

Thursday, 23.09.2010 | 7 pm
TU Berlin | WellenFeld H 104 | Straße des 17. Juni 135

{ SOUNDING CODE }
SuperCollider Symposium 2010 in Berlin

WFS Concert

Marcus Schmickler
Bonner Durchmusterung (2010)

Alberto de Campo
Reversing Pendulum Music (2010)
first performance

- - -

John Bischoff
Sidewalk Chatter (Redux) (2009/2010)
first performance, commissioned by { SOUNDING CODE }

Bjarni Gunnarsson / Miguel Negrão:
Fallacies (2010)
first performance

Florian Goltz, audio

free admission

www.supercollider2010.de
www.ak.tu-berlin.de/studio

Co-production of Electronic Music Studio TU Berlin | Audiocommunication Group and { SOUNDING CODE } SuperCollider Symposium 2010 in Berlin.

Wave Field Synthesis (WFS) is a new technique for sound spatialisation. It aims at a physical reconstruction of sound fields according to natural or artificial models by synthesizing the wave fronts of a defined virtual sound source with the superposition of wave fronts emitted by a closely spaced array of loudspeakers. Thus, the spatial configuration of those virtual sound sources does not depend on a certain listener position (sweet spot), as it is the case with traditional stereophonic techniques such as two channel stereo or surround. Moreover, while stereo setups allow the placement of sounds only on a line between the involved speakers and do not work well for lateral sources, WFS has no limitations concerning the placement of virtual sound sources outside and even inside of the reproduction array.

The WFS hall in the main building of the TU Berlin is equipped with an array of 832 loudspeakers. The system can synthesize up to 42 virtual sound sources located inside or outside the room. Audio is fed into the system in realtime, where the sound of one audio channel represents the sound of one virtual source. The position of the sources can be controlled in realtime using either the softwares GUI or OSC-messages sent from Supercollider or any other OSC-software.

Marcus Schmickler (Germany)
Bonner Durchmusterung (2010)

Alberto de Campo (sonification), Carsten Goertz (visualization)

The *Bonn Patternization* takes up the tradition of the relationship between astronomy and music and attempts to attain an epistemological exchange between both. How does one come from a complex series of numbers to an understanding of the objects or even to a consistent phenomenology of the cosmos, and what role could sound play in this? Conversely there is an appeal in deriving interesting acoustic events and musical structures from complex theoretical models of particle physics and astrophysics.

- 1 Reionization / Dark Ages
- 2 Solar eruptions
- 3 Eccentricity of the elliptical orbits of our solar system
- 4 Historical maps of the cosmic background radiation
- 5 The Bonn patternization
- 6 Gravitational models
- 7 Pulsars / neutron stars
- 8 Expansion / redshift / dark matter / dark energy
- 9 Gamma ray bursts
- 10 Quantum spectrums / multi-dimensionality

Commissioned by International Year of Astronomy and Deutscher Musikrat.

Marcus Schmickler is a composer and performer. He studied composition and electronic music and since then has worked in the most diverse fields of composed and improvised music. He has won numerous prizes and honours and is closely associated with the Cologne label a-Musik. As a composer along with his many works of electronic music, he works with the ensemble recherche, the Staatskapelle Weimar, the musikFabrik, the Paragon Ensemble, the Ensemble zeitkratzer and many more. As a musician he works with musicians such as John Tilbury, Thomas Lehn, Otomo Yoshihide, David Behrman, Claudio Bohorquez and Julee Cruise. His discography so far consists of over 50 titles, and he has been performing on the world's stages and at international festivals for years. He gives lectures and seminars and also works as an author in the field of theatre, radio plays and film.

Alberto de Campo (Austria/Germany)
Reversing Pendulum Music (2010)

Pendulum Music is the only process piece by Steve Reich: hanging microphones swing above loudspeakers; the resulting feedback changes with the time delays and distances. *Reversing Pendulum Music* turns the idea around: it uses static microphones, and simulates moving sound sources in the WFS system; overall system properties and simulation glitches will influence the sounding result, and the system allows for interventions, such as disturbing the movements by changing (simulated) gravity.

