

SONIC EXPERIMENTS TELEMATICS

#telematicart

#collaborativecreativity

#networkedmusic-
performances

Live-Performances, Installationen, Symposium und Workshop



13.-14. DEZEMBER'19



zkm karlsruhe

Bridging geographical distances across artistic disciplines and introduction of new spaces for art outside the art establishment were major themes from Mail Art to Telematic Art to net.art.

In the early oeuvre of the media artist Nam June Paik there are action-packed compositions of New Music such as ***Do it yourself***, for which the artist in the early 1960's gave the instruction for the left hand of Bach's first fugue to be played in San Francisco, simultaneously with the right hand in Shanghai, while the complete performance was to be broadcasted across the Pacific. What would not have been technologically feasible at the time can be reexamined and reproduced in today's age.

Telematics refers to communication technologies which allow for effortless sending and receiving of information, linking distant places or stations between each other. Etymologically, the term telematics is derived from the word "Telos", which means "distance" in Greek. Though this term is rarely used in modern post-internet age, it will be embraced in the context of ***Sonic Experiments: Telematics*** in order to use historical (media-artistic) positions and attitudes as a starting point for a current discourse in the field of contemporary music and sound art.

How is today's generation of artists dealing with networking possibilities of the new media and what desiderata do the artists pursue?

What interests could a composer have in working with telematic technologies or opening a composition to collaborative creative processes?

From artistic-musical experiments in the field of multi-room real-time interaction via an in-house audio network such as Fiber Jelly to telematic performances such as ***Prométhée Numérique***—Atau Tanaka's participatory media artwork for radio and internet—up to participatory performances for concert visitors' smart devices: As a center for art and media, the ZKM has contributed to establishing innovative platforms for artistic networking and collaborative creativity both structurally and within the framework of artistic research and production since the late 1980s.

With ***Sonic Experiments: Telematics*** the ZKM aims to bring together media artists, composers and cultural creators in order to approach the state-of-the-art in the field of telematic sound art projects, networked musical performances and collaborative creativity discursively and with the presentation of artistic works.

PROGRAMM

FR 13.—SA 14.12.2019

Admission free.
The conference
language is English.

Fr 13.12.

| | | |
|-------|---------|---|
| 20:00 | Concert | Location: Cube <i>Atlas, a Sound Cartography of Europe</i> |
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Sa 14.12.

| | | |
|-------------|----------------------|--|
| 10:00–13:00 | Workshop | Location: Medienwerkstatt <i>Telematic Hacking</i> with John Richards |
| 13:00–16:00 | Symposium | Location: Lecture Hall |
| 13:00 | Elisabeth Zimmermann | <i>on air-on line-on site. Networked Radioart</i> |
| 14:00 | Luka Frelih | <i>On the Internet, no one can hear you are a dog</i> |
| 14:30 | John Richards | <i>Telematic Hacking</i> |
| 15:00 | Domenico Cipriani | <i>Network distributed Open Sound Control</i> |
| 15:30 | Kosmas Giannoutakis | <i>Innovating the electroacoustic music composition practice: the collaborative framework of human and algorithmic agency CECIA</i> |
| 16:00–18:00 | Panel Discussion | Location: Lecture Hall with Elisabeth Zimmermann, Luka Frelih, Leigh Landy |
| 20:00 | Concert | Location: Cube World Premiere of <i>CECIA (Collaborative Electro-acoustic Composition with Intelligent Agents)</i> Artemi-Maria Gioti, Kosmas Giannoutakis, Mariam Gviniashvili, Panayiotis Kokoras, Martyna Kosecka, Erik Nyström & Juan Carlos Vasquez Live-Performances of Container Doxa & Domenico Cipriani Subsequent: DJ-Sets on the Music Balcony |

Fr 13.–Sa 14.12.

