Program

11th International Conference on
New Interfaces for Musical Expression

NIME

2011

OSLO

NIME 2011 Program book

11th International Conference on
New Interfaces for Musical Expression

30 May - 1 June 2011, Oslo, Norway

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UiO : University of Oslo

NORGESMUSIKKHØGSKOLE
Norwegian Academy of Music

BEK

notam.

NTNU – Trondheim
Norwegian University of
Science and Technology

[simula . research laboratory]

norsk teknisk museum

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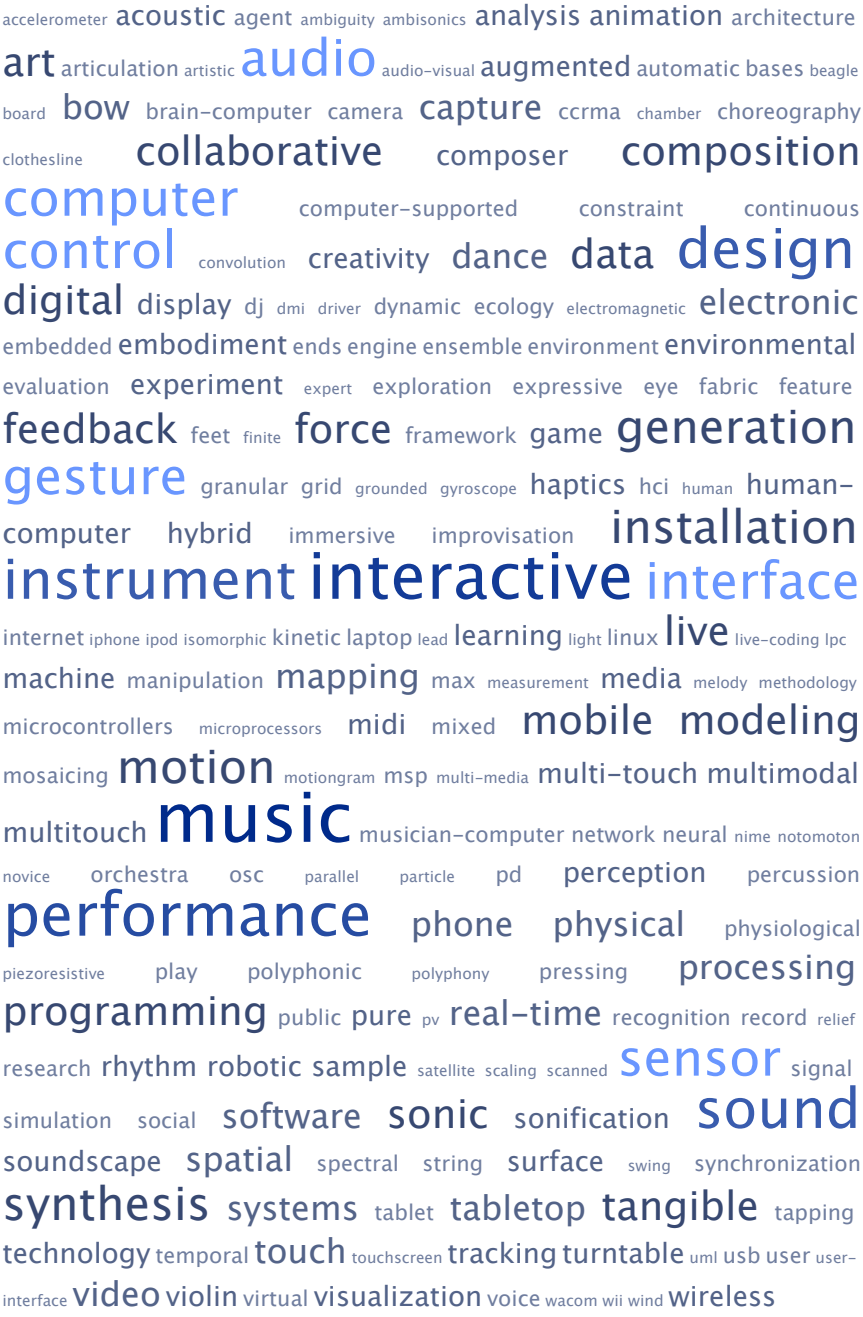

The 200 most used keywords in the NIME 2011 programme.

Contents

Welcome to Oslo

Welcome to the capital of Norway!

I am very happy that you have chosen to gather in Oslo to discuss music and music-related technology. Music is a big and important part of the way of life in Oslo: There are concerts and festivals all year round, and the people who live here flock to them.

Oslo's music scene draws visitors from all over the world. World-renowned artists within genres as different as electronic music, extreme metal, and jazz live here and perform here.

But there is much more to Oslo than music, and I am sure music lovers such as you take a keen interest in other forms of artistic expression as well. Oslo has a rich cultural history and was home to such luminaries as Henrik Ibsen and Edvard Munch. It is also well known for its architecture. You will have no trouble filling your spare time with visits to museums, galleries or historical landmarks.

To the people who live here, Oslo's most attractive feature is probably the combination of the city's urban gems with its proximity to nature. Wherever in the city one finds oneself, the forests and the fjord are within easy reach.

I hope you will find time to enjoy some of what we have to offer. I wish you a rewarding conference and a pleasant stay in Oslo.

Fabian Stang
Mayor of Oslo

Welcome to NIME

On behalf of the University of Oslo, the Norwegian Academy of Music and our partners and sponsors, we are proud to present the 11th edition of NIME.

In its 11th year NIME has become an important conference series, the meeting point of researchers, developers and artists from all over the world. Even though participants come from widely different backgrounds, they share a mutual interest in groundbreaking music and technology.

Since the start of the conference series, the word *NIME* has started to take on meaning in itself, independent of the annual conferences. Even outside the core group of annual conference participants, people start to know that NIME is somehow related to exciting musical and artistic research and practice. Still, though, *NIME* is mainly used as a noun, e.g. "bring your favourite NIMEs to the jam session tonight." Perhaps it is now time to start using it also as a verb: *to nime*.

What's in a word? We are often asked by people what NIME actually means. There is an official answer, but we rather like the idea that the four letter acronym can take on new meanings:

- N = New, Novel, ...
- I = Interfaces, Instruments, ...
- M = Musical, Multimedial, ...
- E = Expression, Exploration, ...

Whatever the meaning of the letters, the underlying idea is the hunt for new understanding, development and artistic exploration of devices in music. This type of exploration in (and on the borders between) science and art is not a problem for people in the NIME community. Outside the NIME community, however, our experience is that the worlds of science and art are often separate. We believe that the conference and the community can make a difference, and show that science and art need each other to prosper.

The NIME conference has over the last decade grown from a workshop at CHI in 2001, to have more than 500 submissions in 2011. This record number of submissions has made it possible to set up a large and varied program that we hope will be inspiring for everyone being present. Despite

the large submission number, we decided to keep NIME as an "intimate" conference, a conference where it is possible to attend everything. We have stuck with the idea of single-track presentations, even though this means that the acceptance rate for oral presentation was as low as 15%. Keeping with the NIME spirit, though, we think that large poster and demo sessions are probably the best way of seeing, testing, and exploring various new instruments/interfaces in practice.

Programming concerts for a conference like NIME is challenging. Here we have tried to find a balance between novel instruments, performance maturity, and artistic expression. We were happy to see that many picked up on our challenge of submitting combined "paper + performance" proposals. These submissions were treated as two separate submissions at first, through separate scientific and artistic review, before being evaluated together. Some were accepted together, and some were accepted as either paper or performance. Keeping up to international standards on both a scientific paper and a performance is not an easy task. But we see that many people in the community are up for it, and we highly encourage this type of double submissions also for future conferences.

There will be three keynote lectures, all of which will approach the topic of NIME from different angles. Tellef Kvifte's lecture will bring in historical and organological perspectives through a discussion of digital instruments in the 19th century. David Rokeby will talk about his exploration of using the body in interactive art, something which is currently very popular in the NIME community. Sergi Jordà will talk about his instruments, and possibilities/challenges in working between science, art and industry. We hope these lectures will be inspiring and help to draw some longer lines in between the shorter and more fast-paced presentations at the conference.

We are also happy to present a series of pre-NIME events. As usual, there is a large set of tutorials and workshops held by local and international NIME participants. This year there is also a symposium called "Technology and Aesthetics," produced by NOTAM. The Art.on.Wires Media festival is a 5 day long feast of hacking, lectures and concerts, produced by the newly established Art.on.Wires socity. Finally, there is an exhibition on Sonic Interaction Design produced by COST Action IC0601 and BEK.

A number of organisations and individuals have contributed to making this conference a reality. There is only one thing to say: thank you!

All in all, we hope that NIME 2011 will represent another milestone in the development of the NIME community, and be of inspiration to all of you who participate. Happy NIMEing.

