

molecule

interactive installation

by Joanna Hoffmann and Wolfgang Spahn

2010



„There is nothing apart from atoms and empty space: the rest is an opinion“  
Democritus

The motto of the installation recalls the tradition of early Greek philosophy that initiated the everlasting search for the fundamental principle and essence of the nature, physis, the world. Today we know that atoms are born in nuclear reactions of stars, join in molecules and constitute the matter of the world that we belong to. These „extremely minute particles“ are constantly interacting with each other thus making everything that exists interdependent - part of a much larger and complex system.



This is optimistic news that at least on atomic level, inscribed in the cosmic recycling, we are practically immortal. The secret remains: what makes us alive?

The inspiration for the installation came from the study of the structure of a protein molecule. This extremely dynamic and diverse compound is responsible for all cellular processes from metabolism to DNA replication. Known as the “basic brick of life”, it is mainly composed of carbon, oxygen, hydrogen and nitrogen – the most primary elements in the cosmic space.

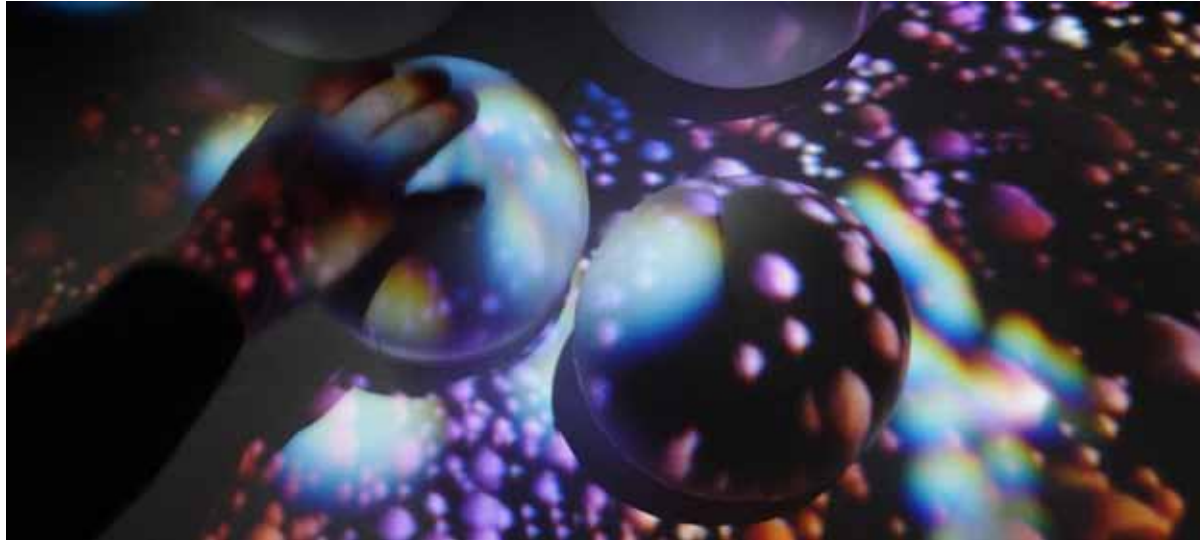
Life is considered as an integral component of the Universe. However it is extremely context-dependent thus cannot be treated separately from the environment in which it has originated and evolved.

The installation brings out relations between our inner and outer environments, between micro and macro scales, animated and non animated, scientific and imaginative, providing the viewer with a contemplative and playful experience.

## Description:

The installation consists of 3 overlapping projections projected on the floor: a 3D interactive model of a protein structure, live programmed video compositions and live programmed shadows of 5 white balls recorded by an infrared camera.

These 5 white balls (tangible representations of atoms) are scattered around the room and serve as interfaces. Each ball contains a sensor measuring its movement, and a transmitter sending signals to one of the computers. The movement of each ball influences the flow of the 3D model of a protein. If more balls are set in motion the course of the projected molecule becomes the sum of all signals. In this way a few participants can act together to explore the complexity and alterability of molecular structure. The 3D model of a protein merges with a constantly changing sequence of video pieces referring to the fundamental elements and states of matter.

