Thank you for coming!

Please also join us for the following CCRMA concerts this Winter:

**Music <541> presents: Aleksander Gabryś**  
new works for double bass by Stanford graduate composers  
Fri | Feb 7 | 7:30pm

**Tender Buttons**  
piano, modular synthesizers, and live interactive video  
Thu | Feb 13 | 7:30pm

**Stanford New Ensemble**  
new works by Stanford undergraduate composers  
+ Terry Riley’s *In C around the Knoll*  
Wed | Feb 19 | 7:30pm

**Ezra Buchla | Alex Chechile**  
a double bill of electronic musicians  
Thu | Feb 20 | 7:30pm

**Music <541> presents: Quasar Quartet**  
new works for saxophone quartet by Stanford graduate composers  
Sat | Feb 29 | 7:30pm

**Salt Itinerary**  
multimedia opera  
Fri | Mar 6 | 7:30pm

**Jocelyn Ho + fff ensemble: Women’s Labor**  
a concert in celebration of the International Women’s Day  
Sat | Mar 8 | 2:30pm

**Vilbjørg Broch**  
electronic music by CCRMA Visiting Scholar  
Tue | Mar 10 | 7:30pm

**SideLObe presents The Furies: A Laptopeera**  
premiere of the full opera for laptop orchestra by Anne Hege  
Sun | Mar 15 | 7:00pm  
Mon | Mar 16 | 7:30pm

All events take place on the CCRMA Stage (The Knoll 317).

If you would like to stay up to date with our events, please subscribe to our mailing list:  
http://ccrma-mail.stanford.edu/mailman/listinfo/events
PROGRAM

Shorelines (2019)  
Mark Ferguson

For Carr (2019)  
Matt Wright

Works for Listening - No. 8 (2019)  
Tine Surel Lange

Directional Animals (2014)  
Hassan Estakhrian

Hidden Values (2012)  
Natasha Barrett

Ear Tone Study #3 (2020)  
Alex Chechile

Resurrections, for lonely PiaNOT (2020)  
Fernando Lopez-Lezcano

TO ENSURE A MORE PLEASANT EXPERIENCE FOR ALL: No food, drink, or smoking is permitted in the building. Cameras and other recording equipment are prohibited. Please ensure that your phone, other electronic devices, or watch alarm are all turned off. Thank you.

Mark Ferguson is best known for his evocative species recordings, which immerse listeners in the hidden sonic fabric of wildflower meadows, suburban undergrowth, ancient woodland and other habitats. His electroacoustic compositions—crafted exclusively from his own library of wildlife sounds—have been noted for their imaginative, highly-detailed treatment of natural environments and biological structures. Mark’s work has been broadcast by the BBC, mentioned by the Guardian, and selected for performance in England, Ireland, France, Sweden and the USA. He is currently a doctoral researcher at the University of Birmingham, supported by the Midlands4Cities Doctoral Training Partnership and AHRC.

Fernando Lopez-Lezcano enjoys imagining and building things, fixing them when they don’t work, and improving them even if they seem to work just fine. The scope of the word “things” is very wide, and includes computer hardware and software, controllers, music composition, performance and sound. His music blurs the line between technology and art, and is as much about form and sound processing, synthesis and spatialization, as about algorithms and custom software he writes for each piece. He has been working in multichannel sound and diffusion techniques for a long time, and can hack Linux for a living. At CCRMA, Stanford University since 1993, he combines his backgrounds in music (piano and composition), electronic engineering and programming with his love of teaching and music composition and performance. He discovered the intimate workings of sound while building his own analog synthesizers a very very long time ago, and even after more than 30 years, “El Dinosaurio” is still being used in live performances. He was the Edgar Varese Guest Professor at TU Berlin during the Summer of 2008. In 2014 he received the Marsh O’Neill Award For Exceptional and Enduring Support of Stanford University’s Research Enterprise.

Tine Surel Lange is a Norwegian composer, artist, and researcher – based in the arctic Lofoten Islands, Norway – with background from the Norwegian Academy of Music, The Lithuanian Academy of Music and Theatre, Sonic College and the Royal Danish Academy of Music. She is working with the surrounding world both thematic and as material and her works range from experimental chamber music to electro-acoustic pieces (live electronics, soundscape composition, installation, ambisonics) to performances and audiovisual works. She has also done music to several theatre and dance performances. She belongs to a new generation of artists and composers who work with 3D audio, immersive and surrounding sound. She is engaged in listening aesthetics and our psychological categorization of sound. Her hope is to create increased empathy for our surroundings through listening.