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| | Installations | Location: kleines Studio Multimedia installation <i>Neigungen</i> by Lasse-Marc Riek & Tobias Schmitt Location: in front of Cube Virtual pavilion <i>return void</i> ; curated by Damian T. Dziwis in the context of <i>the wrong biennale</i> . |
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Fr 13.12.

COMMUNICONCERT

Location:
Cube

| | |
|---|---|
| 20:00 | <i>Atlas, a Sound Cartography of Europe</i> |
| Atlas is the creation of a subjective map, a collective work from all aspects. The sound matter was collected in advance of the performance, in three venues in Paris, Karlsruhe and Athens. Three composers and a video-maker worked together to exploit these geo-localised sources and mix them to their own electronics. The process resulted in a real-time performance, simultaneously broadcast in these three cities, in which the artists interact together, dialogue with or interrupt the flows arriving from elsewhere. | |
| Music | Carmine-Emanuele Cella, Dimitris Kamarotos, Valerio Tricoli |
| Video | Marina Gioti |
| Casting | |
| Paris | Emanuele Carmine Cella (electronics) |
| | Minh-Tâm Nguyen (percussions) |
| Athens | Dimitris Kamarotos (electronics) |
| Karlsruhe | Valerio Tricoli (fixed media 8 channels & Revox B77 stereo tape machine) |
| ZKM team | Benjamin Miller (sound direction) Moritz Büchner (video management) Andy Koch, Christina Zartmann (camera) Hans Gass (lighting and event technology) |
| Film shooting team | |
| Cameraman | Ioannis Kanakis |
| Sound Recordists | Oscar Ferran (Paris), Dimitris Kamarotos (Athens), Valerio Tricoli (Karlsruhe) |
| Co-commissioned & co-produced by | IRCAM-Centre Pompidou, Paris, Onassis STEGI, Athens, ZKM Center for Art and Media, Karlsruhe |
| With the support of | the Interfaces network, supported by the European Union's Creative Europe program |

Within the framework of

Co-funded by the
Creative Europe Programme
of the European UnionONASSIS
STEGI

Fr 13.12.

COMMUNICERT

Location:

Cube

IRCAM

IRCAM the Institute for Research and Coordination in Acoustics/Music, is one of the world's largest public research centers dedicated to both musical expression and scientific research. A unique location where artistic sensibilities collide with scientific and technological innovation directed by Frank Madlener, bringing together over 160 people. IRCAM's three principal activities—creation, research, transmission—are visible in IRCAM's Parisian concert season, in productions throughout France and abroad, in a new rendezvous created in June 2012, ManiFeste, that combines an international festival with a multidisciplinary academy.

Founded by Pierre Boulez, IRCAM, a non-profit making association with recognized public utility, is associated with the Centre Pompidou, under the aegis of the French Ministry of Culture and Communication. IRCAM and the CNRS are associated in the framework of the STMS Joint Research lab (Sciences et technologies de la musique et du son—UMR 9912) and were joined by the Pierre et Marie Curie University (UPMC) in 2010 and in the framework of the project team MuTant, INRIA.

Onassis Stegi

Onassis Stegi is the place where contemporary culture meets aesthetics and science. The place where courageous, restless, daring Greek artists find the means to showcase their work; the place where international collaborations are nurtured; the stage on which the boundaries between science, art, society, education, learning and politics are renegotiated. Above all, Onassis Stegi is the space where questions are asked which feed the mind and spirit, which query givens, with this ideal ultimate goal: generating actions, interventions and ideas which shape and shake society. The Onassis Stegi building hosts theatrical and musical productions, film screenings, art and digital shows, but its activities and central concept extend beyond the four walls of the center on Syngrou Avenue.

Sa 14.12.

