Peng | Daniel Rebsky | Connor Settle | Sami Wurm

### Co-directors

Matt Wright and Marise van Zyl

### Director

Ge Wang



### Duet? (2023)

Kelly Cochran, feat. Ernest "Hemi"-ngway, The Hemispherical Speaker

*'Tis a gift to be simple, 'tis a gift to be free  
'Tis a gift to come down where you ought to be  
And when you find yourself in the place just right  
'Twill be with the music that brings you to life.*

Inspired by a 2013 performance I saw live by the Florida State University's Brass Machine. A decade later, I've come so far.

### Doomsday Clock (2023)

Connor Settle & Daniel Rebelsky & Abhinav Garg

According to the latest research, we only have around 6 years and 82 days before climate change becomes an unstoppable force of destruction. Yet when we ask our leaders for solutions, all we hear are crickets. Our piece reflects on the stunning sounds of the natural world, along with the combination of beautiful and terrible things we humans are doing to it. It's a reminder to all of us that the clock is ticking.

### Cyberpunk Sanjo (산조) 2023 (2023)

Soohyun Kim

Computer music meets Korean traditional music. Sanjo (산조) is a Korean traditional music style which involves two players, one on a melodic instrument and the other on percussion. Known for its improvisational nature, it is often compared to Jazz jam sessions in Western music. It also entails a musical conversation between a melodic instrument player and a percussion player.

In this performance, Kim plays his own melodic computer music instrument in the style of Korean traditional music. Using a GameTrak controller, his instrument is designed to express the essence of dynamic vibrato and pitch bend of Korean traditional music. And what he is sitting across from is a "ghost" computer player who provides the percussion component. This Sanjo performance is thereby presented in a form of fusion with computer music, which is unprecedented in Korean traditional music history.

### Indoctrination, Bondage, Liberation (2023)

Celeste Betancur & Sami Wurm & Max Jardetzky

Indoctrination, Bondage, Liberation is a three-movement exploration of the human touch and the influences that bad actors can have upon our internal cognition. The piece revolves around the twisting of belief and the distortion of truth, powered by the evolutionarily manipulative bonds of physical intimacy. In the first and third movements, sounds are triggered by skin-on-skin contact that closes an electrical circuit between performers, ushering in a sonic reflection on the corporeal mechanisms that define us, for better or worse.

### A Synthetic Storm (2023)

Team-Teal: Kelly Cochran & Analiese Bancroft

Imagine yourself on a handmade rocking chair. Peaceful as the storm comes and goes. From white noise to orchestra, let the rain grow and dance in your imagination. Maybe you will even fall asleep?

### Whimsical Whistling (2023)

Dominic DeMarco

Whistling is a wonderful tool for musical expression, yet sometimes it can be very lonely. In particular, I often imagine a rich harmony in my mind, yet all I can produce is a single high-pitched warble. In SLOrk, I can attempt to sonify the orchestra that lives within us.

### Icarus Suite (2023)

Dominic DeMarco & Daniel Kim & Tristan Peng

Imprisoned by King Minos, escape feels futile for labyrinth designer Daedalus (Daniel) and his son Icarus (Dominic), until they see a flock of birds in the sky. Struck with inspiration, the experienced inventor creates wings of wax for himself and his son. Will they make a successful escape from their tower cell? Sit back, relax, and listen to this classic tale, brought to sound by the Greek Muse (Tristan).

### Peripheral Love (2023)

USB3 (Urban Synth Boys 3): Soohyun Kim & Terry Feng & Yikai Li

Computer Music meets City Pop, one of the trendiest popular music genres of 2023! Welcome to the world of USB3, where everyday computing peripherals become expressive musical instruments. "Peripheral Love" is USB3's debut single, a song about living in the city and loving computer music (and Chipotle). Inspired by Japanese pop artist Mariya Takeuchi and her iconic hit, "Plastic Love", we've carefully designed and mastered the computer peripherals to play popular music in a new way.

*Take me away*

*Don't let me go*

*Hold me now*

*Close to your heart*

*You make me feel some way*

*I just wanna*

*Listen to your sound*

*Digital but warm and true*

*Synthesize my love for you*

*With a reverb or a few*

*I need you quick like Chipotle*

*With some audio visual, when I click on play*

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**Analiese Bancroft** is a sophomore undergraduate in Material Science and Engineering and MST. She grew up in a Commercial Music program for composing and keyboard studies in Orange County. She is a researcher in the Hong Laboratory for neuromodulation studies and a coxswain on Stanford's Women's Crew. She grew up combining her love for ballet and music and is excited to implement movement and coding. This is Analiese's first quarter in Slork and is absolutely loving it!

**Kelly Cochran** thinks program bios should be in first person. I'm a Computer Science Ph.D. student researching deep learning for RNA genomics who also identifies as a Frank Ticheli stan. I am who I am thanks to years of conducting and playing trumpet, euphonium, and more throughout high school and in the Duke Marching Band and Wind Symphony. SLOrk is my home at Stanford.

**Dominic DeMarco** is a Computer Science cotermin student who loves computer music and algorithmic composition. When he's not SLOrking, you can find Dominic playing trombone for Wind Symphony or conducting the marching band.

**Terry Feng** is a first-year CCRMA master's student researching interactive music-making and musical co-creativity. From building real-time software systems empowering technical and creative expression to composing and performing with elements of traditional and non-traditional practice, he's keen on creating experiences that invite musical participation and engagement.

**Abhinav Garg** is a first-year Master's student in Computer Science, specializing in AI and NLP. He has a deep interest in computer music and recently joined SLOrk to pursue the field. This will be his debut performance and he is excited to explore the world of computer music.

**Max Jardetzky** is a junior on the Computer Science systems track who discovered the interdisciplinary beauty of CCRMA classes in his freshman year. This is his first quarter in CCRMA's MA/MST coterminal program, but his sixth class with Ge Wang: the final Infinity Stone, if you will. In the rare moments when he's not crashing the Chuck virtual machine, you can find Max writing a compiler, brewing specialty coffee, or lifting heavy metal bars in a controlled fashion.

**Daniel Donghun Kim** agrees with Kelly. I am a second-year master's student studying Cyber Policy that loves music and coding. And after hanging out at CCRMA too much, I joined SLOrk during my final quarter. Other than computer music, I love playing the piano and all sorts of games.