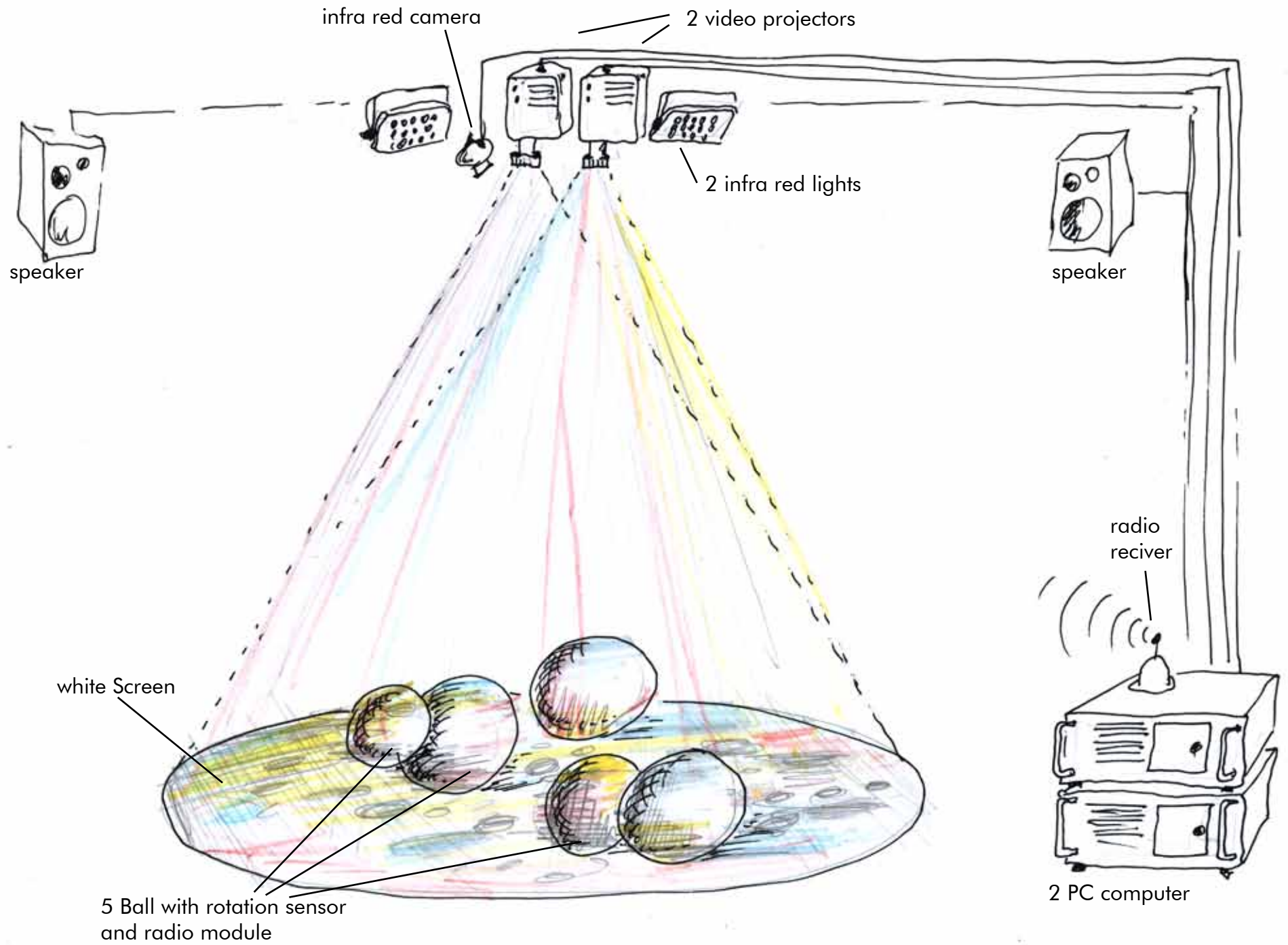


Recordings of the balls, programmed and united with the other projections, introduce confusion between reality and its representation and challenge viewers' sense of spatial and temporal dimensions.

The evocative and live visual composition has a specially composed and programmed soundscape based on recordings in big urban agglomerations, and generated sounds that help refer to existence, continuity, movement, interchange, and communication. The flow of the sounds reflect our daily activities and varying presence - reminding us that we, like atoms, exist and interact in many dynamic micro and macro systems.