WORKSHOP

Location:

Medienwerkstatt

10:00–13:00

Telematic Hacking with John Richards

Hacking and performing with a networked device offers new ways to make music. In the case of a Wi-Fi network, it could be manipulating data packages and how such packages are sent and received with an interest in the sonification of this data or router behaviour. Such issues as latency in networked performance are not to be seen as a detriment, but instead as part of the material nature of the network that offers unique possibilities for collective group action/performance. Join Dirty Electronics to build a mini network sniffer and sound generator. Raw Wi-Fi data becomes the starting point for electronic sound. The network sniffer instrument will be based on the low-cost hackable ESP8266 Wi-Fi module. Code, analogue electronics, ugly construction techniques, and group performance will be explored.

Sat 14.12.

SYMMETRICAL SYMPOSIUM

Location:
Lecture Hall

13:00

Elisabeth Zimmermann ***on air-on line-on site. Networked Radioart***

In 1987, KUNSTRADIO a weekly radio art program on Österreich 1, the cultural channel of Austrian National Radio, ORF was founded by the journalist and art critic Heidi Grundmann. Conceived as a space for radio art – i.e. an art that reflects the radio medium itself. In 1995 a group of artists created KUNSTRADIO ON LINE (<http://kunstradio.at>) as a means of announcing and archiving the weekly program, as an additional site of radio art and as archive. In 1996 KUNSTRADIO ON LINE started to stream not only the weekly program-slot but also the occasionally very long or even potentially unending on line elements of innovative complex networked radio-art projects which soon started to be named ***on air-on line-on site*** to characterize the complex context they were created for and unfolded in. In some at an astonishing number of real and virtual networked nodes around the world and with the participation of many artists. The relatively easy access to possibilities to streaming technologies resulted in a shift from performance- to installation- oriented work.

14:00

Luka Frelih ***On the Internet, no one can hear you are a dog***

In this talk, Frelih will present a personal history of art and artists faced with an explosively growing new open medium: the internet in the second half of the 1990s. A diverse network of people and initiatives came together that fueled numerous exchanges of ideas and critiques, tight or loose collaborations, early experiments with the medium and its technologies, trying out new formats and seeking to reach like minds and audiences beyond their local communities.

14:30

John Richards ***Network Angel***

The workshop and participatory event have become core to music for DIY electronics as well as providing a means to disseminate new work. With this, the idea of community becomes increasingly important. Furthermore, face-to-face activities and live performance are the norm; so information of sorts is passed on in the flesh, in-situ, at a certain time and place. Physical, corporal experiences, synchronous activity. Music for DIY electronics also eschews expensive and elitist systems, and places an onus on readily available materials. Do it cheap, for the many, not the few. Part of the rhetoric of music for DIY electronic music involves being present, which often involves travelling to a location. Conversely, telematic music is often concerned with networks, remote locations, high-speed

Sat 14.12.

SYMMETRICAL SYMPOSIUM

Location:
Lecture Hall

Internet connections, and dis-embodied sound/performance. A conundrum then arises when the ideas of telematic music—the transfer of information over telecommunications, most commonly the Internet—and music for DIY electronics and hacking are put together.

This talk presents a series of initiatives that have set out to question this conundrum within the framework of the EU Interfaces project. The development of a mini Wi-Fi network sniffer/instrument based on the low-cost ESP8266 System on a Chip (SoC), is seen as a starting point to explore telematic music on both a material and community level that also embraces a DIY spirit.

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| 15:00 | Domenico Cipriani <i>Network distributed Open Sound Control</i> |
| By the means of the WebSocket protocol, as a transportation tool for Open Sound Control (OSC) messages, it is possible to allow full-duplex communication between a live performer and its listeners, connected to a dedicated single-page application (SPA) with their mobile devices. Cipriani will illustrate how he built a communication infrastructure between the Kyma sound design environment and an online server developed with Node.js which hosts a p5.js sketch. He will further describe the terminal Javascript program which converts the WebSocket messages into OSC data and how this data is handled by Kyma through the OSC Tools developed by Cristian Vogel during his 2016 residency at ZKM Institute for Music and Acoustics. | |

