

institut für elektronische musik und akustik



Open CUBE

Interactive Electronics



Donnerstag, 14.04.2016, 19:30 Uhr, IEM CUBE, Inffeldgasse 10/3, 8010 Graz

In Zusammenarbeit mit der Gesellschaft zur Förderung von Elektronischer Musik und Akustik – GesFEMA

Stelios Manousakis

L'Hypothèse de l'Atome Primitif Sonore (2010)
for digital feedback with live electronics

Live electronics: Davide Gagliardi

L'Hypothèse de l'Atome Primitif Sonore ('The Primeval Sonic Atom Hypothesis') is named after a cosmological theory by Georges Henri Joseph Édouard Lemaître, a Belgian physicist, astronomer and priest. '*L'Hypothèse de l'Atome Primitif*' was presented in 1931 and proposed that the Universe is expanding from a single point containing extreme amounts of energy. It was mockingly dubbed the 'Big Bang' theory. This is the conceptual starting point for the piece, its sonorities, and the sound synthesis method employed. The instrument is a cybernetic system based on digital feedback, set in motion by a single binary digit: the primeval atom of digital technology. The piece begins with the bursting of a highly condensed core of sonic energy, which after a period of turbulence and constant transformation creates a plethora of sonic worlds: some slow and calm, others fast, oscillating, or in chaotic states - but all constantly breeding change and transformation. The performer zooms in and out of these worlds, eavesdropping on sonic galaxies from the cosmic to the quantum levels and in-between. The work is an open composition, meant to take its final shape through live performance, creating an immersive sonic experience that fluctuates between varying degrees of tension and release.

Dario Sanfilippo

LIES (distance/incidence) 1.0 (2012)
for analog and digital audio feedback network

Live electronics: Artemi - Maria Gioti

LIES (distance/incidence) 1.0 is a human-machine interaction performance implementing hybrid analog-digital feedback delay networks with nonlinear DSP. The signal from two microphones is captured, processed through the network, reproduced through loudspeakers, and finally recaptured by the microphones, recursively. Microphones, in this work, are the interface between human and machine, as the performer will be using them to explore different areas of the environment, hence different acoustical responses, in order to support or contrast the behaviours of the system according to a relational score.

Artemi – Maria Gioti

Magnetic fields (2016)

for electromagnetically augmented piano

Piano: Alexandra Radoulova

The electromagnetically augmented piano is an autonomous, self-observing system consisting of a microphone and various computer-controlled electromagnets and solenoids that are placed inside the piano soundboard. Through the microphone the system is able to sense its immediate environment and detect any additional input to that generated by the system itself. When additional (human) input is detected, the system adapts its output correspondingly. The relationship between the performer and the computer system is governed by forces of attraction and repulsion and is based on mutual adaptation to each other's changing behaviour. All sounds produced in the piece – including those generated by the computer – are strictly acoustic, the electromagnets being used to actuate the strings only.

David Pirrò

Useless Machine #7 (2016)

feedback system, live electronics

Live electronics: David Pirrò

Sound captured by the eight microphones scattered in space is injected into a dynamical system consisting of interconnected moving elements. The movements of these objects are audified and projected back into the venue by loudspeakers, and again recaptured by the microphone array. The system is tightly connected to the environment, it reacts to every small acoustic variation recomposing it in space and time and it interacts with itself, exposing its internal behaviour.

The performance consists of an exploration of the space spanned by different behaviour qualities emerging by slight changes of the rules governing the dynamical system.

Open CUBE – Kalendarium

21.04.2016 18h00 - CUBE Lecture mit Doron Sadjja - "Mapping the Perceptual Landscape"

19h00 - Open CUBE - "The Gentle Caress of a Stone Wall"

07.06.2016 20h00 - Open CUBE mit Joel Diegert

Details zur Open CUBE Konzertreihe unter:

<http://iem.kug.ac.at/veranstaltungen/open-cube.html>