FUTURE MUSIC OREGON  
The Computer Music Center  
at the University of Oregon School of Music  
http://darkwing.uoregon.edu/~fmo

Future Music Oregon is dedicated to the exploration of sound and its creation, and to the innovative use of computers and other recent technologies to create expressive music and media compositions. To this end we embrace our roles as both a focus of educational and creative pursuits. Student composers working in the FMO studios have been tremendously successful having their work presented at national and international experimental music and new media festivals. In addition to establishing a creative and intellectually stimulating environment for education, FMO sponsors a concert series featuring new electroacoustic music. Past guest artists have included noted composers of electroacoustic music such as James Paul Sain, James Dashaw, Carl Stone, Russell Pinkston, Allen Strange, Carla Scaletti, Eric Chasalow, John Chowning, Burton Beerman, Barry Truax, Dennis Miller, Chris Chafe, Gary Lee Nelson, Mark Applebaum, Michael Alcorn, Brian Belet, Peter Terry, and Gioacchino Rossini.

If you would like more information about Future Music Oregon or would like to support the work at Future Music Oregon, you may contact Jeffrey Stolet at the School of Music or via e-mail at: stolet@darkwing.uoregon.edu.

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SPECIAL THANKS

We would like to thank Sony Disc Manufacturing for their exceptional and significant gifts to the School of Music. We also received the valuable support from a number of other wonderful individuals and groups. We wish to take this moment to thank them.

Anonymous Donors (3)  
Fabulous Tweeter Brothers  
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105th Season, 134th program
**PROGRAM**

**Neptune’s Clouds** (2005) by Josh Humphrey
for stereo digital audio media

**The Waldstein Machine** (2005) by Lincoln Smith

**Ascension** (2005) by Brett Wartchow
for stereo digital audio media

**Brain Wave Study I: Chemical Reaction** (2005) by Nic Mitchell
for four channels digital audio media

**Reverie** (2005) by Aaron Barnhart
for four channels digital audio media and digital recitation
Aaron Barnhart, performer

**Meditation on a Spent .38 Shell** (2005) by Paul Hembree
for stereo digital audio media

**Sarahnade** (1995) by Stephen David Beck
for stereo digital audio media

**Strange Bugs Stranger** (2005) by Stephen David Beck
for trumpet, saxophone and computer
Griffin Campbell, alto saxophone
Brian McWhorter, trumpet

**Guys W/Big Cars**
Guys W/Big Cars. The philosophy behind my interactive computer music is the notion of the Virtual Instrument. For a long time I worked with alternative controllers and synthesizers, trying to develop systems that professional musicians could use in their performances. The physical instruments (Electronic Wind or Valve Instruments) would drive real-time synthesizers both directly and indirectly. The direct contact would be akin to a real instrument. You play one note, you get one note. But because these were virtual systems, I began to look at how musicians could control multiple virtual instruments at the same time. This indirect control of multiple instruments became problematic with respect to creating a sonic and temporal identity for the virtual instrument for both the listener, and more importantly for the performer. My early works in this realm, Strange Attractors, and Love’s Not Time’s Fool, were effective at creating sonic identities for the instrument, but less successful at linking temporal events (sounds that happened after the note event) to the gesture that created them. More importantly, I found that performers needed a long time to develop a sense of “virtual instrument” virtuosity that is required for any successful performance. So I turned from alternative instruments to traditional instruments as the source of interaction. My musician collaborators were already virtuosos on their respective instruments, and I began searching for ways to translate my ideas of interaction from a virtual instrument mode to a hyperinstrument mode, where the interaction is more of an extension of the physical process of the instrument. The works performed here are recent experiments in this realm. It should be noted that all of the sounds generated in the interactive pieces are generated in real-time from the input of the musical instruments.

**Percubot Study No. 1** (2005) by Troy Rogers
for micro robot ensemble and computer controlled environment

**Bell * 1242** by Justin Armstrong
for stereo digital audio media

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James Forger) and Pfeiffer College (saxophone studies with Donald Grant and Michael Price). He is the Regional Director for the Southeastern U.S. and Puerto Rico for the North American Saxophone Alliance, and is professor of saxophone and chair of the Instrumental Performance Division of the LSU School of Music where he has been on faculty since 1984.