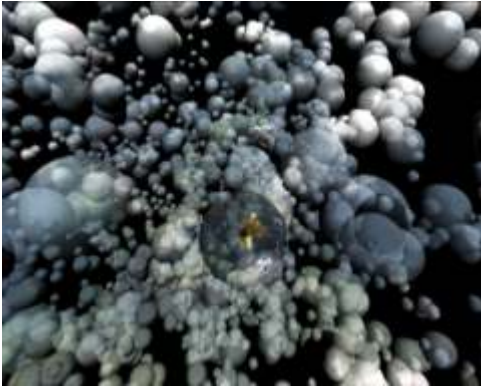
The installation has an open structure without definite beginning and end. The interaction alters the constant flow and the view of 3D model that, in fact can never be perceived in its entirety. The ever-changing visual and sonic experience corresponds with the live performance of the molecule, giving the viewer a unique, unrepeatable, and personal experience.

Sketch:

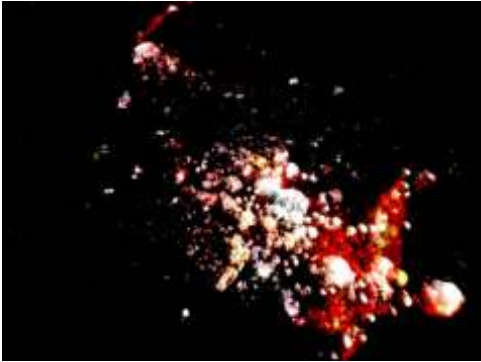


Stills from the videos

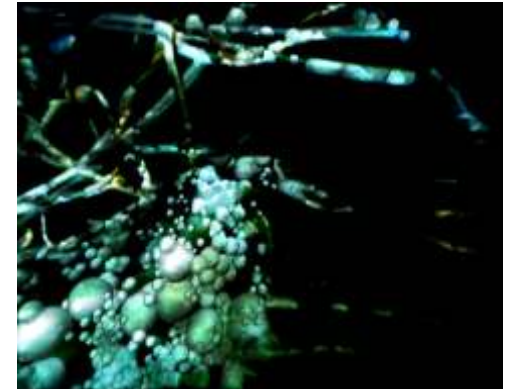
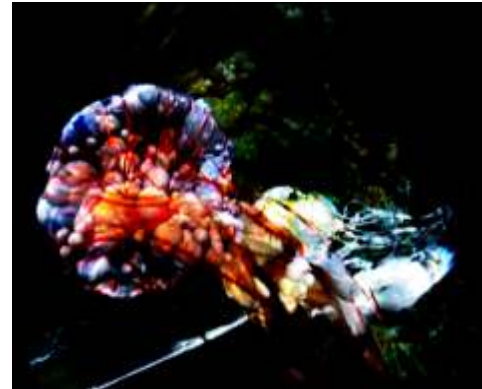
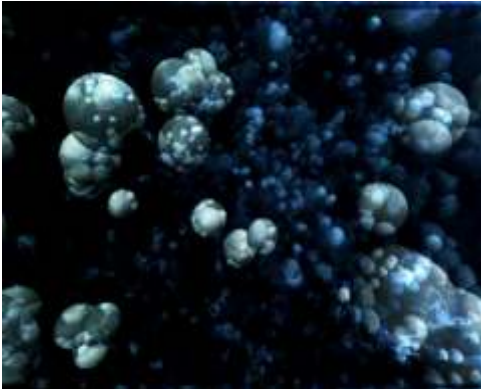
Air:



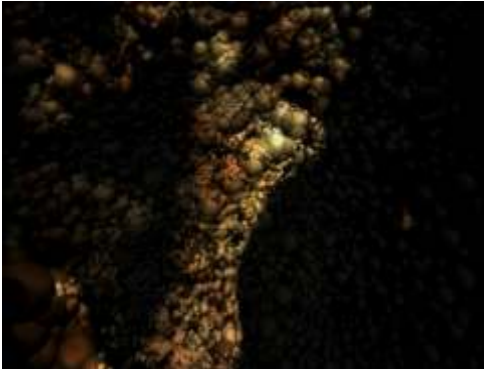
Fire:



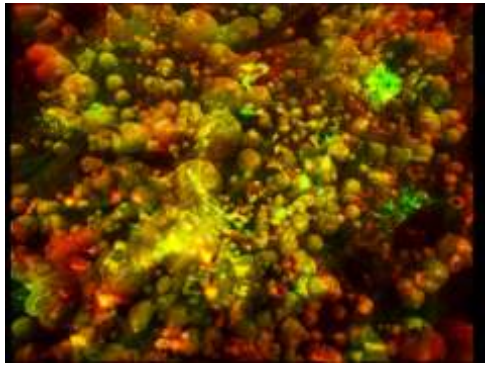
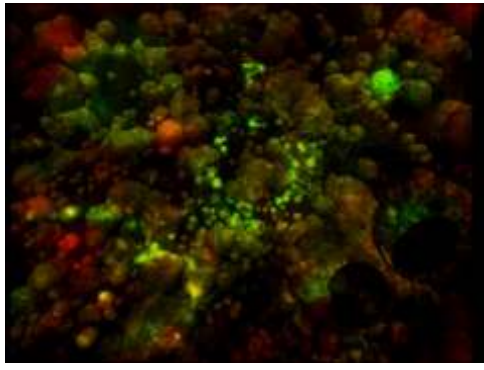
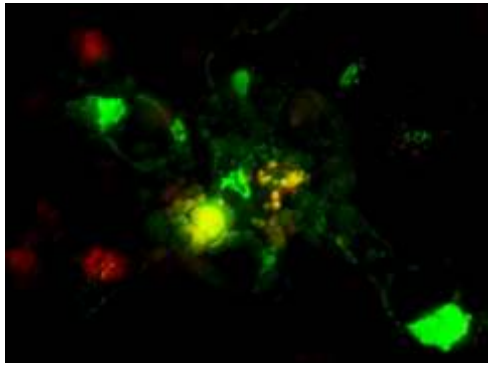
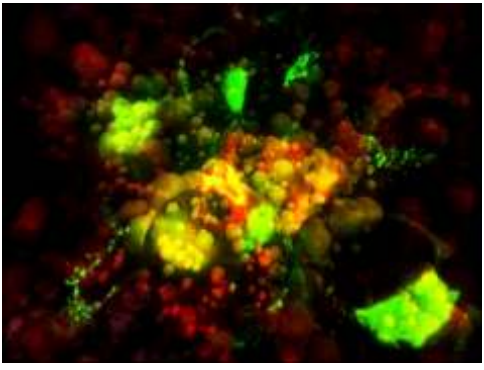
Water:



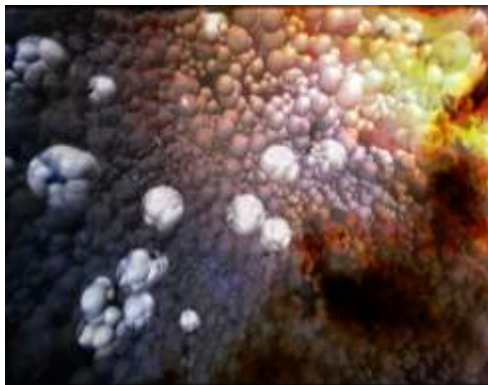
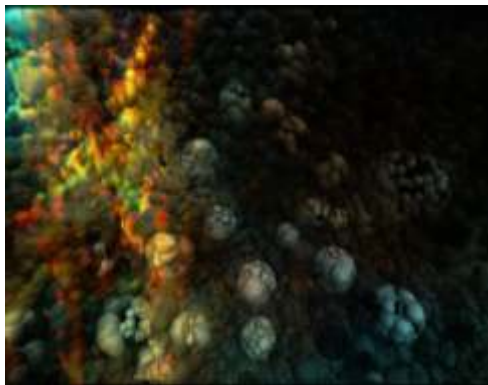
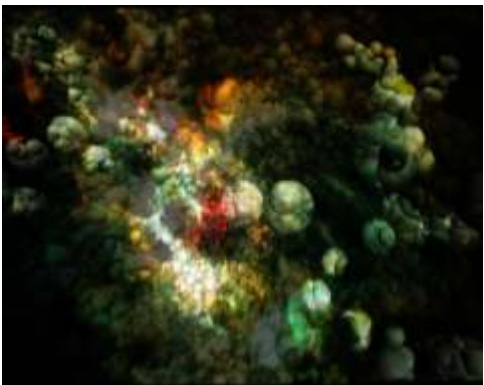
Earth:



Cellular:



Cosmic



Joanna Hoffmann

Born 68 in Poznan, Poland; lives in Berlin;  
1987-92 studied at the Academy of Fine Arts in Poznan, Poland, MA with distinction  
2000 – doctor degree at AFA, Dept of Multimedia Communication  
2005 – habilitation of doctor degree, AFA  
Professor at the Academy of Fine Arts in Poznan, Poland.