Alexander Refsum Jensenius & *Kjell Tore Innervik*
University of Oslo & Norwegian Academy of Music

Institutions

University of Oslo
Department of Musicology

Norwegian Academy of Music

NOTAM
Norwegian Centre for
Technology in Music and Arts

BEK
Bergen Center for Electronic Arts

NTNU
Norwegian University of
Science and Technology

Simula Research Laboratory

Norwegian Museum of Science,
Technology and Medicine

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Art.on.Wires

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Symposium

Asbjørn Blokkum Flø
Cato Langnes
Rune Molvær
Jøran Rudi
Henrik Sundt
Notto J. W. Thelle
Hans Wilmers

SID exhibition

Dag Andreassen
Daniel Arfib
Maria Grazia Ballerano
Frauke Behrendt
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Luiz Naveda
Kia Ng
Per Anders Nilsson
Kristian Nymoen
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Jieun Oh
Dan Overholt
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Brett Park
Philippe Pasquier
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Nils Peters
Toiviainen Petri
Timothy Place
Patrick Pogscheba
Anthony Rowe
Robert Rowe
Jøran Rudi
Even Ruud
Joel Ryan
Jan Schacher
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Norbert Schnell
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Anna Xambo
Matthew Yee-King
Tomoko Yonezawa
Takegawa Yoshinari
Mark Zadel
Michael Zbyszynski
Tone Åse

All the names in the lists are in alphabetical order

I

Practical information

Internet

University of Oslo

If your home institution is a member of Eduroam you can use the network called "eduroam." Typically you enter something like user@institution as user name, and your regular password. Otherwise, you can use this:

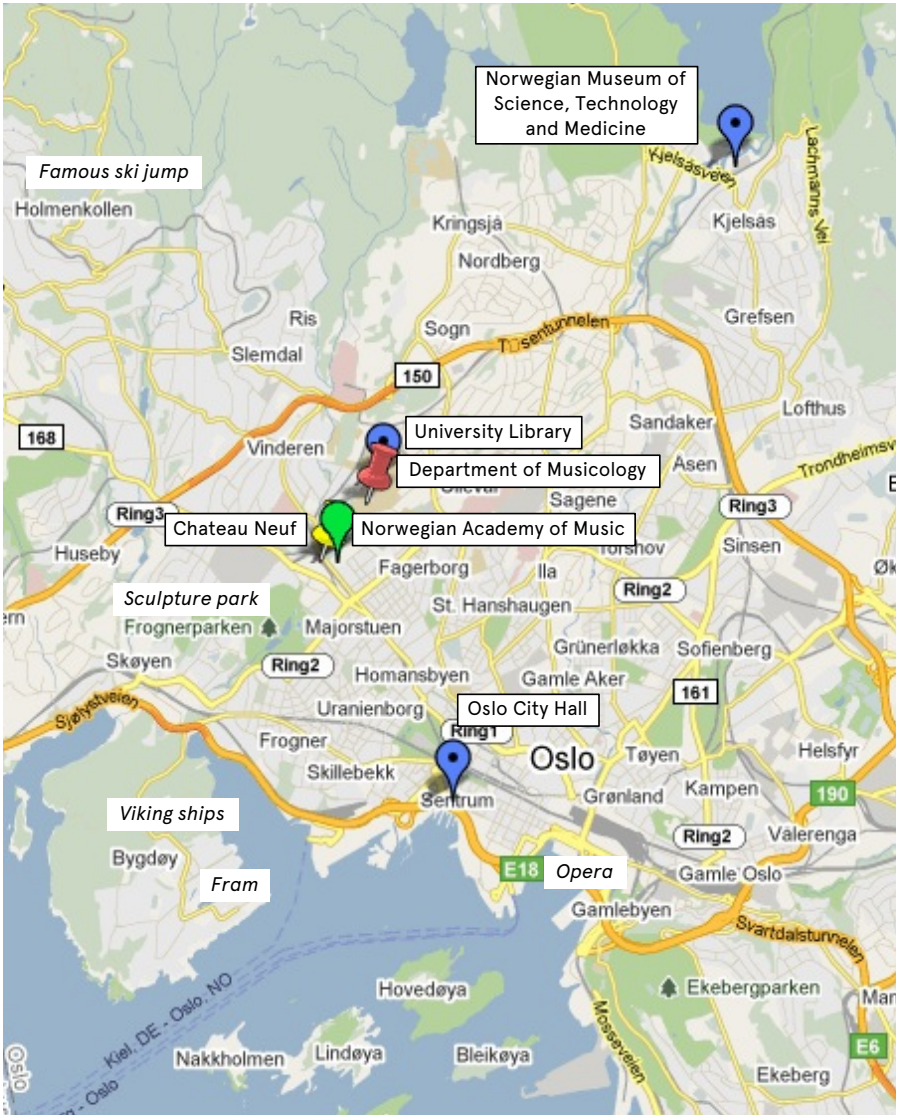
- Name of network (SSID): conferences
- Security: WPA-PSK (WPA personal)
- Password: uio200uio

Norwegian Academy of Music

- Name of network (SSID): NMH-Gjest or NMH-Student
- Security: login through web browser
- User name: NIME
- Password: NIMEconf11

Chateau Neuf

- Name of network (SSID): Studentersamfundet
- Security: WPA2 Personal
- Password: blimedlem



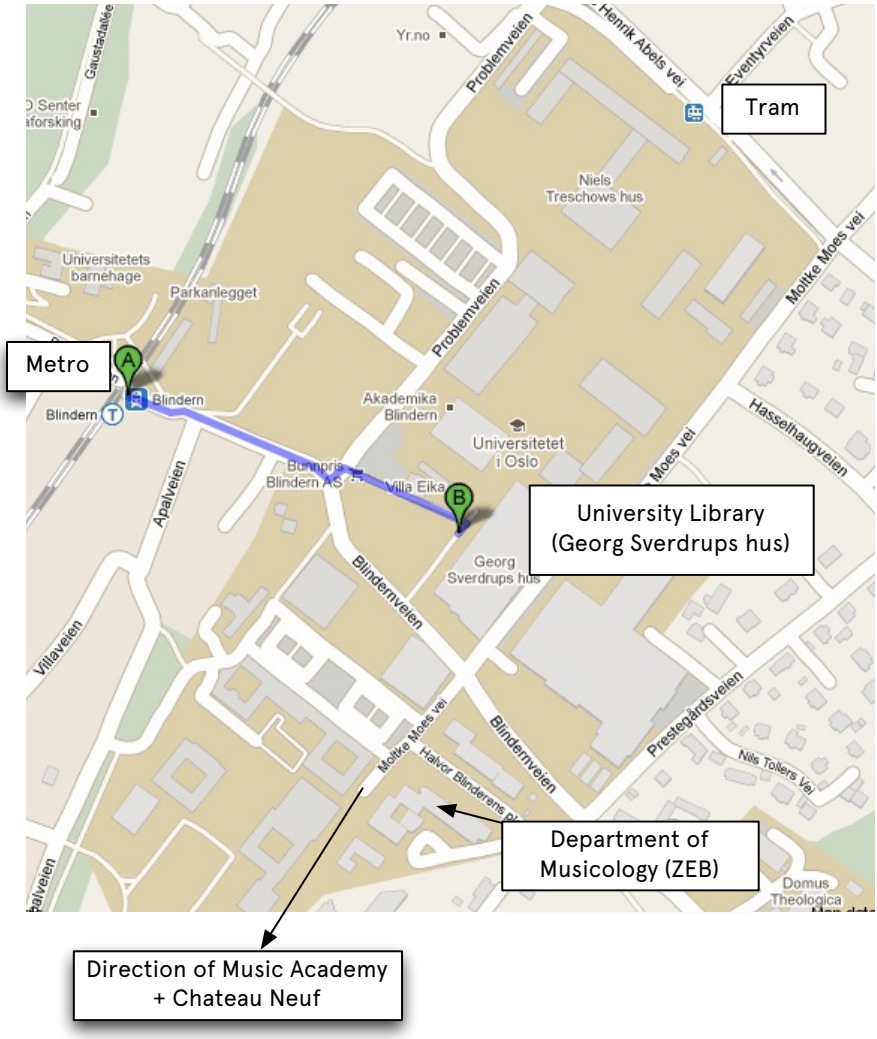
City of Oslo with NIME venus and a few tourist attractions.

Venues

University Library

The scientific program (keynotes, presentations, posters, demos) will be held at the University library, which is located at the centre of the University of Oslo campus.

Building name: Georg Sverdrups hus
Street address: Moltke Moes vei 39
Metro station: Blindern
Tram station: Universitetet i Oslo
Bus stop: Vestre Aker kirke

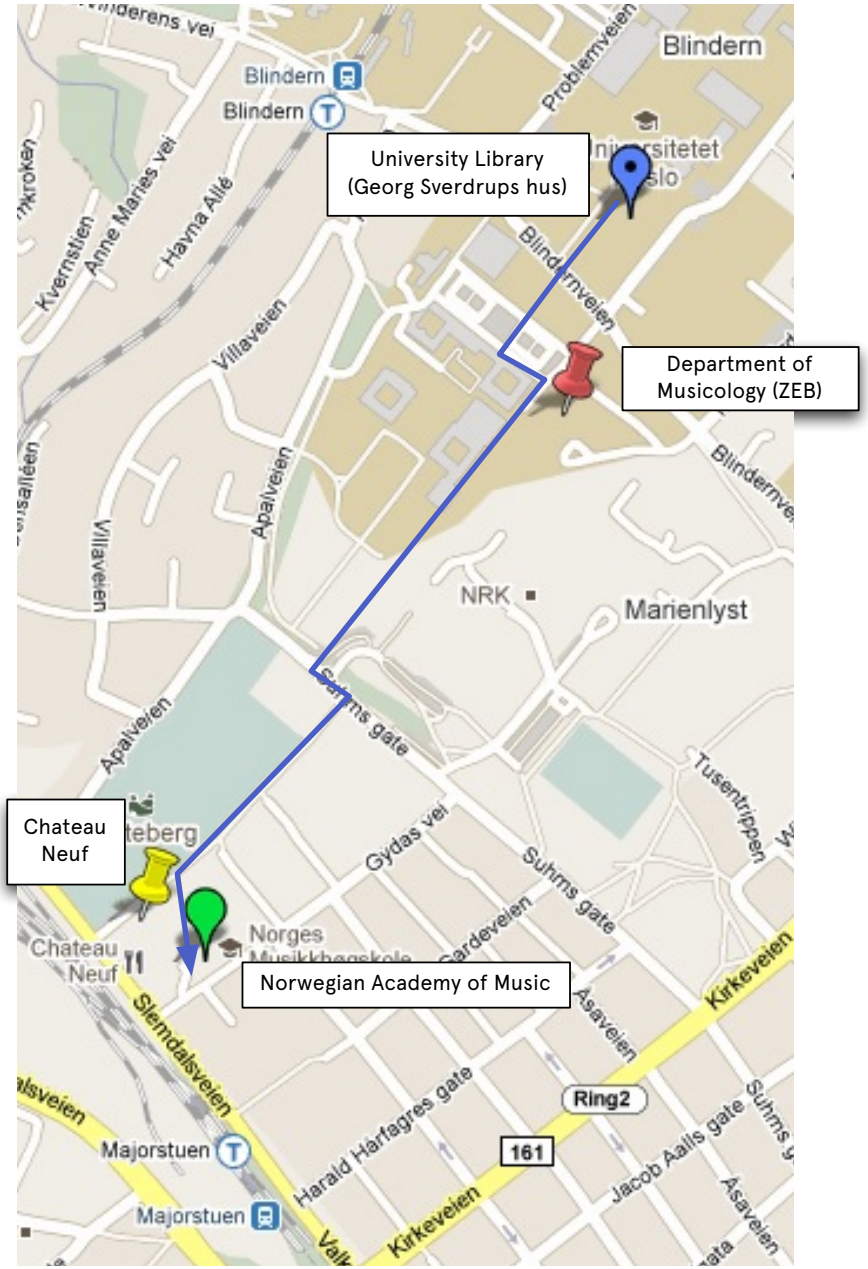


Map of the central part of University of Oslo campus.