Dr. Matthew Wright is a media systems designer, improvising composer/musician, computer music researcher, father of a toddler, and the Technical Director of Stanford’s Center for Computer Research in Music and Acoustics (CCRMA).
electronics. Since 1999 her work with sound has expanded to encompass sound-art, sound-architectural installations, interactive techniques, collaboration with experimental designers and scientists as well live performance and improvisation. Recent examples of this include the use of scientific data and geological processes in sound-art, spatial composition for hemispherical loudspeaker array and a special interested in High Order Ambisonics, and her third installation project with the group Ocean Design and Research Association. Her works are performed and commissioned throughout the world and have received numerous recognitions, most notably the Nordic Council Music Prize (Norden / Scandinavia, 2006), Giga-Hertz Award (Germany, 2008), Edvard Prize (2004, Norway), Noroit-Leonce Petitot (Arras, France, 2002 & 1998). Bourges International Electroacoustic Music Awards (France 2001, 1998 & 1995), Musica Nova (2001), IV CIMESEP 2001, Concours Scrim (France 2000). International Electroacoustic Creation Competition of Ciberart (Italy 2000), Concours Luigi Russolo (Italy 1995 & 1998), Prix Ars Electronica (Linz, Austria 1998), 9th International Rostrum for electroacoustic music (2002). Her installations include a major work for the Norwegian state commission for art in public spaces.

Alex Chechile is an artist and composer whose work develops in parallel with research in neuroscience, psychoacoustics, and the biomechanics of hearing. His electroacoustic compositions and installations bring transparently the otherwise invisible processes in biology and technology to the view of the public. His projects have been supported by the Mellon Foundation, the New York State Council on the Arts, Harvestworks, Issue Project Room, the Experimental Television Center, the Deep Listening Institute, and the American Embassy. His work has been presented worldwide at festivals and venues including the Cité Internationale des Arts, MoMA, ICMI, Electronic Music Midwest, EMPAC, the New York Electronic Arts Festival, and IRCAM. Alex was a founding member of Pauline Oliveros’ Tintinnabulate ensemble, collaborated with Mercury Rev, and opened for Primus. Chechile is a Ph.D. candidate at Stanford University’s Center for Computer Research in Music and Acoustics, where he is completing his dissertation Practical Applications of Difference Tones in Electronic Music Composition and Synthesis. Chechile will present a concert of Ear Tone Etudes in a double bill with Ezra Buchla on February 20th at 7:30pm on the CCRMA Stage.

Hassan Estakhrian is a musical storyteller. He is a composer, performer, songwriter, intermedia artist, producer, music technologist, sound engineer, and educator. He is a vocalist and multi-instrumentalist (electric bass, guitar, keyboard, drum set, and other instruments) and the director of the music ensemble, Antenna Fuzz. 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 about turkey sandwiches and social inequality, a work framed around a sandbox, toys, a boy, and sea critters, and a mixed-chamber piece with prepared piano. Over the course of his formal education, Hassan has studied with Mark Applebaum, Brian Ferneyhough, Erik Ulman, Nicole Mitchell, Chris Dobrian, Ko Umezaki, Michael Dessen, Robert Maggio, Adam Silverman, Larry Nelson, Van Stiefel, and others. He has earned a Bachelor of Music

Mark Ferguson: Shorelines
Reflections and re-imaginings from Talisker Bay Beach, Isle of Skye, Scotland.


Shorelines was realised in the Electroacoustic Music Studios at the University of Birmingham in early 2019, with support from the Midlands4Cities Doctoral Training Partnership and AHRC.

Matt Wright: For Carr
Carr Lane Wilkerson Jr. (1966-2019) was a CCRMA masters student then sysadmin/enthusiast/enabler. He loved the music of New Orleans, especially The Meters, including Zigaboo Modeliste’s 5 second drum solo at the beginning of Hey! Last Minute, as well as Shifty Looping (which coincidentally also debuted in New Orleans). He would have loved feedback ensembles of semi-autonomous cybernetic agents and laughed at this piece.

Tine Surel Lange: Works for Listening - No. 8
Works for Listening is a series of electro-acoustic works developed at Notam (NO), MISC (LT), EMS (SE) and CCRMA (USA). All the works are made in 5th order Ambisonics, but have been presented in other formats as well and are the most played works by Tine Surel Lange. The works are numbered from No. 1 to No. 14 (still ongoing). In Works for Listening there are a strong focus on listening aesthetics and our psychological categorization of sound. Surrounding sound environments are created with material taken from everyday life: Organic sound sources to a varying degree reconstructed by tone, rhythm, timbre, and layers. The sonic material in Works for Listening appears as physical and tactile, and often abstracted from their original state. With Works for Listening the composer hopes to create inspiration for increased listening experiences in life. Surel Lange’s work with Ambisonics is based on mono sound sources (field recordings, mostly done with contact microphones) placed in space where the development in the material (pitch, filters, frequencies, dynamics) are connected and emphasized with vertical movement. No. 8: Underwater recordings from Spree, Berlin, Germany, recorded with a hydrophone.