Author of 25 solo shows among others at:  
the Centre for Contemporary Art in Warsaw (PL), Kingsgate Gallery in London (UK), Commercial Gallery in London (UK), Potocka Gallery in Cracow (PL); Labyrinth State Gallery in Lublin (PL);, XX1 Gallery Warsaw (PL); OBF Gallery, Monterrey (Mexico); Bereznitsky Gallery in Berlin (DE)

Participant of over 150 group exhibitions and festivals among others:  
„Voices from the waters” International Film Festival, Bangalore (IN) 2009, Transmediale 09 Festival for Media Art, Haus der Kulturen der Welt Berlin (DE) 2009, WRO International Media Festival, Wroclaw (PL) 2005/07/09, “Video Brasil”, Sao Paolo, (2007), “Time of Stars. Innovations in the Universe”, European Patent Office, Berlin (DE), 2006, „Temporary Cities”, National Centre for Contemporary Arts, Moscow, (RU); “Cyberonica” Dana Centre/Science Museum in London, UK (2005); “Lightness of Things” (2003), “Conceptual reflection in Polish Art” (1999), Center for Contemporary Art in Warsaw (PL)

recent international symposia include::  
„Art+Communication.(„Energy”)” International Festival for New Media Culture, RIXC, The Centre for New Media Culture, Riga, Latvia (2009), ISEA International Symposium of Electronic Arts, Singapore, (2008), „Impact V”, Kumu Contemporary Art Museum, Tallin Estonia (2007), “Interfaces of Art”, Academy of Fine Arts in Cracow, Poland (2007), - “Mutamorphosis. Challenging Art & Science”, organized by Leonardo / ISAS (International Association for Art. & Science) and CIANT (International Center ) in Prague, Czech Republic (2007)

International residencies among others: CEMA Center for Experimental Media Art/ Srishty College of Art, Design and Technology in cooperation with National Centre for Biological Sciences in Bangalore India (2009), ; KHOJ Delhi Art & Science Residency in collaboration with International Centre for Genetic Engineering and Biotechnology in New Delhi India (2007), fellowship at the Academy of Film and Television in Potsdam, Germany (2005/6), KHOJ Kolkata (2006), Art Omi, Ghent-New York, USA 2004; KulturKontakt Austria (1998); Art Residency at the Spike Island Artspace, Bristol, U.K. (1998)

Awards among others:  
artistic stipends of Polish Minister of Culture in 2008 & 2004  
1st prize in the Polish edition of the art competition „2007-a very spatial year” organized by Europlanet. and the Space Research Centre of Polish Academy of Science.



Wolfgang Spahn

Born 1970 in Ingolstadt.

Studies of mathematic and sociologic in Regensburg and in Berlin

1994 – 1997 manager and member in „Kunst und Kulturverein Schokoladen“

1997 – 2000 member in „Kunsthau Tacheles“

1998 – 2000 head of the screen printing studio in the “Kunsthau Tacheles”

2000 – 2002 member in „Kunsthau Meinblau“

Works and lives in Berlin.

Solo Exebitions (selection):

09/09 “Asymmetische Systeme II: Eis Sprung” Galerie Ardes, Berlin

11/05 “Klima - Wandler ...und wo sind die Myzelien” Galerie 35, Berlin

11/03 “Himmel und Hölle”, Galerie 35, Berlin

01/02 “Wir bau’n uns einen Führerbunker”, Galerie 35, Berlin

12/01 “buy.onic”, Hot Pixel Gallery, Berlin

Exhibitions (selection):

04/10 “10 Biennale der Miniaturkunst” Belgrad, (Serbia)

01/10 “ubiquitous oscillations” General Public, Berlin

12/09 “Born Digital” Toonkammer, Utrecht, (Holland)