Department of Musicology (ZEB)

Several of the tutorials on Saturday and Sunday will be located at Department of Musicology, a 3-minute walk from the library. This is also the location of the *fourMs mocap lab*, which it will be possible to visit during lunch breaks.

Building name: ZEB
Street address: Sem Sælands vei 2A
Metro station: Blindern
Tram station: Universitetet i Oslo
Bus stop: Vestre Aker kirke



Walking from the University library to the Norwegian Academy of Music / Chateau Neuf takes ~10 minutes.

Norwegian Academy of Music

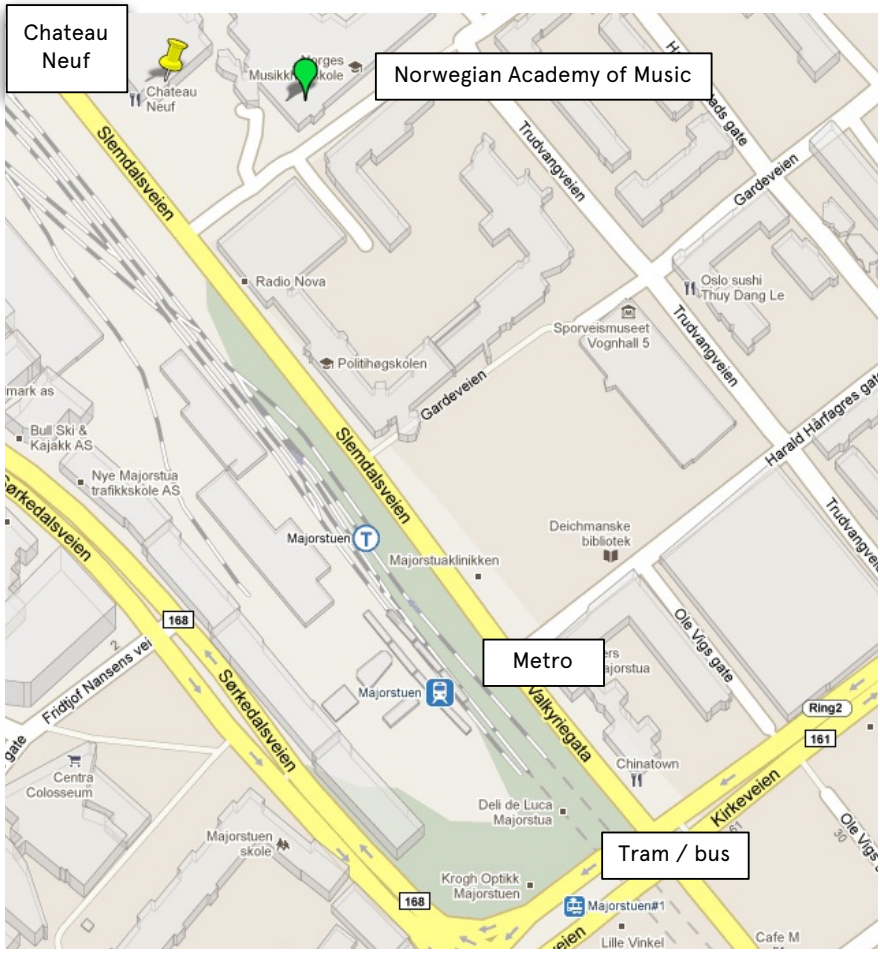
The Norwegian Academy of Music is the location for evening concerts. Some of the tutorials and the symposium *Technology and Aesthetics* will also be held here.

Street address: Slemdalsveien 11
Metro/Bus stop: Majorstuen

Chateau Neuf

Club concerts and the *Art.on.Wires Media Festival* will be located at the student house Chateau Neuf, which is the building next to the Norwegian Academy of Music.

Street address: Slemdalsveien 15
Metro/Bus stop: Majorstuen

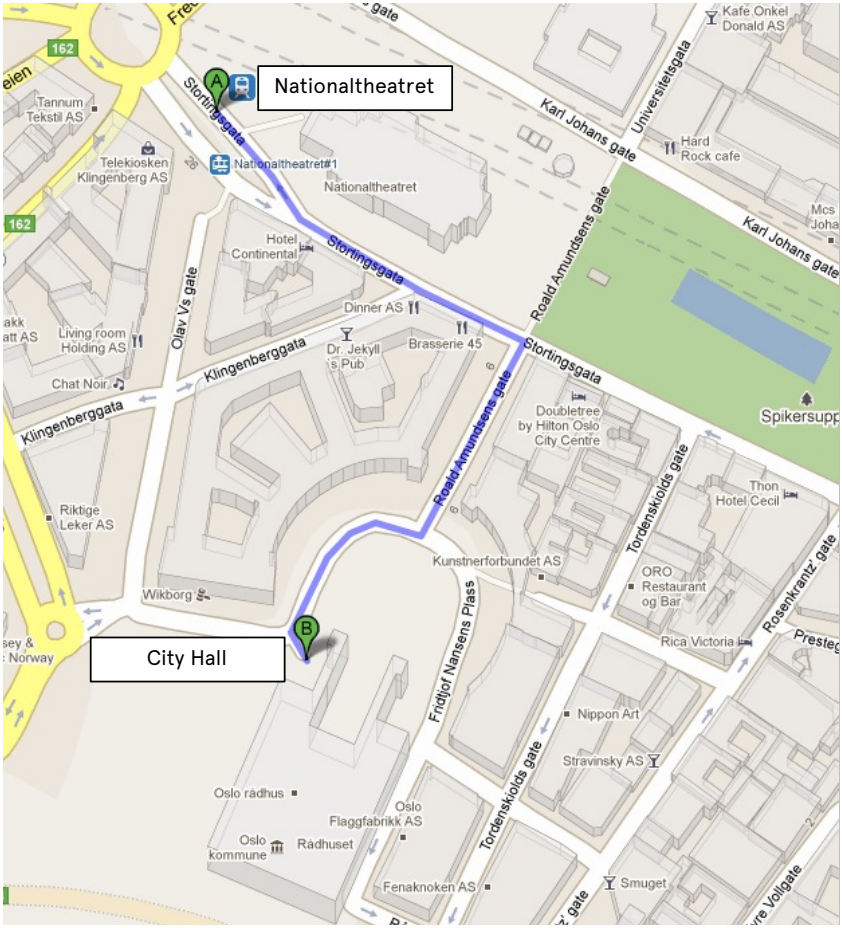


The Norwegian Academy of Music / Chateau Neuf are located next to each other, and only a few minutes to walk from the Majorstuen area.

City Hall

The City of Oslo invites conference participants to a reception at the Oslo City Hall on Monday 30 May. We will travel together on the metro from the university.

Metro station: Nationaltheatret



Direction from Nationaltheatret metro station to Oslo City Hall (~5 min.)

Norwegian Museum of Science, Techn. and Medicine

The SID exhibition is located at the Norwegian Museum of Science, Technology and Medicine. This is also where the opening concert on Sunday 29 May will be held. The museum is located outside the city centre, so we will organise bus transport from the Norwegian Academy of Music.

Street address: Kjelsåsveien 143
Bus station: Kjelsås (lines 54, 25, 22)
Train station: Kjelsås (local train to Gjøvik)
Tram station: Kjelsås/Kjelsåsalleen (lines 12 Kjelsås, 11 Disen)

Eating

Here follows a list of some recommended places to eat on campus, close to the music academy, and downtown. For more comprehensive lists see web resources like tripadvisor.com or oslopuls.no (in Norwegian). Norway is a high cost country so you will probably find most prices to be rather high, particularly due to the high tax on alcoholic beverages.

Blindern Campus

Dana Bakeri The most affordable place on campus. They have böreks for 20,-, sandwiches for 30,-, and a selection of other dishes from 10–50,-. Our favorite is the potato börek.

Opening hours: Monday – Sunday: 09:00 – 18:30 (hours may vary)

Frederikke kafe The main cafeteria on campus, and the best place for lunch during the conference. Price range: 55–115,-. You can check their daily menu online here: http://bit.ly/iFxZyN

Opening hours: Monday – Thursday 11.00 – 19.00. Friday 11.00 – 18.00.