Hassan Estakhrian: Directional Animals
What does a turtle, cat, horse, and bear have in common? They go places.
Natasha Barrett: Hidden Values
Part I: The Umbrella
Part II: The Lock
Part III: Optical Tubes

Every year, new inventions push the boundaries of science and enrich our understanding of the natural world. Ancient and seemingly minor inventions have also shaped our societies and affect our everyday in a multitude of ways. A single object can connect to the history of the world, yet the utility of these simple devices go unnoticed. Hidden Values takes a moment to pause and explore directly, dramatically and through metaphor, three of these inventions: the umbrella, the lock (and key) and sight correction. The work was composed at IRCAM during a music research residency exploring advanced sound spatialisation techniques in composition. From the abundance of inventions that have found their way into everyday objects, I chose themes that would yield to the compositional use of space, the projection of near and far information and the transformation between sound masses, sound scenes and precise spatial points. Special thanks to soprano Evdokija Danajloska and percussionist Gilles Durot for their collaboration in the sound materials used in the composition of this work.

The research residency was funded by IRCAM, The Oslo City Cultural Grant for International collaboration, and the Norwegian Cultural Council. Hidden Values was composed at IRCAM with support from the Norwegian Composers’ Fund. The work was composed in 7th order 3D Ambisonics and also exists in a number of other spatial formats.

Part I: The Umbrella - An umbrella protects from the environment, protects from the rain, snow, sun and to some extent the wind. As a metaphor it protects and saves, defends and deflects, cover and disguise, but maybe it’s just unnecessary baggage. The Umbrella explores a real umbrella and a real environment, but also the metaphor found in a short poem by Jorge Luis Borges, Instantes:

I was one of those who never goes anywhere without a thermometer without a hot-water bottle, and without an umbrella and without a parachute. If I could live again, I would travel lighter. If I could live again, I would begin to walk barefoot from the beginning of spring and I would continue barefoot until autumn ends.

Part II: The Lock - The invention of the lock and key can be traced back over 4000 years. The theme of the lock and key and its metaphors, have been used throughout literary and dramatic history. Locked doors provide safety in a modern world. A lock hides secrets from prying eyes, locks people in, locks people out, represents power and ownership. The Lock plays out a drama between two forces: one represented by the female voice, the other by percussion instruments.

Part III: Optical Tubes - Optical tubes, apparently invented by Descartes, were glass tubes that touched the eyeball like contact lenses, but with the unfortunate side effect that you could not blink! Over 50% of the adult population wear glasses to correct their vision. Seeing the world in focus or through a haze is something we can choose to do. In Optical Tubes, imagining how it would have been for objects to only appear in focus as you moved towards or away from them is a central musical idea.

Alex Chechile: Ear Tone Study #3
Upon the simultaneous presentation of two or more pure tone frequencies in a specific ratio and amplitude, additional tones are generated inside the ear. Known as difference tones, the sounds are perceived as emerging from within the listener's head. Unlike acoustic tones in the room, difference tones are not physically present outside of the ear.

In 2019, Chechile completed a behavioral research study examining the perception of up to seven types of difference tones produced by two and three-tone frequency combinations. The Ear Tone Etudes is a series of short studies that explores the unique properties of the results. The third etude uses frequency combinations that yield the largest number of difference tones, and therefore the “ear tones” are particularly rich in timbre.

Ear Tone Etude #3 is built using augmented acoustics of ancient caverns in Longyou, China. In 2017, a team of researchers from CCRMA traveled to the caves to record acoustical measurements. The resulting multichannel reverberation in Ear Tone Etude #3 was further expanded beyond the size of the measured space to allow for greater interaction between the decaying tones and multiple difference tones.

Fernando Lopez-Lezcano: Resurrections, for lonely PiaNOT
The “Weathered Piano”, or PiaNOT, is the ghost of an upright piano that was saved from transcending acoustic life in a landfill, and spent a year converted into comfortable housing for small creatures, while being retuned by rain and sun. It has been the source of sounds and resonances for four pieces so far, and yesterday evening it shared its sounds with a live audience for the first time in a very successful creative collaboration with Michiko Theurer in violin (and computer, and piano!). This time around the PiaNOT is alone, with no other resonant strings to keep it company (we miss you Michi!), its sounds recorded, played back, processed and spatialized by SooperLoopy, a multi-looper program written by Fernando Lopez-Lezcano in SuperCollider, and still a work in progress. A piano, resurrected, again...

ABOUT THE ARTISTS

Natasha Barrett is a freelance composer working with music, research and creative uses of sound. She is currently based in Norway. Her doctoral research focused on acousmatic music and on instrumental music with live