| | |
|---|---|
| 15:30 | Kosmas Giannoutakis <i>Innovating the electroacoustic music composition practice: the collaborative framework of human and algorithmic agency CECIA</i> |
| The experimental project CECIA (Collaborative Electroacoustic Composition with Intelligent Agents) integrates the creative agency of 5 composers and Machine Learning algorithms, in order to create a composition of electroacoustic music. The applied framework makes possible a systematic decentralized workflow and is based on synchronous activity between the agents which interact in long time-scales. The ML algorithms learn some features from the aesthetic preferences of the composers and facilitate the creation of new material while the composers exchange multi-modal information following democratic procedures. In this presentation, a statistical analysis of the process will show findings about the collaborative dynamics and preliminary conclusions, that reflect the research questions of the project, will be drawn. | |

Sat 14.12.

SYMMETRICAL SYMPOSIUM

Location:
Lecture Hall

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|--|---|--|
| 16:00–18:00 | Panel Discussion with Luka Frelih, Leigh Landy & Elisabeth Zimmermann, moderated by Yannick Hofmann | |
| "Art within the telematic culture is so fundamentally different from the art of the past as to constitute an entirely new field of creative endeavour." | Roy Ascott | |
| <p>In order to circumnavigate the art scene and its paradigms, to open up free spaces outside the institutionalized art establishment and to be able to reach participants directly by the shortest possible route, artists such as Robert Adrian X, Hank Bull and Roy Ascott organized the first major wave of global telecommunications projects from the late seventies onwards and contributed to the establishment of a temporary artistic telecommunications infrastructure. As part of these pioneering telematic art projects, participating stations were connected via slow-scan cameras and receivers, fax machines, telephones and ARTEX*, and image- and text-based content was exchanged and collaboratively further developed. Also due to commercialization and the mass distribution of telematic technology used in communication art, some of the pioneers have declared the implementation of telematic art projects obsolete since the nineties. Thirty years later, permanent global connectedness through technology is the normal state, and the miniaturization of networked technologies such as computers and smart devices has changed the technical prerequisites for telematic art projects.</p> | | |
| <p>What artistic desiderata are behind it when artists and composers work in this field today?</p> <p>This panel discussion will examine the state of the art in networked artistic production and compare the artistic desiderata of the pioneers with the latest positions in networked sound art and network music.</p> | | |

*ARTEX (Artist's Electronic Exchange Network, 1980–1990) was a computer communication system set up in the early 1980s by I. P. Sharp in collaboration with Robert Adrian X and Bill Bartlett.

Sat 14.12.
20:00

C O M M U N I C A T I O N S C E R T

Location:
Cube

CECIA project artistic outcome electroacoustic music composition

This piece of electroacoustic music is the result of an intense collaboration between the composers Panayiotis Kokoras, Mariam Gviniashvili, Juan Carlos Vasquez, Martyna Kosecka, Erik Nyström and machine learning algorithms. During a period of 4 months, they have composed/generated material of a duration of more than 2 hours, which has been crystallized into a 7-minute composition. The title and program note of this piece is also subject to this collaboration and will be announced at the premiere.

Container Doxa Performance

Container Doxa is a modular constellation for musical, conceptual and other endeavours. As such, Doxa is creating a space in which club electronica easily flirts with free improvisation, and where political commentary seamlessly steers into glowing psychedelia. Developing its own interaction protocol, the band evades any idiomatic confinements. It is nevertheless maintaining a cohesive sonic momentum, with neon lights, palm trees and Mao as some of the anchor points. Yet another entry point is this one: a dystopian disco soundtrack for the Stack.

*Domenico Cipriani **underControl:** **distributing mobile commands over the web***

underControl is a minimalist dance music performance written and executed with Symbolic Sound Kyma which encourages the active interaction of the listeners through touch gestures on their mobile device.