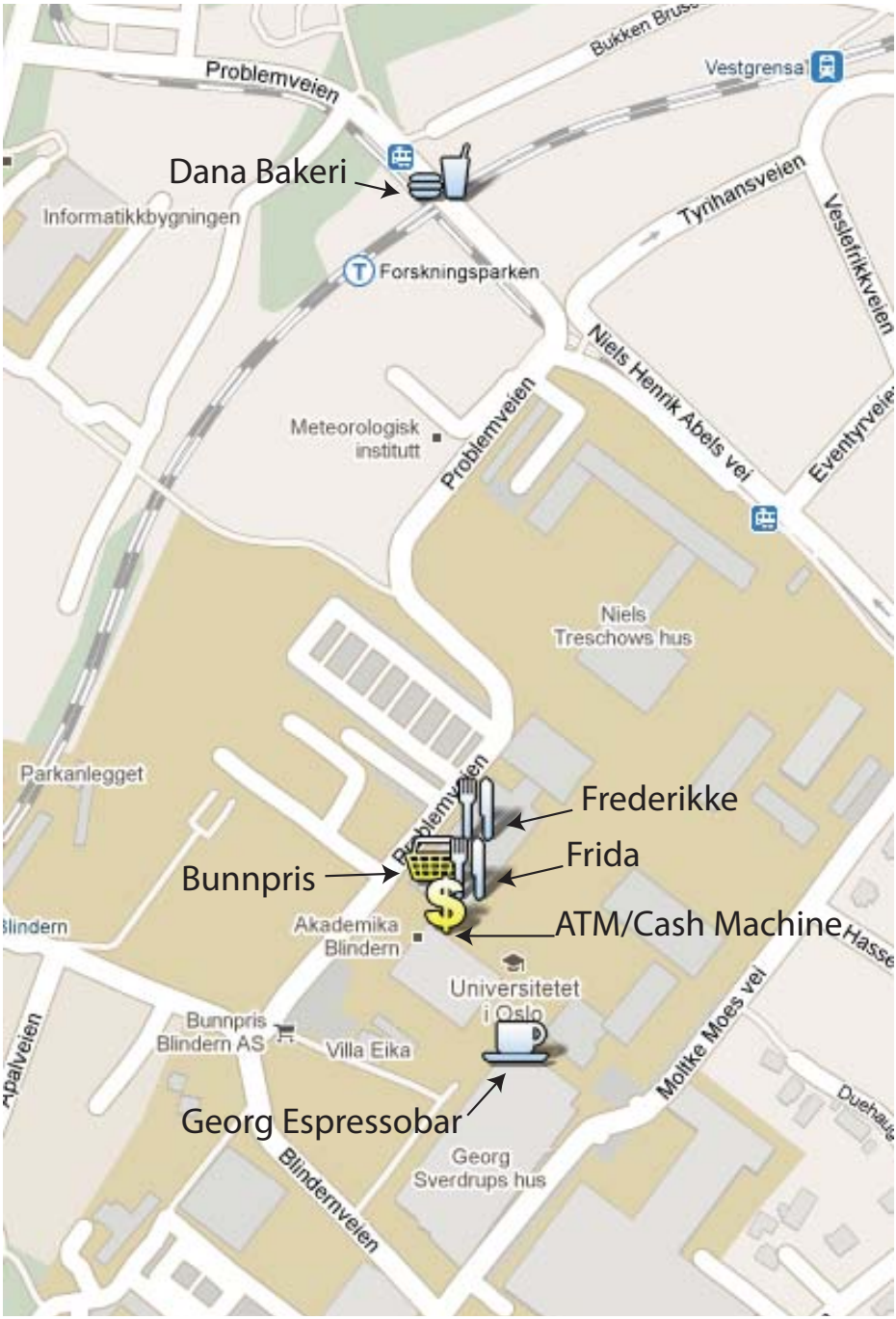
Frida Located on the ground floor of the same building as Frederikke. Crossover menu, better and more expensive than Frederikke. Price range 80-120,-.

Bunnpris An affordable convenience store, if you want to try the Norwegian way of eating lunch: buy your own bread and spread.

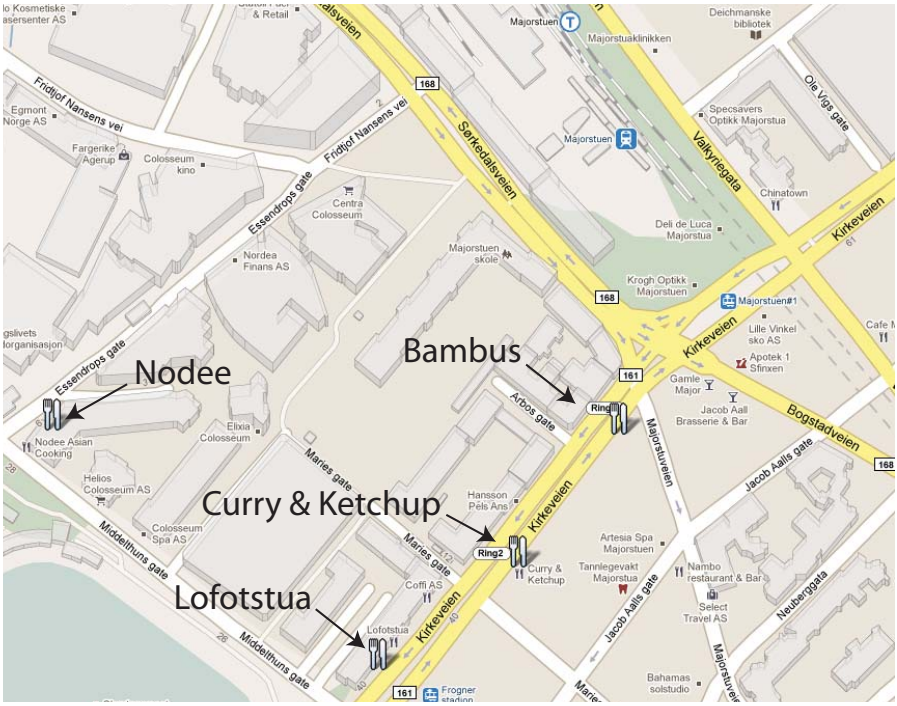
Opening hours: Monday – Friday: 07:00-21:00. Saturday: 10:00-18:00.

Georg Espressobar Here you get good espressos/coffee and snacks.

Opening hours: Monday – Friday: 08.00 – 17.00.


Dana Bakeri
Problemveien
Vestgrensa
Informatikkbygningen
Forskningsparken
Tyrihansveien
Veslefrikkveien
Niels Henrik Abels vei
Meteorologisk institutt
Problemveien
Eventyrveien
Niels Treschows hus
Parkanlegget
Problemveien
Frederikke
Frida
Bunnpris
ATM/Cash Machine
Akademika Blindern
Universitetet i Oslo
Bunnpris Blindern AS
Villa Eika
Georg Espressobar
Moltke Moes vei
Georg Sverdrups hus
Blindernveien

Majorstuen area



Norwegian Academy of Music Canteen with sandwiches and two hot dishes per day. Monday – Thursday: 10.00 – 17.00, Friday: 10.00 – 16.00

Chateau Neuf They serve a few hot dishes in the bar until 19:00.

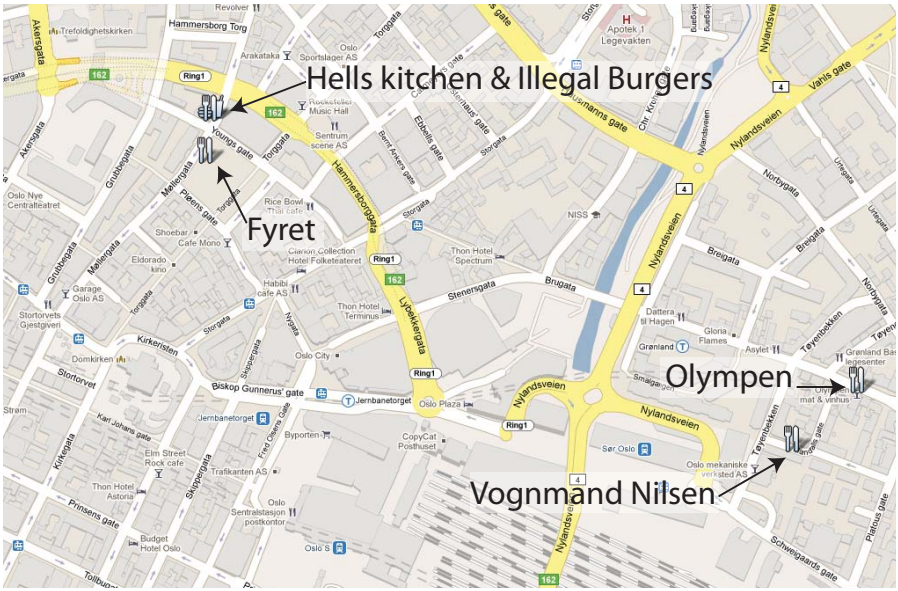
Curry & Ketchup Affordable curry place with decent atmosphere. Price range 80–100. (They don't take credit cards!)

Bambus Varied Asian food (Thailand, China, Japan and Vietnam), quiet atmosphere. Price range 155–235,-.

Lofotstua A place for Norwegian seafood, including deep water fish. Based on Northern Norwegian traditions from the 1950's. Price range 200–300,-.

Noodee Supposedly one of the better Sushi places in Oslo. Serves other Asian dishes as well. Price range 150–300,-.

Oslo City Center



Fyret Nice little place with maritime atmosphere. Norwegian/Danish cuisine. Has an extensive range of the traditional Scandinavian Akevitt; recommended! Price range 70-150,-.

Hells Kitchen and Illegal Burger A bar with good pizzas in a hip area. Gets very packed during weekends. Next door is a trendy burger place. Price range 120-150,-.

Olympen Originally a "worker's pub" from 1892, the place has now been totally refurbished and serves traditional Norwegian food including an affordable three course menu for 298,- (good value/price). Has an extensive beer range with many local beers. Price range 120–200,-.

Vognmand Nilsen Norwegian ingredients in modern style. Price range 150–300,-.

Norwegian Language

Here is everything you will need to survive in Norway for a couple of days.

Norwegian pronunciation

Norwegian words are generally pronounced having the stress of each word in the beginning. This is also the explanation of the distinct Norwegian–English accent, in which the two most famous versions are the "Vossa-english" and the "Thor Heyerdahl-english."