Alberto de Campo (b. 1964) studied classical composition and jazz guitar in Austria. As guest researcher and later research director at CREATE, UC Santa Barbara, he worked with Curtis Roads on experimental synthesis instruments, and wrote the tutorial for SuperCollider2. He taught at the IEM Graz, and at the Academy for Media and Arts (KHM) Cologne. There, long term collaborations began with Florian Hecker, earweego, the band powerbooks_unplugged, and realtime research. In 2004/2005, Alberto de Campo held the Edgard Varèse guest professorship for Electronic Music at TU Berlin. From 2005-2007, he was lead researcher in the SonEnvir project at IEM Graz, where an interdisciplinary team of scientists studied the applicability of sonification in diverse fields. With the team, de Campo wrote numerous publications, and organised a concert of sonifications of social data for the ICAD 2006 conference in London. In 2007 he became professor for Music Informatics at the Institute For Music And Media (IMM), Robert Schumann Music University Düsseldorf, and since 2009, he is Professor for Generative Art/Computational Art at the Institute for Time-based Media, Arts University Berlin (UdK).

John Bischoff (USA)
Sidewalk Chatter (Redux) (2009/2010)

Sidewalk Chatter (Redux) employs a STEIM “crackle box” as a sound-making input. As a performer plays the box by touching the circuit’s traces, a computer program analyses loudness peaks and frequency components and generates its own synthesized voices based on those patterns. This version, which was ported to SuperCollider from my original MaxMSP patch by Chad McKinney, adds spatial motions which track the diverse sonic contours within the sounds themselves. Many thanks to Chad for his help.

John Bischoff (b. 1949, San Francisco) has been active in the experimental electronic music scene in the San Francisco Bay Area for over 30 years as a composer, performer, and teacher. He is known for his solo constructions in real-time computer synthesis and the pioneering development of computer network music. His performances around the US include NEW MUSIC AMERICA festivals in 1981 (SF) and 1989 (NYC), Lampo (Chicago), and the Beyond Music Festival (LA). He has performed numerous times in Europe at such venues as the Festival d'Automne in Paris, Tesla in Berlin, Fylkingen in Stockholm, T-U-B-E in Munich, and Skolska 28 in Prague. He was a founding member of the League of Automatic Music Composers (1978) and he co-authored an article on the League's music that appears in "Foundations of Computer Music" (MIT Press 1985). He is also a founding member of the network band The Hub that recently released a 3-CD set titled “Boundary Layer” on the Tzadik label. In 1999 he received an award from the Foundation for Contemporary Arts (NYC) in recognition of his music. Recordings of his work are available on Artifact, 23Five, Tzadik, and Lovely Music. He is currently an Associate Professor of Music at Mills College in Oakland, California.

**Bjarni Gunnarsson (Iceland / Netherlands) &
Miguel Negrão (Portugal / Netherlands)
Fallacies (2010)**

Fallacies is a collaboration piece between Bjarni Gunnarsson and Miguel Negrão. It concerns the real-time interaction and relationships between gradually evolving sine wave drones and dense, dynamic microsounds. The idea is a journey in an indeterminate direction: a global movement carried by an intense current of enfolding sound-masses that get disturbed and affected by streams of high-density subatomic events. *Fallacies* is a multichannel creation to be performed live on the WFS system.

Bjarni Gunnarsson is an Icelandic composer born in 1980 in Reykjavík. As a member of the electronic music duo Einóma, he has released numerous LPs, EPs, compilation tracks and remixes on labels like Vertical Form, Thule, Uni:form, Spezial Material, Tra- chanik and lmalc. Bjarni has performed his music in concerts and festivals in Berlin and Hamburg Germany, London and Manchester England, Den Haag and Utrecht Holland, Paris and Caen France, Brussels Belgium, Copenhagen Denmark, Athens Greece, Leitrim Ireland as well as in various places in Iceland. Major in computer science, Bjarni studied composition with Gerard Pape, Trevor Wishart, Agostino Di Scipio and Curtis Roads at the CCMIX music center in Paris, and is currently attending the Sonology course at the Royal Conservatory of music in Den Haag. A collection of his works can be found on the CD "Safn 2006-2009" which was released by the Belgium label Lamadameaveclechien in January 2010. Bjarni has recently completed a piece for the WFS system in Leiden.

Miguel Negrão is a sound artist born in 1981 in Lisbon, Portugal. Under the alias ZLB he has been active with Drone and Ambient music projects. He has presented pieces for the Wave Field System of the Game of Life foundation, Acousmonium of the GRM and in other concerts in Portugal, Spain and Netherlands. With a Bachelors in Applied Mathematics, he has recently finished a Masters at the Sonology Institute in the Den Haag Conservatory on the topic of Strategies in diffuse spatialization.