Listeners must connect to <http://socketscontrol.herokuapp.com> and move with their fingers geometric shapes on their screen. The X/Y position of the shape will control a coupled pair of sound parameters as pitch/pan/level of percussive sounds, bass line detuning, cutoff frequency/delay time of auxiliary effects. An information on the screen of the mobile devices will inform the listeners about which sound (and which parameters) they are controlling; every mobile device will be assigned to a different set of controls. The interaction of the participants with the sound events will be visualised on a projection by the means of a processing sketch.

Fr 13.–
Sa 14.12.

INSTALLATION

Lasse-Marc Riek & Tobias Schmitt ***Neigungen***
Multi-channel audio-video installation with
audience interaction on the theme of darknet

Based on the production ***Darknet Poetry*** for Deutschlandradio Kultur (premiered 06.07.2018) and the preceding intensive preoccupation with the theme Darknet/Clearnet, Riek & Schmitt developed the multimedia installation ***Neigungen (Tendencies)***. Lasse-Marc Riek and Tobias Schmitt have been researching darknet for several years now. The duo usually works as ***Waldlust*** with field recordings of the place of performance. True to this method, they work with found material from the parallel world of the Internet. The darknet is a synonym for evil and the bizarre in the media, but in times of social bots, whistleblowing, Snowden, the NSA and censorship in authoritarian states that are decisive for elections, one must not stigmatize encrypted free access to the Internet. In this work, Riek and Schmitt contextualize and contrast the many sides of the virtual grey zone.

The transitions between inside and outside play a central role for the two media artists: How does the transfer between the virtual and the physical world work?

How does a normative corrective transform the inside into a façade?
Where does it fall when the corrective no longer works?

The participants in the installation walk through and hear a darkened room, which is played by a 6-channel audio system and projection screens. Via an onion page developed for the installation, the users access a self-hosted server, which is only accessible via the darknet with a gate browser. There is a pool of sounded text fragments. Text-to-speech voices (text which is translated into speech via speech synthesis systems) are playable for the visitors and are selected as recordings on the multi-channel system. The recordings are then embedded in sound landscapes that the artists have generated from the darknet using techniques such as making images audible and cryptographically processed texts. In addition, the software analyses and visualizes the decision-making behaviour of the users in real time and thus displays their situational inclinations numerically.

The participants get an unbiased and playful introduction to the topic of darknet. By using their own telecommunication devices, the first hurdle of the unfamiliar is cleared. Through the individual and playable access, the users make a creative and compositional contribution to the installation and find themselves in it.

Fr 13.–
Sa 14.12.

INSTALLATIONNS

Damian T. Dziwis ***return void;***

A traveling exhibition for “the wrong” new digital art biennale hosted on a Wi-Fi router.

Curated by Damian T. Dziwis with digital art works by the international artists Alka Cappellazzo, Damian T. Dziwis, Marco Kempf, Kathi Schulz, Tabitha Swanson, Moisés Horta Valenzuela and Simon Zimmermann.

The exhibition is happening in a virtual “non-space” gallery hosted on a local Wi-Fi router and focusses on programmed art in the context of creative coding. The works shown are ***quemadmodum***—a WebGL artwork by Alka Cappellazzo, ***The Fear Of Disappearing***—a webbased interactive video by Kathi Schulz, ***ML Does Rorschach Tests*** and ***qualia hallucinations***—neural network generated videos by Tabitha Swanson and Moisés Horta Valenzuela, ***Deepworld***—an encyclopedia containing information about “artificial countries” generated with different neural networks made by Marco Kempf and Simon Zimmermann, as well as an AI generated soundtrack made by Damian T. Dziwis.

About “the wrong” new digital art biennale:

The wrong new digital art biennale is a global event aiming to nurture digital culture today. its mission is to create, promote and push positive forward-thinking contemporary digital art to a wider audience through a biennial event that gathers a vast selection of digital artworks, embracing the artists, curators and institutions of today’s digital culture scene. the wrong happens both online and offline: the online happens in pavilions; virtual curated spaces in any online accessible media where selected artworks are exhibited. the offline happens in embassies; institutions, art spaces, galleries and artist run spaces in cities around the world. the offline also happens in routers; devices developed to display digital art to everyone nearby with a smart phone or tablet, via Wi-Fi.

