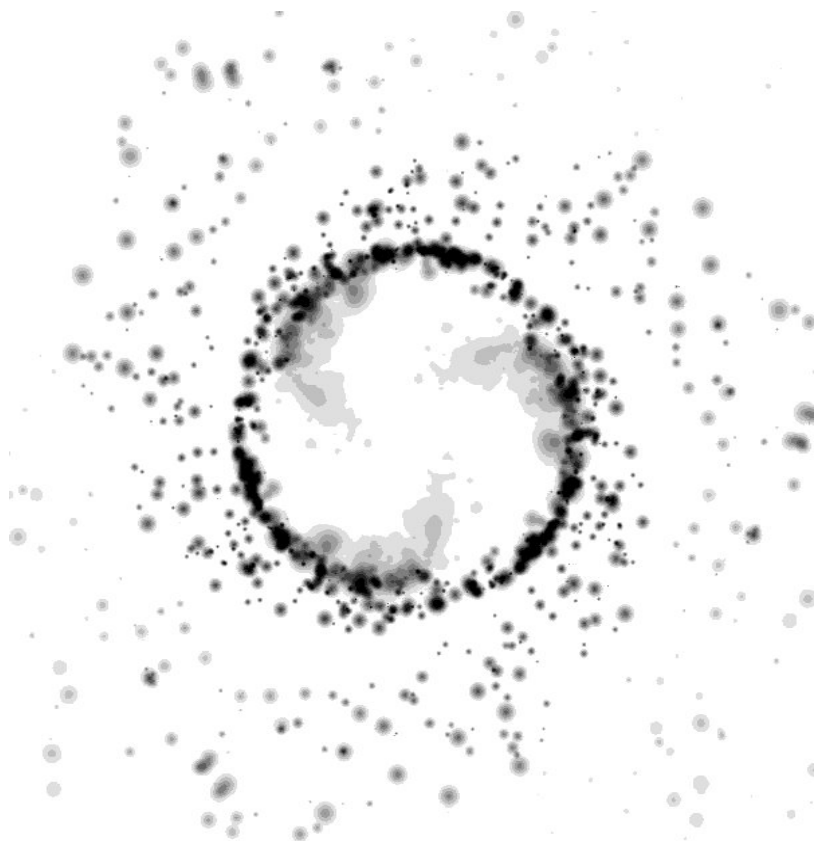


# TRANSITIONS



a Summer Concert at



## PROGRAM

---

**Turenas** John Chowning

**Princessa Chontales** Chris Chafe, celletto  
Roberto Morales, flutes and computer

**Shooting Stars** Visda Goudarzi

**Skeletons in the Closet** Mark Applebaum

**It's Like A Car** Edgar Berdahl, haptic drum  
Frankie Siragusa, percussion

**Unorthogonality** Javier Sanchez

**Phasered Limercks** Max Mathews  
Laurie Amat, voice

**A Very Fractal Cat, Somewhat T[h]rilled** Fernando Lopez-Lezcano

► break ◄

**Transafter** Luke Dahl  
Baeksan Chang

---

## PROGRAM NOTES

### **Turenas (1972)**

**John Chowning**

Turenas (1972) was the first widely presented composition ever to make extensive use of frequency modulation (FM). At the same time it was the first piece to create the impression of moving sound sources in a 360 degree soundspace. Chowning developed a technique for synthesizing any path a sound could follow moving around or through the audience surrounded by just four loudspeakers. By means of the computer it is possible to calculate the Doppler shift, the angle and distance as the sound "moves" from one place to the other in an illusory space. The title Turenas is an anagram of "Natures" thus pointing to the issues Chowning addresses in this piece, namely the question of how to apply the knowledge gained in the understanding of the attributes of natural sounds to a compositional goal.

### **Princessa Chontales (2009) Roberto Morales & Chris Chafe**

Morales composed the computer sequences and processing effects after his experiences recording music of the Huaves natives of Oaxaca, Mexico. His work at The Banff Centre in March, 2009 included this performance with Chris Chafe.

### **Shooting Stars**

**Visda Goudarzi**

"Shooting Stars" is an Acousmatic and UPIC piece. A walk into the fields, the forest nearing and a sky getting darker as the crescent moon set, summer night, the noise of the night, the bugs and breeze in the trees; then walking through a field of tall grass. (which is generated by shaking keys) The sky and the stars overtake the senses and the earth and all that which is a part of the land falls away and the sky and the stars surround. Lay out your blankets and enjoy listening.