Norwegian vowels:

- A — as in english "a" in "bath"
- E — as in english "e" in "ent"
- I — as in english "ee" in "keen"
- O — as in english "oo" in "moose"
- U — as in english "oo" in "food"
- Y — almost as in German "ü" in "Günther"

Norwegian letters:

- Æ — pronounced like the sound of a crying baby, or the "a" in the English word "sad"
- Ø — pronounced like the "i" in the English word "bird", or the "o" in "word"
- Å — pronounced like the "au" in the name "Paul"

Diphthongs:

- “au” as in Norwegian ÆU or
- “ei” as in Norwegian ÆI
- “kj”, “ki”, “tj” as in swedish “tj” in “tjena”
- “skj”, “ski”, “sky” as in english “sh” in “shop”

Some useful words

- Hello: hallo
- Hi: hei
- Thank you: takk
- Food: mat
- Beer: øl
- Cheers!: skål!
- Sound: lyd
- Envelope follower: omhylningskurveetterfølger
- New Interfaces for Musical Expression: nye grensesnitt for musikalsk ekspressivitet

Some useful phrases

- My name is King Harald: Jeg heter kong Harald
- I don’t speak Norwegian: Jeg snakker ikke norsk

Norwegian peculiarities

The ground floor is called 1st floor in Norway. So the 3rd floor at the University Library is two stairs up from the ground floor where the main auditorium is located.

II

Program

Opening Concert — Sunday 29 May 18:00

Norwegian Museum of Science, Technology and Medicine

LOLC
Akito van Troyer, Jason Freeman, Avinash Sastry, Sang Won Lee, Shannon Yao

Little Soldier Joe
Øyvind Brandtsegg and Carl Haakon Waadeland

Random Access Solo
Malin Stattin and Gerhard Eckel

Opening of SID exhibition

Reactable
Carles López

Opening Session — Monday 30 May 09:00–09:30

Auditorium 1, University Library

Einar Lie, Research Dean, Faculty of Humanities, University of Oslo
Eirik Birkeland, Principal, Norwegian Academy of Music
Alexander Refsum Jensenius, Chair, NIME 2011

Keynote Lecture 1 — Monday 30 May 09:30–10:30

Auditorium 1, University Library

Musical Instrument User Interfaces: the Digital Background of the Analog Revolution
Tellef Kvifte

Paper session A — Monday 30 May 11:00–12:30

Auditorium 1, University Library

The Overtone Fiddle: an Actuated Acoustic Instrument
Dan Overholt

A Low-Cost, Low-Latency Multi-Touch Table with Haptic Feedback for Musical Applications
Colby Leider, Matthew Montag, Stefan Sullivan and Scott Dickey

The Electromagnetically Sustained Rhodes Piano
Greg Shear and Matthew Wright

Gamelan Elek Trika: An Electronic Balinese Gamelan
Laurel Pardue, Christine Southworth, Andrew Boch, Matt Boch and Alex Rigopulos

Sonicstrument: A Musical Interface with Stereotypical Acoustic Transducers
Jeong-Seob Lee and Woon Seung Yeo

Poster session B — Monday 30 May 13:30–14:30

3rd floor, University Library

Solar Sound Arts: Creating Instruments and Devices Powered by Photovoltaic Technologies
Scott Smallwood

An Approach to Collaborative Music Composition
Niklas Klügel, Marc René Frieß and Georg Groh

A Reference Architecture and Score Representation for Popular Music Human-Computer Music Performance Systems
Nicolas Gold and Roger Dannenberg

V'OCT (Ritual): An Interactive Vocal Work for Bodycoder System and 8 Channel Spatialization
Mark Bokowiec

First Person Shooters as Collaborative Multiprocess Instruments
Florent Berthaut, Haruhiro Katayose, Hironori Wakama, Naoyuki Totani and Yuichi Sato

Studying Interdependencies in Music Performance: An Interactive Tool
Tilo Hähnel and Axel Berndt

1city 1001vibrations: development of a interactive sound installation with robotic instrument performance
Sinan Bokesoy and Patrick Adler

Beatscape, a mixed virtual-physical environment for musical ensembles
Aaron Albin, Sertan Senturk, Akito Van Troyer, Brian Blosser, Oliver Jan and Gil Weinberg

Experiences from video-controlled sound installations
Anders Friberg and Anna Källblad

A Physically Based Sound Space for Procedural Agents
Benjamin Schroeder, Marc Ainger and Richard Parent

MoodifierLive: Interactive and collaborative expressive music performance on mobile devices
Marco Fabiani, Gaël Dubus and Roberto Bresin

Demo session C — Monday 30 May 13:30–14:30

3rd floor, University Library

Kinetic Particles Synthesizer Using Multi-Touch Screen Interface of Mobile Devices
Yasuo Kuhara and Daiki Kobayashi

The Sound Flinger: A Haptic Spatializer
Christopher Carlson, Eli Marschner and Hunter Mccurry

Daft Datum: an Interface for Producing Music Through Foot-Based Interaction
Ravi Kondapalli and Benzhen Sung

Strike on Stage: a percussion and media performance
Charles Martin and Chi-Hsia Lai

Paper session D — Monday 30 May 14:30–15:30

Auditorium 1, University Library

Gestural Embodiment of Environmental Sounds: an Experimental Study
Baptiste Caramiaux, Patrick Susini, Tommaso Bianco, Frédéric Bevilacqua, Olivier Houix, Norbert Schnell and Nicolas Misdariis

Listening to Your Brain: Implicit Interaction in Collaborative Music Performances
Sebastian Mealla, Aleksander Valjamae, Mathieu Bosi and Sergi Jorda

Examining How Musicians Create Augmented Musical Instruments
Dan Newton and Mark Marshall

Paper session E — Monday 30 May 16:00–17:00

Auditorium 1, University Library

Tahakum: A Multi-Purpose Audio Control Framework
Zachary Seldess and Toshiro Yamada

A Framework for Coordination and Synchronization of Media
Dawen Liang, Guangyu Xia and Roger Dannenberg

Satellite CCRMA: A Musical Interaction and Sound Synthesis Platform
Edgar Berdahl and Wendy Ju

Reception — Monday 30 May, 17:30–19:00

Oslo City Hall

Cornerghostaxis#1
Gerriet K. Sharma, David Pirrò and Dana Jessen

I-phone improvisation (App: Curtis Lite)
NIME 2011 participants

Club Concert — Monday 30 May, 20:00–23:00

Chateau Neuf

Licht & Hiebe
Jacob Selle and Stefan Weinzierl (Venue: Lillesalen)

ROYGBIV
Joshua Clayton (Venue: Lillesalen)

With Winds (for soprano t-stick)
Andrew Stewart (Venue: Biblioteket)

L'instant
Tom Mays (Venue: Biblioteket)

All Hail the Dawn
Alexander Dupuis (Venue: Lillesalen)

Ural Power
Yoichi Nagashima (Venue: Lillesalen)

Television Sky
EP trio – Erika Donald, Ben Duinker and Eliot Britton (Venue: Biblioteket)

About Place
Michael Straus (Venue: Biblioteket)

Paper session F — Tuesday 31 May 09:00–10:50

Auditorium 1, University Library

Two Turntables and a Mobile Phone
Nicholas J. Bryan and Ge Wang

MadPad: A Crowdsourcing System for Audiovisual Sampling
Nick Kruge and Ge Wang

The Visual in Mobile Music Performance
Patrick O'Keefe and Georg Essl

Designing for the iPad: Magic Fiddle
Ge Wang, Jieun Oh and Tom Lieber

MobileMuse: Integral Music Control Goes Mobile
Benjamin Knapp and Brennon Bortz

Tangible Performance Management of Grid-based Laptop Orchestras
Stephen Beck, Chris Branton, Sharath Maddineni, Brygg Ullmer, Shantenu Jha

Keynote Lecture 2 — Tuesday 31 May 11:30–12:30

Auditorium 1, University Library

Adventures in Phy-gital Space
David Rokeby

Poster session G — Tuesday 31 May 13:30–14:30

3rd floor, University Library

Audio Arduino — an ALSA (Advanced Linux Sound Architecture) audio driver for FTDI-based Arduinos
Smilen Dimitrov and Stefania Serafin

Musical control of a pipe based on acoustic resonance
Seunghun Kim and Woon Seung Yeo

Play Fluency in Music Improvisation Games for Novices
Anne-Marie Hansen, Hans Jørgen Andersen and Pirkko Raudaskoski

JunctionBox: A Toolkit for Creating Multi-touch Sound Control Interfaces
Lawrence Fyfe, Adam Tindale and Sheelagh Carpendale

Beyond Evaluation: Linking Practice and Theory in New Musical Interface Design
Andrew Johnston

Intuitive Real-Time Control of Spectral Model Synthesis
Phillip Popp and Matthew Wright

BeatJockey: A new tool for enhancing DJ skills
Pablo Molina, Martin Haro and Sergi Jordà

Traces: Body, Motion and Sound
Jan Schacher and Angela Stoecklin

MoodMixer: EEG-based Collaborative Sonification
Grace Leslie and Tim Mullen

OSC Implementation and Evaluation of the Xsens MVN suit
Ståle A. Skogstad, Kristian Nymoen, Yago De Quay and Alexander Refsum Jensenius

The effect of visualizing audio targets in a musical listening and performance task
Lonce Wyse, Norikazu Mitani and Suranga Nanayakkara

Composability for Musical Gesture Signal Processing using new OSC-based Object and Functional Programming Extensions to Max/MSP
Freed Adrian, John Maccallum and Andrew Schmeder

SoundSaber — A Motion Capture Instrument
Kristian Nymoen, Ståle A. Skogstad and Alexander Refsum Jensenius

A modulation matrix for complex parameter sets
Øyvind Brandtsegg, Sigurd Saue and Thom Johansen

Demo session H — Tuesday 31 May 13:30–14:30

3rd floor, University Library

Sound Low Fun
Yu-Chung Tseng, Che-Wei Liu, Tzu-Heng Chi and Hui-Yu Wang

Autonomous New Media Artefacts (AutoNMA)
Edgar Berdahl and Chris Chafe

Creating Musical Expression using Kinect
Min-Joon Yoo, Jin-Wook Beak and In-Kwon Lee

Making grains tangible: microtouch for microsound
Staas De Jong

Sound Selection by Gestures
Baptiste Caramiaux, Frederic Bevilacqua and Norbert Schnell

Paper session I — Tuesday 31 May 14:30–15:30

Auditorium 1, University Library

An Open Source Interface based on Biological Neural Networks for Interactive Music Performance
Hernán Kerlleñevich, Manuel Eguia and Pablo Riera