BIOGRAPHIES

Container Doxa

The project was initiated in 2017, as a late night intervention into the Jazz festival Ljubljana. Its first album, *Less Than Nothing*, was released in 2018. While continuously undergoing reinvention and re-assemblage, Doxa has toured across Slovenia and beyond, playing at 12 Points Festival in Dublin and at Spektrum in Berlin. All this time, it is also present on the web. Currently, the project is serviced by Pia Reš, Miha Gantar, Lester St. Louis, Leonard Medica, Stella Ivšek, Bryan Qu, Anže Zorman and Dré A. Hočevar.





Domenico Cipriani

The project was initiated in 2017, as a late night intervention into the Jazz festival Ljubljana. Its first album, *Less Than Nothing*, was released in 2018. While continuously undergoing reinvention and re-assemblage, Doxa has toured across Slovenia and beyond, playing at 12 Points Festival in Dublin and at Spektrum in Berlin. All this time, it is also present on the web. Currently, the project is serviced by Pia Reš, Miha Gantar, Lester St. Louis, Leonard Medica, Stella Ivšek, Bryan Qu, Anže Zorman and Dré A. Hočevar. Domenico Cipriani has been releasing raw minimalist dance music for more than a decade. With his many monikers and groups he has released more than 100 vinyls and toured the most infamous European clubs. His label Restoration (co-founded with Marieu) has played an active role in the vinyl resurgence of the late 2000. After his graduation at the S.A.E. Institute of Barcelona, he has further developed his research on social semiotic with an M.A. in Linguistics at the University of Padova, focusing on an evolutionary approach to explaining language change. He has discovered Symbolic Sound Kyma in 2016. Since then he has participated every year to the Kyma International Sound Symposium, deepening the interconnection between Kyma and p5.js, exploiting the Open Sound Control protocol.

BIOGRAPHIES

Elisabeth Zimmermann

Elisabeth Zimmermann studied at the International Centre for Culture and Management (ICCM) in Salzburg and has been involved in organizing, coordinating, and curating radio art projects, symposia, CDs, publications, and international telematic art projects. Since 1998, she has been the producer of the weekly radio art program *Radio-kunst–Kunstradio* (<http://kunstradio.at>) on the cultural channel of ORF (Austrian National radio). In 1999, she founded *werks*—an art association dedicated to the realization of artistic projects in telecommunications media, which published the book *Re-Inventing Radio–Aspects of Radio as Art* (eds. Heidi Grundmann, Elisabeth Zimmermann, et al, Revolver, Frankfurt am Main, 2008). She has been part of the international curator's team for the Festival Radio Revolten, Halle/Saale, 2016.



BIOGRAPHIES



Valerio Tricoli

Valerio Tricoli is a composer and performer of electro-acoustic music. Since the mid '00 his main instrument for live presentations is the Revox B77 reel-to-reel tape recorder, used as a completely analogue / ergonomic device for live sampling and real-time transformation / editing / mixing of pre-recorded (field or studio recordings).

BIOGRAPHIES

Luka Frelih

Luka Frelih is an artist working with computers and networks, a computer programmer, free software hacker and web designer. He's been a core member of the LJUDMILA laboratory since its founding in 1994. He was in many collaborations connecting technology and art. Programmed the Instant ASCII Camera, a net art generator and more than one web map interface for positioned radio-linked roaming agents. Together with other Ljudmila programmers he developed the SLIX (Slovenian easy to use Linux) distribution and diverse free software tools to publish and manage multimedia databases on the web. He is one of the developers for Culture.si and Kulturnik.si cultural information portals run by LJUDMILA. Luka was a member of Theremidi Orchestra, a DIY electronic noise band, using soldering workshops and improvised noise performances as a new way to approach sound and audiences. Lately he has been co-creating the PIFCamp art hacker camp and OSMO/ZA—a new space for developmental art and cultures in Ljubljana.