### **Skeletons in the Closet (2009)**

**Mark Applebaum**

There are skeletons in my closet—eight of them. They have names: Oberheim OB-8, Roland Jupiter 8, Roland Juno 60, Roland SH-101, Yamaha CS-40M, Moog MG-1, Sequential Circuits Prophet 5, and Sequential Circuits Pro-One. The skeletons want out; it seems that my 1980s past has finally caught up with me.

Neglected for decades and gathering dust, these classic analog synthesizers were hauled out during the summer of 2009 for the purpose of recording corresponding sample libraries. The painstakingly assembled samples

(over 1,400 in total) each have a maximum duration of five seconds, and range from laconic, iconic beeps to irregular, idiosyncratic phrases complete with internal rhythmic complexities.

*Skeletons in the Closet* consists simply of a series of ensemble explosions (the number of which is selectable for each performance), polyphonic outbursts constituted by the simultaneous concatenation of all eight synthesizers. In effect, the listener is surrounded by a sequence of groaning, shrieking, and scratching (to get out). Insofar as the eight synthesizers occupy fixed positions in the 8-channel space, it might be more accurate to use the plural “closets” in the title.

The piece is characterized by several indeterminate elements. For every outburst, the computer randomly selects a sample within each synthesizer library (never repeating a sample), or it randomly chooses to “play” a silence. Even if the same group of eight samples were to be randomly selected again during a subsequent performance, the ensemble’s collective envelope will differ—that is, the rhythmic relationship among all eight synthesizers is randomized within each outburst. The duration between outbursts is similarly randomized. And the algorithm includes a chance that a given set of eight samples will be immediately repeated—albeit with a newly randomized set of rhythmic relationships amongst them—thereby creating a momentary stutter of sorts. Each of the randomized elements operates within a given range, selectable by the user before the outset of a performance. For example, the user can select the shortest and longest possible durations between outbursts, or fix the likelihood that an individual synthesizer will be silent.

*Skeletons in the Closet* was premiered at CCRMA at Stanford University. Thanks to Michael St. Clair for his expert assistance with the Max patch.

## **It's Like A Car**

**Edgar Berdahl & Frankie Siragusa**

Multichannel recording of a live improvisation of the haptic drum (Berdahl) and traditional percussion instruments (Siragusa) including the drum set, maracas, xylophone, and FM radio. The haptic drum is programmed to trigger samples of Indian percussion instruments and spoken phrases.

## **Unorthogonality (2009)**

**Javier Sanchez**

This audiovisual material uses basic geometric elements to experiment with the relationship between “musical movement” and “spatial movement”. Music Gestures are translated to lines, which have some common features that can be appreciated along the workpiece: they are not perfectly straight and they are close to horizontality or verticality. Orthogonality is avoided along the piece. MAXM/SP/JITTER and some simple mathematical algorithms have been used to create the visual effects.

## **Phasered Limericks (2009)**

**Max Mathews**

A group of eight Limericks will be sung by Laurie Amat and filtered by a bank of 19 phaser filters played by Max Mathews. Each filter is a two pole, high Q resonant algorithm which runs on a MacBook Pro computer. The frequency and decay times of the filters are controlled in real-time by midi signals sent to the computer from an Oxygen8 keyboard and knobs.

## **A Very Fractal Cat, Somewhat T[h]rilled (2008-2009)**

**Fernando Lopez-Lezcano**

This is the second version of the second piece (after "Cat Walk") of a series of algorithmic performance pieces for pianos, computer and cat that I started working on last year (the proverbial cat walking on a piano keyboard). The performer connects through a keyboard controller to four virtual pianos both directly and through algorithms. Through the piece, different note and phrase generation algorithms are triggered by the performer's actions, including markov chains that the virtual cat uses to learn from the performer, fractal melodies, plain scales and trills and other even simpler algorithms. The sound of the pianos is heard directly, and is also processed using spectral, granular and other synthesis techniques at different points in the performance, creating spaces through which the performer moves. A surround environment is created with Ambisonics spatialization, and everything in the piece was written in SuperCollider.