Recognition Of Multivariate Temporal Musical Gestures Using N-Dimensional Dynamic Time Warping
Nicholas Gillian, R. Benjamin Knapp and Sile O'Modhrain

A Machine Learning Toolbox For Musician Computer Interaction
Nicholas Gillian, R. Benjamin Knapp and Sile O'Modhrain

Paper session J — Tuesday 31 May 16:00–17:00

Auditorium 1, University Library

Music and Technology in Death and the Powers
Elena Jessop, Peter Torpey and Benjamin Bloomberg

Design and Evaluation of a Hybrid Reality Performance
Victor Zappi, Dario Mazzanti, Andrea Brogni and Darwin Caldwell

InkSplorer : Exploring Musical Ideas on Paper and Computer
Jérémie Garcia, Theophanis Tsandilas, Carlos Agon and Wendy Mackay

Concert — Tuesday 31 May, 19:00–20:30

Lindemansalen, Norwegian Academy of Music

Body Jockey
Sarah Taylor, Maurizio Goina and Pietro Polotti

Improvisation for piano + motion capture system
Sarah Nicolls and Nick Gillian

Socks and Ammo
Můstek – Lauren Sarah Hayes and Christos Michalakos

SoundGrasp
Thomas Mitchell and Imogen Heap

TURN ME! I need 12 Volts!
Kristin Norderval

Club Concert — Tuesday 31 May, 21:00–23:00

Chateau Neuf

E=MCH
Paul Stapleton, Caroline Pugh, Adnan Marquez-Borbon and Cavan Fyans (Venue: Lillesalen)

REMI Sings
Christopher Alden (Venue: Biblioteket)

Suspended Beginnings
Diemo Schwarz and Victoria Johnson (Venue: Biblioteket)

The Loop
Jason Dixon, Tom Davis, Jason Geistweidt and Alain B. Renaud (Venue: Klubb-scenen)

Dissonance
Victor Zappi and Dario Mazzanti (Venue: Betong)

The Shells
Alex Nowitz (Venue: Biblioteket)

BiLE (Birmingham Laptop Ensemble)
Julien Guillamat, Charles Céleste Hutchins, Shelly Knotts, Norah Lorway, Jorge Garcia Moncada, Chris Tarren (Venue: Lillesalen)

Where Art Thou?: Dance Jockey
Yago de Quay and Ståle Skogstad (Venue: Biblioteket)

Sonolume
Domenico Sciajno (Venue: Lillesalen)

Paper session K — Wednesday 1 June 09:00–10:30

Auditorium 1, University Library

Battle of the DJs: an HCI perspective of Traditional, Virtual, Hybrid and Multitouch DJing
Pedro Lopes, Alfredo Ferreira and Joao Madeiras Pereira

Designing Digital Musical Interactions in Experimental Contexts
Adnan Marquez Borbon, Michael Gurevich, A. Cavan Fyans and Paul Stapleton

Crackle: A mobile multitouch topology for exploratory sound interaction
Jonathan Reus

A principled approach to developing new languages for live coding
Samuel Aaron, Alan F. Blackwell, Richard Hoadley and Tim Regan

Integra Live: a new graphical user interface for live electronic music
Jamie Bullock, Daniel Beattie and Jerome Turner

Paper session L — Wednesday 1 June 11:00–12:30

Auditorium 1, University Library

Robust and Reliable Fabric, Piezoresistive Multitouch Sensing Surfaces for Musical Controllers
Adrian Freed, Yung-Sim Roh, Yotam Mann and David Wessel

Examining the Effects of Embedded Vibrotactile Feedback on the Feel of a Digital Musical Instrument
Mark Marshall and Marcelo Wanderley

HIDUINO: A firmware for building driverless USB-MIDI devices using the Arduino microcontroller
Dimitri Diakopoulos and Ajay Kapur

Latency improvement in sensor wireless transmission using IEEE 802.15.4
Emmanuel Flety and Côme Maestracci

The Snyderphonics Manta, a Novel USB Touch Controller
Jeff Snyder

Poster session M — Wednesday 1 June 13:30–14:30

3rd floor, University Library

Creating Interactive Multimedia Works with Bio-data
Claudia Robles Angel

TresnaNet: musical generation based on network protocols
Paula Ustarroz

Designing a Music Performance Space for Persons with Intellectual Learning Disabilities
Matti Luhtala, Tiina Kymäläinen and Johan Plomp

Raja — A Multidisciplinary Artistic Performance
Tom Ahola, Teemu Ahmaniemi, Koray Tahiroglu, Fabio Belloni and Ville Ranki

Eobody3: A ready-to-use pre-mapped amp; multi-protocol sensor interface
Emmanuelle Gallin and Marc Sirguy

Eye Tapping: How to Beat Out an Accurate Rhythm using Eye Movements
Rasmus Bååth, Thomas Strandberg and Christian Balkenius

MelodyMorph: A Reconfigurable Musical Instrument
Eric Rosenbaum

Flo)(ps: Between Habitual and Explorative Action-Sound Relationships
Karmen Franinovic

Acquisition and study of blowing pressure profiles in recorder playing
Francisco Garcia, Leny Vinceslas, Esteban Maestre and Josep Tubau

Wekinating 000000Swan: Using Machine Learning to Create and Control Complex Artistic Systems
Margaret Schedel, Rebecca Fiebrink and Phoenix Perry

MTCF: A framework for designing and coding musical tabletop applications directly in Pure Data
Carles F. Julià, Daniel Gallardo and Sergi Jordà

Physical modelling enabling enaction: an example
David Pirrò and Gerhard Eckel

SoundGrasp: A Gestural Interface for the Performance of Live Music
Thomas Mitchell and Imogen Heap

tween distinct genres
Trond Engum

The Six Fantasies Machine: an instrument modelling phrases from Paul Lansky's Six Fantasies
Andreas Bergsland

On Movement, Structure and Abstraction in Generative Audiovisual Improvisation
Bill Hsu

Demo session N — Wednesday 1 June 13:30–14:30

3rd floor, University Library

Gliss: An Intuitive Sequencer for the iPhone and iPad
Jan Trutzschler

Quadrofeelia — A New Instrument for Sliding into Notes
Jiffer Harriman, Locky Casey, Linden Melvin and Mike Repper

SQUEEZY: Extending a Multi-touch Screen with Force Sensing Objects for Controlling Articulatory Synthesis
Johnty Wang, Nicolas D'Alessandro, Sidney Fels and Bob Pritchard

SWAF: Towards a Web Application Framework for Composition and Documentation of Soundscape
Souhwan Choe and Kyogu Lee

Playing the "MO" — Gestural Control and Re-Embodiment of Recorded Sound and Music
Norbert Schnell, Frederic Bevilacqua, Nicolas Rasamimana, Julien Blois, Fabrice Guedy and Emmanuel Flety

(LAND)MOVES
Bruno Zamborlin, Marco Liuni and Giorgio Partesana

Can Haptics make New Music? — Fader and Plank Demos
Bill Verplank and Francesco Georg

Keynote Lecture 3 — Wednesday 1 June 14:30–15:30

Auditorium 1, University Library

Digital Lutherie and Multithreaded Musical Performance: Artistic, Scientific and Commercial Perspectives
Sergi Jordà

Concert — Wednesday 1 June 19:00–20:30

Lindemansalen, Norwegian Academy of Music

Trondheim Voices
Tone Åse, Siri Gjære, Live Maria Roggen, Heidi Skjerve, Ingrid Lode, Kirsti Huke, Anita Kaasbøll, Silje R. Karlsen

Interstices AP
Bill Hsu and Alain Crevoisier

Flayed/Flock
Bill Hsu, Håvard Skaset, Guro Skumsnes Moe

L2Ork
Ivica Ico Bukvic (Director), John Elder, Hillary Guilliams, Bennett Layman, David Mudre, Steven Querry, Philip Seward, Andrew Street, Elizabeth Ullrich and Adam Wirdzek

Club Concert — Wednesday 1 June 21:00–23:00

Chateau Neuf

V'Oct(Ritual)
Mark Bokowiec and Julie Wilson-Bokowiec (Venue: Betong)

mikro:strukt
Satoshi Shiraishi and Alo Allik (Venue: Betong)

Study No. 1 for Overtone Fiddle
Dan Overholt and Lars Grausgaard (Venue: Klubbscenen)

Distributed Composition #1
Doug Van Nort, Pauline Oliveros and Jonas Braasch (Venue: Betong)

7-of-12 dialectologies
Daniel Schorno and Haraldur Karlsson (Venue: Betong)

TweetDreams
Luke Dahl and Carr Wilkerson (Venue: Klubbscenen)

Installations

ROOM#81
Nicolas d'Alessandro and Roberto Calderon (Foyer, Chateau Neuf)

BM 0.1
Leo Peschta (3rd floor, University Library)

ORFI
MusicalFieldsForever – Anders-Petter Andersson, Birgitta Cappelen, Fredrik Olofsson (Foyer, University Library)

III

Concert notes

Sunday 29 May 18:00

Norwegian Museum of Science, Technology and Medicine

LOLC – Akito van Troyer, Jason Freeman, Avinash Sastry, Sang Won Lee and Shannon Yao

In LOLC, the musicians in the laptop orchestra use a textual performance interface, developed specifically for this piece, to create and share rhythmic motives based on a collection of recorded sounds. The environment encourages musicians to share their code with each other, developing an improvisational conversation over time as material is looped, borrowed, and transformed. LOLC was originally created by Akito van Troyer and Jason Freeman and is in active development at the Georgia Tech Center for Music Technology by Jason Freeman, Andrew Colella, Sang Won Lee and Shannon Yao. LOLC is supported by a grant from the National Science Foundation as part of a larger research project on musical improvisation in performance and education (NSF CreativeIT#0855758).

Aaron Albin, Andrew Colella, Sertan Şentürk and Sang Won Lee are current degree candidates or alumni from the Georgia Tech Center for Music Technology. All are focused on exploring new methods of musical interactivity through projects that involve current technology such as the Kinect, swarm robots, creative video games, and current MIR techniques.