BIOGRAPHIES

Music emerging from self-organizing systems is the focus of the artistic practice of Kosmas Giannoutakis. He situates compositional, performative and algorithmic agencies as non-hierarchical, decentralized networks, which exchange information in multiple time-scales through the medium of sound. His works have received numerous prizes and have been presented in various international festivals and conferences. Born in Thessaloníki Greece, he has studied piano, percussion, composition and computer music at the University of Macedonia, University of Music FRANZ LISZT Weimar, University of Music Freiburg and the Institute of Electronic Music and Acoustics—IEM at the University of Music and Performing Arts Graz.

Kosmas Giannoutakis



John Richards



John Richards explores the idea of Dirty Electronics that focuses on shared experiences, ritual, gesture, touch and social interaction. He is primarily concerned with the performance of large-group electronic music and DIY electronics, and the idea of creating music inside electronics. His work also pushes the boundaries between performance art, electronics, and graphic design and is transdisciplinary as well as having a socio-political dimension. Dirty Electronics has been commissioned to create sound devices for various arts organisations and festivals and has released a series of hand-held synths on Mute Records.

BIOGRAPHIES

Lasse-Marc Riek & Tobias Schmitt



Lasse-Marc Riek, born 1975 in Bad Segeberg, is a sound artist. His works are interdisciplinary and belong to the fine arts as well as to sound art. Riek is co-founder of the label **Gruenrekorder**, which concentrates on soundscapes, field recordings and electroacoustic compositions. Numerous exhibitions, concerts and radio productions.

Tobias Schmitt, born 1975 in Frankfurt am Main, works as a sound artist and curator. Numerous publications and concerts in Germany and abroad.

Lasse-Marc Riek and Tobias Schmitt have also been on tour since 2003 as the sound art duo **Waldlust**.

Prof. Dr. Leigh Landy (www.llandy.dmu.ac.uk) directs the Music, Technology and Innovation–Institute for Sonic Creativity, De Montfort University (Leicester, UK). His sample-based compositions have been performed globally. He has worked extensively with the late playwright, Heiner Müller and the new media artist, Michel Jaffrennou and was composer in residence for the Dutch National Theatre. His publications focus primarily on the studies of electroacoustic music. He is editor of **Organised Sound** (CUP) and author of eight books and is currently completing the book, ***On the Music of Sounds and the Music of Things*** with John Richards. He directs the ElectroAcoustic Resource Site (EARS) projects and is a founding director of the Electroacoustic Music Studies Network (EMS).

Leigh Landy

IMPRINT

| Project Team | |
|-----------------------------------|--|
| Artistic Direction | Ludger Brümmer, Yannick Hofmann |
| Organisation | Sophie Caecilia Hesse |
| Sound Engineers | Benjamin Miller, David Luchow |
| Documentation | ZKM Videostudio |
| Light-/ Event Technician | Hans Gass |
| Support Light-/ Event Technicians | Christian Berkes, Jakob Schreiber |
| General Support | Sergiy Ptushkin |
| Graphic Design and Layout | 2xGoldstein+Schöfer |
| ZKM Hertz Lab | Ludger Brümmer (Head of Department), Caro Mössner, Silke Sutter (Secretary), Manfred Hauffen (Technical Director), Götz Dipper (Music Informatics/System Administration), Yannick Hofmann, Lisa Bensel (Project Coordination/Publications), Anton Kossjanenko, Benjamin Miller, Sebastian Schottke (Audio Engineering), Bernd Lintermann, Dan Wilcox (Software Development), Johannes Jensen (Electrical Engineering), Hans Gass (Light and Event Engineering), Sophie Hesse (Events/Documentation), Daniel Höpfner (mediaartbase), Sergiy Ptushkin (Internship) |
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Within the framework of

interfaces



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