11/09 “PIKSEL 09” Lydgalleriet, Bergen, (Norwegen)

10/09 “Strictly Berlin 09” Concent Art, Berlin

08/09 “Tiefklang ” Internationales Klangkunstfest, Berlin

05/09 “Licht und Schatten” Schloss Rheinsberg, Rheinsberg

05/09 “The Art of the Overhead” Malmö, Schweden

11/08 “farb\_laut” Internationales Klangkunstfest, Galerie Nord, Berlin

04/08 „Between Fiction and Fact, strictly Berlin“ Galerie der Künste, Berlin

04/06 “Figures of Motion” Schloss Plüschow, Schwerin

06/05 “International Biennale of Contemporary Art”, National Gallery, Prag

11/05 “Klima - Wandler ...und wo sind die Myzelien” Galerie 35, Berlin

05/04 “Politische Ästhetik” Takt Kunstraum, Berlin

12/03 “Muslim Milliqi-Prize”, The Kosovo Art Gallery, Pristina, (Kosovo)

11/03 “Himmel und Hölle”, Galerie 35, Berlin

10/02 “Arte in Contemporanea”, Piazza Grande, Modena, (Italien)

08/02 “Reservoirs VI”, Wasserspeicher Prenzlauer Berg, Berlin

04/02 “Hicetnunc”, Villa Manin, San Vito, (Italien)

Dr Dave Lawrence

conducting post doctoral research and teaching in digital creativity/interactive design at Middlesex University, London UK

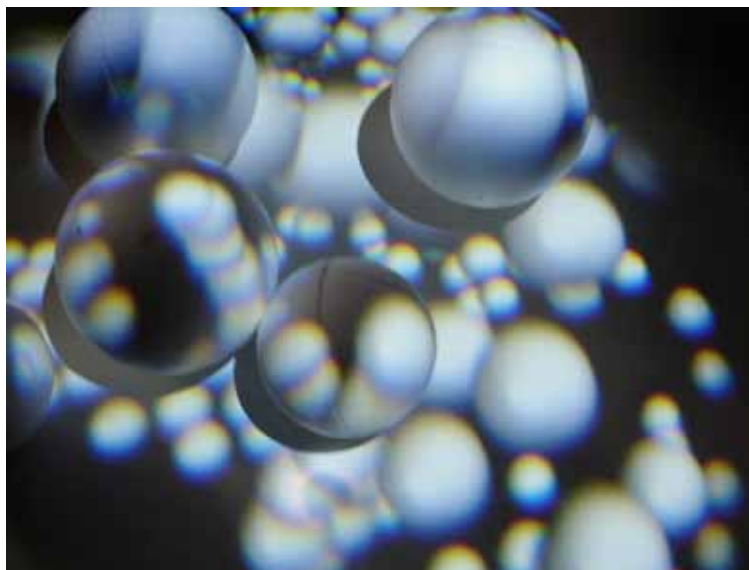
sound artist, composer, performer, and researcher - with special interests in - time & place, analogue/digital worlds, the sounds and science of life, forming instruments, (free) improvisation, performance, exploring interaction, and inner & outer worlds. Composition practice adopts 'meticulous serendipity' and often uses multiple layers of sounds - sampled (in 'soundabout' walks - urban, rural, international), generated, performed, improvised, sensed, synthesised, and/or digitally processed.

Recent/ongoing projects include: "Molecule" (collaboration with Joanna Hoffmann & Wolfgang Spahn), "Hindustan" (collaborative arts project centred on West Bengal, India, 2010), e-Mobilart (international collaborative arts project exhibiting in Thessaloniki Greece & Katowice Poland, 2009), "Secret Life" (Transmediale, Berlin 2009; collaboration with Joanna Hoffmann), "Somniloquy" (a sonic drama, Brighton 2008, Fiorenzo Palermo), 'Stardust Ruins' (Liliane Lijn, Rifleman Gallery London Summer 08), 'Laranjas' (Portugal, June 08, Ines Amado), 'Soundings from the Estuary' (London, June 08, Frank Watson), 'Sphere & Cross' (NCCA, Moscow Dec 06, Sasha Frolova)

2011: international artist residency awarded, KulttuuriKauppila, Finland

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