Little Soldier Joe – Øyvind Brandtsegg and Carl Haakon Waadeland

The duo Little Soldier Joe uses percussion and live processing to explore thematic and textural ideas that arise in the improvised interplay between these two performers. LSJ uses live sampling and manipulation matter-of-factly as an established manner of music making. The audio manipulation techniques used are based on recent developments in particle synthesis.

Øyvind Brandtsegg Composer, musician and professor in music technology at NTNU. His focus lies in Compositionally Enabled Instruments, Particle Synthesis and sound installations. Øyvind has performed with the groups Krøyt and Motorpsycho, written music for interactive dance, theatre and TV, and worked as a programmer for other artists. His latest effort in music software programming is the "Hadron Particle Synthesizer", to be released as a device for "Ableton Live"' and as a VST plug-in.

Carl Haakon Waadeland Musician, composer and professor in music at NTNU. His main scientific interest lies within empirical rhythm research and the construction of models that simulate rhythm performance. Waadeland has performed and recorded amongst others with Gary Holton & Casino Steel, Warne Marsh, Siris Svale Band, Mikis Theodorakis & Arja Saijonmaa, Dadafon, and Rasmus og Verdens Beste Band. Waadeland published a book and CD on the Norwegian folk drum tradition in 2008.

Random Access Solo – Malin Stattin and Gerhard Eckel

Random Access Solo is a performance by Malin Stattin and Gerhard Eckel based on Gerhard's sonic sculpture Random Access Lattice (which is a tribute to Nam June Paik's work Random Access Music). Malin is performing with a motion-tracked loudspeaker, exploring a sonic topography of multilingual voice recordings (from librivox.org) laid out in space by Gerhard. A special version of the sculpture and the loudspeaker have been developed for the performance, considering the difference in the demands of a dance performer and the general exhibition public for exploring the work.

Malin Stattin is a choreographer and dancer based in Stockholm, Sweden. She is the founder and artistic director of the circus and dance company Vifira, which since 2008 has been her main platform for work. She has been working as a freelancer since 2004 after graduating from Danshögskolan in Stockholm and TEAK in Helsinki.

Reactable performance – Carles López

The Reactable was conceived in 2003 and was first presented at the International Computer Music Conference (ICMC) 2005 in Barcelona. Since then, the Reactable team has given more than 300 presentations and concerts in 40 countries, turning it into one of the most worldwide acclaimed new musical instruments of the 21st century. Since 2009, the Barcelona spin-off company Reactable Systems has been producing several Reactable models, such as the Reactable Live for traveling musicians and DJs, or its latest incarnation, Reactable mobile for Apple's iPhones and iPads.

Carles López Musician, producer and DJ born in Barcelona. López has been playing with the Reactable for the last three years. With this instrument he has performed in more than 40 countries, at all kinds of events, clubs and festivals. López also works as a composer for films and contemporary dance.

Monday 30 May 17.35

Oslo City Hall

Cornerghostaxis#1 – Gerriet K. Sharma, David Pirrò and Dana Jessen

Cornerghostaxis#1 (2009) is a piece by Gerriet K. Sharma for tape, live electronics, bassoon and tracking. The bassoonist is accompanied by a fixed four-channel electroacoustic composition. The tracked performer is immersed in a physically modelled scene in which four objects respond to her movements: the motion of these four "colleagues"' determines the spatial appearance of the four channels of the tape composition. Thus, the spatial behaviour of the performer very subtly controls the spatialisation of the piece, allowing for an intimate relationship between the unprocessed instrument and the electronic sounds and establishing a gestural relationship between the soloist's sounds, rhythms and movements and four sources which can be moved, lifted, placed, turned around the audience and varied in volume.

Dana Jessen Bassoonist Dana Jessen is a versatile musician with a concentration in contemporary and improvised music. Focused on expanding the role of the bassoon outside traditional settings, Dana has collaborated with composers, improvisers, dancers, poets, filmmakers and chamber musicians around the world. She lives and works in Amsterdam.

Gerriet K. Sharma Soundartist, composer. Postgraduate Studies (MFA) Media Art at the Academy of Media Arts (KHM) in Cologne. Master Composition/ Computermusic at IEM, University of Music and Performing Arts Graz. Key aspects of activity are spatialization of electroacoustic compositions in Ambisonics and transformation into 3D sound sculptures. Sight specific sound installations in public places and buildings.

David Pirrò Master degree in Theoretical Physics at the University of Trieste, and a Master degree in Computer Music at the Conservatory G. Tartini of Trieste (Italy). He worked at the Centre of Computational Sonology in Padua and collaborated in various electroacoustic and audio-visual projects with composer Paolo Pachini.

iPhone improvisation – NIME 2011 participants

All NIME participants with an iPhone are invited to participate in a large scale improvisation. We will use the app *Curtis Lite* and send out a sonic message that will spread around the room under the reception.

Monday 30 May 20:00

Chateau Neuf

Licht & Hiebe – Jacob Sello. Performed by Stefan Weinzierl (Lillesalen, Chateau Neuf)

Licht & Hiebe (2010) is the first concert piece for the new Instrument: The "Hexenkessel" (witch's cauldron) is a modified 22" timpani that uses LLP technology to turn the drumhead into an intuitive multitouch-interface for the control of live-electronics & dmx-stage-lights. The multitouch technique goes into symbiosis with a traditional instrument, keeping its acoustic qualities, but opening it to the vast possibilities of interactive multimedia. Besides the control of live-electronics the instrument features an interface to dmx-controlled stage-lights to create a situation of intense intermedial fireworks entirely controlled by the performer. The parts needed for this non-destructive timpani-hack cost less than $500.

Jacob Sello (1976, Hamburg/Germany) studied Audio Engineering, Systematic Musicology and Multimedia Composition in Hamburg. He is highly interested in the exciting possibilities that arise from the conjunction of traditional acoustic instruments and state-of-the-art technology. Pieces for clarinet controlled RC- helicopters or DJ-driven pneumatically prepared disklavier pieces are the outcome.

Stefan Weinzierl (1985, Günzburg/Germany) is constantly searching for fascinating challenges beyond genre-boundaries; as a drummer in contemporary solo performances, classical ensembles and orchestras as well as in Jazz- and Rock/Pop bands. He graduated in educational sciences in Regensburg and completed the Percussion Master program at the HfMT Hamburg in 2010.

ROYGBIV – Joshua Clayton (Lillesalen, Chateau Neuf)

Refraction of Your Gaze by Indeterminate Variables (ROYGBIV) is an effort to interface sound and the visible spectrum with digital and analog media. A collage of field recording, synth pad, and mechanical noise, ROYGBIV unfolds as wavelengths of light are read with discrete color sensors. Data is communicated through microcontrollers to custom audio software and a slide projector reproduces images of the natural world. ROYGBIV is concerned with fundamental properties of sensing, perception, and the technologies that mediate such experience. Metaphysical dimensions of color

and sound are implied as the projected image and rainbow form a dialectic between reflection and refraction.

Joshua Clayton New York-based artist whose work occupies a hybrid space of media art and language. His recent projects explore semiotics, mysticism, architecture and the urban landscape, and research-based forms of practice. Joshua has just completed a master's degree in Interactive Telecommunications from New York University.

With Winds for soprano t-stick – D. Andrew Stewart (Biblioteket, Chateau Neuf)

The t-sticks grew out of a collaborative project by Joseph Malloch and composer D. Andrew Stewart, at McGill University. The first prototype was completed in 2006. The t-sticks form a family of tubular digital musical instruments, ranging in length from 0.6 metres (soprano) to 1.2 metres (tenor). They have been designed and constructed to allow a large variety of unique interaction techniques. As a result, a significant emphasis is placed on the gestural vocabulary required to manipulate and manoeuvre the instrument. The musical experience for both the performer and audience is characterised by a unique engagement between performer body and instrument.

D. Andrew Stewart composer, pianist, clarinettist and digital musical instrumentalist. Stewart has been working in the field of music composition since 1994. Since 2000, he has been pursuing a career in live electronics – gesture-controlled – performance, after developing his own sensor-suit.

L'instant – Tom Mays (Biblioteket, Chateau Neuf)

The piece L'instant is freely inspired by the idea of subatomic *instantons* (a theoretical particle that is a "twist in matter and space-time" which automatically turns itself into an open, inflationary universe), employing rotation and layering of parts whose rhythms and timbres are built out of the combining and crossing of irrational numbers... The scenario is roughly "from the big bang to entropy", and a "surround sound" 5.1 diffusion space is critical to the sense of immersion within the rotating sound objects and textures. Originally composed as an 8 channel acousmatic work for a planetarium in Reims, France, this new version is for a solo performer with a Karlax (made by Da Fact).

Tom Mays composer, computer musician and teacher – teaches at the National Superior Conservatory of Music in Paris, and is currently working on PhD at the University of Paris 8 with Horacio Vaggione. He is especially interested in gestural performance of real-time computer systems for both written and improvised music, as well as in interaction between music and video.

All Hail the Dawn – Alexander Dupuis (Lillesalen, Chateau Neuf)

An interactive audiovisual feedback loop forms the basis of All Hail the Dawn. The instrument contains two simple light-sensitive oscillators. A crude spectral analysis in Max/MSP is used to filter the oscillators as well as looped buffers recorded from the instrument. A matrix of the spectral analysis, interactively altered in Jitter using audio data, is projected back onto the instrument and performer as a series of shifting patterns. This setup allows both the graphics and sound to drive each other, creating an evolving audiovisual relationship sensitive to slight changes in position, sound or processing.

Alexander Dupuis composer, performer, and multimedia artist. His work involves live electronics and guitar, real-time graphics and 3D animation, feedback systems and audiovisual installations. He graduated from Brown University in 2010, and is currently working towards his Masters Degree in the Digital Musics program at Dartmouth College.