## **ABOUT THE ARTISTS**

Internationally-known sound artist **Laurie Amat** explores the broad possibilities of voice, breath and body in live performance, recording and multimedia. In addition to her work with Max Mathews, she performs solo improvisation and motion, collaborates with poet Josef Aukee and numerous Czech and American instrumentalist/electronic artists. In collaboration with director Cecil B. Feeder she is currently creating solo resonant space performance for film at the San Francisco Armory studios of kink.com

**Mark Applebaum** (b. 1967, Chicago) is Associate Professor of Composition and Theory at Stanford University where he received the 2003 Walter J. Gores Award for excellence in teaching and served as John Philip Coghlan Fellow. He received his Ph.D. in composition from the University of California at San Diego where he studied principally with Brian Ferneyhough. His solo, chamber, choral, orchestral, operatic, and electroacoustic work has been performed throughout the United States, Europe, Africa, and Asia. Additional information is available at [www.markapplebaum.com](http://www.markapplebaum.com).

**Edgar Berdahl** is a PhD student in Electrical Engineering at Stanford University. He has been studying how force feedback can be used to design novel musical instruments.

**Chris Chafe** is the Duca Family Professor at Stanford University and director of CCRMA. The past year, he and Roberto Morales have performed together at the Cervantino Festival, Guanajuato and Queretaro, Mexico, as well as two concerts at The Banff Centre, where Chafe recently completed a year's residency as Visiting Professor.

**John Chowning** Osgood Hooker Professor of Fine Arts, Emeritus. B.M., Wittenberg University, D.M.A., Stanford University, Studies with Nadia Boulanger, Paris, 1959-62. Fields: computer music/composition, auditory/music perception. Patents: The Simulation of Moving Sound Sources, The Synthesis of Complex Audio Spectra by Means of Frequency Modulation. Publications/Recordings: Journal of the Audio Engineering Society, Schott/WERGO. Grants/Awards: artist-in-residence, Künstlerprogramm des Deutschen Akademischen Austauschdiensts, Berlin, 1974; invited composer/researcher IRCAM, Paris, 1978, 1985; Fellow, American Academy of Arts and Sciences, 1988; Honorary Doctor of Music, Wittenberg University, 1990; Dipl. Atme d'Officier dans l'Ordre des Arts et Lettres, French Ministre de la Culture, 1995; Doctorat Honoris Causa, Universit. Ai de la Miditerranie, Marseille, 2002.

**Visda Goudarzi** is a Computer Musician interested in software development for computer music, human- computer interaction, gesture based interfaces, computer graphics and the application of new media in art. She recently graduated in the "Music-Science and Technology" program at CCRMA. She has also a Masters degree in Computer Science from TU Vienna and plays piano whenever there is some time left.

**Fernando Lopez-Lezcano** (born in Buenos Aires, Argentina) received Master Degrees in Electronic Engineering (University of Buenos Aires) and Music (Carlos Lopez Buchardo National Conservatory, Buenos Aires). He has been working in the field of electroacoustic music since 1976 (instrument design, composition, performance). In a former life he also worked as a microprocessor hardware and software design engineer for embedded real-time systems. He created and maintains the Planet CCRMA at Home Open Source package collection of music and sound applications for Linux systems. In 1992 he taught computer music at Keio University, Japan. Since 1993, he has kept computers and users at CCRMA happy (most of the time), taught courses about various electronic music subjects, composed and performed his own music and enjoyed the company of good friends. He was the "Edgar Varese Guest Professor" at TU Berlin during the Summer 2008 semester. His music has been released on CD and played in the Americas, Europe, and East Asia.

**Roberto Morales** is Professor of Composition at the Universidade de Guanajuato and received his PhD from the University of California, Berkeley.

**Javier Sanchez** is currently Visiting Scholar at CCRMA, Stanford University. He received his MS in Mechanical Engineering and his PhD from Tecnun, University of Navarra, Spain. His research and academic career is focused on Computer Graphics applied to several fields such as product design, architecture, music, manufacturing and reverse engineering . His current activity is related to the creation of audiovisual material while performing, with the intention of exploring the relationship between music and spatial movements. Some of the computer graphic techniques used to obtain dynamic visual effects are based on the manipulation of parametric curves and surfaces (NURBS).

**Frankie Siragusa** is a composer living in Los Angeles.

---

No food, drink or smoking is permitted in the building.  
Cameras and other recording equipment are prohibited.  
Please ensure that your pager, cellular phone and watch alarm are turned off.

**<http://ccrma.stanford.edu/concerts/>**

---