**Brian McWhorter** teaches applied trumpet and directs LSU’s burgeoning jazz program. He performs, composes, and improvises contemporary music as a solo artist and in groups such as the Meridian Arts Ensemble, the film-accompanying After Quartet, and the percussion-trumpet duo Endy Emby. He has recorded with the American Brass Quintet, the New Jersey Symphony Orchestra, the Absolute Ensemble, and the chamber/pop group The Sharp Things and After Quartet on an album, that featured his original compositions for two silent films. He was a founding member of Extension Ensemble, an award-winning brass quintet responsible for numerous commissions of progressive composers. Hailed as a “terrific trumpeter” by the New York Times, McWhorter is a graduate of the Juilliard School and the University of Oregon and held teaching positions at Princeton University and Greenwich House Music School before coming to Louisiana State University.

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to reveal their micro-content. The other hyperinstrument is a spectral processor that pulls, stretches and decimates the sound by translating amplitude into spectral shift. Over time, the sound is decimated and then reconstructed with a new harmonic structure based on the intensity of the instrument. The instruments are balanced against one another over the course of the performance, and overall effect is one where it’s not clear how the instruments are generating the sound, but that there is a connection between human and computer instruments.

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ABOUT TONIGHT’S ARTISTS

Stephen David Beck is director of the Laboratory for Creative Arts & Technologies (LCAT) at Louisiana State University in Baton Rouge, LA, where he is professor of composition and Computer Music. He also serves as area head for Visualization, Interaction and Digital Arts at the LSU Center for Computation & Technology. He holds a Ph.D. in music composition and theory from UCLA, and was a Fulbright Scholar, working in the Paris computer music center, IRCAM. His music has been performed widely throughout the U.S., Canada and Europe, and is extremely active in interactive computer music systems, streaming digital media, and open source computer programming. He was the author of Csnd.app, a Csound front-end for NeXT and Mac OS X computers. His current research includes ICAST (the Immersive Computer-controlled Audio Sound Theater), a 24-channel sound diffusion system designed for electroacoustic performance and immersive applications, and DART, a project that is developing tools for distributed audio rendering of a network of heterogeneous computers. His writings have appeared in “The Csound Book,” the Computer Music Journal and Electronic Musician. Beck is past-president of the Society for Electro-Acoustic Music in the United States (SEAMUS).

Griffin Campbell has appeared to critical acclaim as a performer throughout the United States and in Italy, Great Britain, and Japan. Conference performances include solo appearances at meetings of the World Saxophone Congress, North American Saxophone Alliance, the Society of Composers, Inc., the Society for Electro-Acoustic Music in the United States, and the International Computer Music Conference. World premieres include concerti, chamber music, and smaller pieces both in America and abroad. He has received grants from the Louisiana Foundation for the Arts and from Louisiana State University. His recordings can be found on the Capstone, Centaur, Electronic Music Foundation, SEAMUS, Vestige, and WorldWinds labels. He has conducted seminars and master classes in saxophone performance throughout the United States and in Italy at the Faenza International Saxophone Festival (2004). His musical explorations run the full gamut of available genre: from recital appearances to group improvisation, from concerto performance to free jazz and improvised movie scores, from orchestral performance to pop/rock styles. Campbell holds degrees from Michigan State University (saxophone studies with

Rarefraction

for four channels digital audio media

Source audio from installation project “Tracer” provided courtesy of Jefferson Goolsby and Reza Safavi.

Millennium Bugs (2000)

Stephen David Beck

Guys W/Big Cars

Griffin Campbell, alto saxophone

Brian McWhorter, trumpet

Stephen David Beck, piano

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PROGRAM NOTES

Sarahnade

Stephen David Beck

Sarahnade was written not long after the birth of my first child, Sarah. The baby cries are hers, and the operatic voice is an echo of what she might become, or at least how her voice sounded to me when she did cry. The piece is about memory, hope, and love.

Strange Bugs Stranger

Stephen David Beck

Strange Bugs Stranger is the combination of several of my virtual instruments linked over time. I have found that works like Millennium Bugs are effective musically, but the underlying process is hidden from the audience. I wanted to create some clarity in these, so I designed this work to transition from simple interactions to increasingly more complex and more layered interactions over time. It was also written to help introduce Brian McWhorter to the interaction systems that I have been developing, and to help him develop an interactive language that he can use with these systems.

Millennium Bugs

Stephen David Beck

Millennium Bugs was originally written for William Ludwig as an improvisational work for bassoon and computer. The interactivity is on multiple levels and is layered such that it is hard to identify exactly which sound events generate the hyperinstrument’s sound. For this work, there are two distinct instruments. The first is a collection of 9 strange attractors, instruments that project the sound forward and (apparently) backward in time between two temporal points of attraction, sometimes as much as 10 seconds forward. The rate at which these temporal projections take place accelerates and decelerates over time, and the sounds are then granulated