Ural Power – Yoichi Nagashima (Lillesalen, Chateau Neuf)

Live computer music (multimedia) work, composed in 2010 and premiered in Russia. For this work, the composer developed a new interface system for musical expression. The new interface has 8 channels of infrared-ray distance sensors. This instrument is set up with two mic-stands on the stage. The performer also wears the specially developed instrument called *MiniBioMuse-III* which is 16 channels EMG sensor of the performance. The graphic part of this work is real-time OpenGL 3D graphics, which is live-controlled by the performance. This work is programmed in Max/MSP/jitter environment.

Yoichi Nagashima composer/researcher/PE, was born in 1958 in Japan. Since 1991 he has been the director of the *Art & Science Laboratory* in Hamamatsu, Japan. He is a professor of Shizouka University of Art and Culture, Faculty of Design, Department of Art and Science. He was the General Chair of NIME04.

Television Sky – EP trio – Erika Donald, Ben Duinker and Eliot Britton (Biblioteket, Chateau Neuf)

Television Sky is a three-movement work composed by Eliot Britton. The movements (Channels 1, 2, 3) deal with various musical and physical elements that figure prominently in the EP trio's research: Gesture, Texture, and Rhythm. Each movement adopts a different approach to organizing sounds; these provide unique arenas to explore communication, expression, and synchronization issues arising in an electroacoustic chamber music ensemble.

EP trio is a multi-faceted research group and performing ensemble. It is comprised of cellist Erika Donald, percussionist Ben Duinker, and composer/turntablist Eliot Britton. They are based at McGill University in Montreal, Canada where they enjoy support from the Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT).

About Place – Michael Straus (Biblioteket, Chateau Neuf)

About Place is an ever-expanding improvisational composition for sensorogmented [sic] saxophone, live environmental sounds and electronics. SOS was developed with Hans Wilmers at NOTAM (Norwegian Center for Technology in Music and the Arts) from September – October of 2010 with support from the American Scandinavian Foundation. SOS consists of six pressure sensitive sensors affixed to the main keys of the saxophone paired with a module strapped to the bell of the saxophone that wirelessly tracks motion, acceleration and direction in three-dimensional space. It is specifically designed to adapt and be transferred to any member of the saxophone family in a matter of minutes.

Michael Straus Saxophonist, has firmly established himself as an important new voice for experimental music. He is founder of the solo multimedia performance project What are you looking at?, and regularly performs throughout the U.S. and Europe with the chamber ensembles quux, Moonrise Hernandez, Portals of Distortion and EAR Duo.

Tuesday 31 May 19:00

Lindemansalen, Norwegian Academy of Music

Body Jockey – Sarah Taylor, Maurizio Goina and Pietro Polotti

Interactive performance based on the elementary gesture sonification principles of the EGGS system. Compared to previous EGGS performances, the system is used in a simpler form, one that can also be applied to non–trained bodies (non-dancers). Disco Dancing is a way of moving that is totally personal and has none of the established barriers of dance language. The trajectories of the dancer's hands are analyzed and classified in elementary gestalts categories as straight, circular, direction inversion. The dancer triggers and modulates sounds with her body, while the laptop performers change sound palettes and mapping following a predetermined score. A graphical representation of sounds and mapping is visually projected.

Sarah Taylor Dancer, Choreographer trained at the Australian Ballet School (Degree in Dance), in Classical, Cunningham and Graham, Scholarship student to Martha Graham school in New York. Currently working with Cesc Gelabert, for the 2011 Grec Festival, Barcelona.

Maurizio Goina Viola player and an audio-visual composer. Currently he is affiliated with the School of Music and New Technologies of the Conservatory of Trieste where he is developing, together with Pietro Polotti and with the collaboration of Sarah Taylor, the EGGS system for gesture sonification.

Pietro Polotti Studied piano, composition and electronic music. He has a degree in physics from the University of Trieste. In 2002, he obtained a Ph.D. in Communication Systems from the EPFL, Switzerland. Presently, he teaches Electronic Music at the Conservatory Tartini of Trieste, Italy. He has been part of the EGGS project since 2008.

Improvisation for piano + motion capture system – Sarah Nicolls and Nick Gillian

SN: I wanted to get at the closest relationship possible between my hands and the resulting sound. Having worked with sampling and complex processing and various sensors such as EMG, motion capture with live sound as the source seemed a way to really get inside an improvisation system that was really live and really intuitive. You can judge for yourselves!

NG: Sarah's movements are sensed using a Kinect 3D motion capture device and the gestures are recognised in real-time using the SEC, a machine learning toolbox that has been specifically developed for musician-computer interaction.

Sarah Nicolls UK-based experimental pianist and inventor of 'Inside-out piano'; collaborative researcher with e.g. Atau Tanaka, PA Tremblay; concerts e.g. world premieres of Larry Goves' Piano Concerto, Richard Barrett's Mesopotamia/London Sinfonietta/BBC Radio; article in LMJ20; Senior Lecturer at Brunel University; funding: Arts and Humanities Research Council (AHRC), Brunel Research Initiative and Enterprise Fund (BRIEF), Arts Council England.

Nick Gillian Post-doctoral researcher currently working on an E.U. project entitled SIEMPRE at the Sonic Arts Research Centre, Belfast. Nick recently completed his PhD in Gesture Recognition for Musician-Computer Interaction under the supervision of R. Benjamin Knapp and Sile O'Modhrain. His interests are in machine learning and pattern recognition and applying these techniques to enable real-time musician-computer interaction.

Socks and Ammo – Můstek: Lauren Sarah Hayes and Christos Michalakos

Socks and Ammo for piano, percussion and live electronics, is a new work investigating novel methods of communication between laptop and performer, as well as performer and performer, in an improvisational setting. Enhancing traditional aural and visual cues, a network is established between laptops, providing direction and suggestion to and between performers. Tactile feedback is provided to performers in the form of tiny vibrations on the skin, opening up a further, yet covert, channel of information to transmit signals and cues, allowing for a more informed and focused performance.

Lauren Sarah Hayes Composer and performer from Glasgow. Her recent practice focuses on realizing compositions for piano and live electronics, which unify extended technique, bespoke software and instrument augmentation. Undertaken at the University of Edinburgh, her research investigates audio-haptic relationships as performance strategies for performers of digital music.

Christos Michalakos Composer and improviser from northern Greece. Working predominantly with percussion and live electronics, his music explores

relationships between acoustic and electronic sound worlds, through an examination of methods for developing and augmenting his drum kit, forming part of his PhD research at the University of Edinburgh.

SoundGrasp – Thomas Mitchell and Imogen Heap

Recording artist and musician Imogen Heap will make her first live performance with SoundGrasp: a gestural performance interface which will soon appear within Imogen's forthcoming shows. Imogen will construct and layer a composition incorporating the live sampling and modification of voice and acoustic instruments. Hand postures and gestures will be captured using data gloves and interpreted to control the live audio processes. SoundGrasp has been developed as part of an ongoing collaborative research project between Imogen Heap and Thomas Mitchell at the University of the West of England. Fuller treatment is available in the paper"SoundGrasp: A Gestural Interface for the Performance of Live Music" published in this year's conference proceedings.

Imogen Heap Internationally renowned recording artist, musician and live performer from the UK. In 2010 she won a Grammy for "Best Engineered Album (non classical)" and was subsequently awarded an Ivor Novello award, both for her most recent album, "Elipse."

TURN ME! I need 12 Volts! – Kristin Norderval

Multi-channel sonic exploration on themes of power, energy and what people regard as home necessities. One channel is live acoustic vocals and toys. The other three channels are amplified audio streams containing percussive machine sounds, spoken word, and digital audio processing of the acoustic sources sampled in real-time. The audio streams are routed to 3 separate digital amplifier-speaker systems, which are human powered by dynamos and hand cranks. The mix of the channels will vary according to the decisions by audience members about which systems to power and for what duration.

Kristin Norderval creates work for voice, electronics, and interactive technology. Living in Oslo, trained in the US, and working internationally as a composer, singer, and improviser, Norderval has worked with and recorded for a veritable who's who of American composers including Philip Glass, Pauline Oliveros, Steve Reich, George Crumb, Anne Le Baron, David Lang, Tania Leon and many others. Norderval's own music is recorded on Deep Listening, Koch International, and Everglade.

Tuesday 31 May 21:00

Chateau Neuf

E=MCH – Paul Stapleton, Caroline Pugh, Adnan Marquez-Borbon and Cavan Fyans (Lillesalen, Chateau Neuf)

E=MCH is a recently formed quartet featuring Belfast-based improvisers Paul Stapleton (BoSS & Postcard Weevil), Caroline Pugh (Voice & Analogue Cassette Decks, Zero-input Mixer), Adnan Marquez-Borbon (Feedback Bass Clarinet, Recording Modules & Delay Lines) and Cavan Fyans (DIY Electronics). Memories, distortions of time and place, echoes from analogue delay lengths, solid state samplers, and modified vinyl all help shape the fabric of the music in response to its larger ecology. "Okay so making instruments and playing on them is not new, can't really see that there is any new thought about how why and what here, but the sound sculpture looks nice." — Cosmopolitan

Paul Stapleton Sound artist, improviser and writer originally from Southern California, currently lecturing at the Sonic Arts Research Centre in Belfast (SARC). Paul designs and performs with a variety of custom made metallic sound sculptures, electronics and found objects in locations ranging from impro clubs in Cork to abandoned beaches on Vancouver Island.

Caroline Pugh Scottish vocalist and performance artist. She deviously borrows analogue technologies and oral histories to create performances that present imagined constructions of traditional and popular culture. With a background in both folk music and improvisation, she collaborates with people from any discipline and performs in a wide variety of venues including folk clubs, arts venues and cinemas.

Adnan Marquez-Borbon Saxophonist, improviser, computer musician, and composer, currently a PhD student at SARC. His research emphasis is on the roles of learning models and skill development in the design of digital musical instruments. As a musician, his music focuses on improvisation and the electronic manipulation of sounds in real-time.

Cavan Fyans PhD research student, instrument builder, noise maker & improviser. Currently located at SARC, Cavan's research examines the spectator's cognition of interaction and performance in communicative interactions with technology. Cavan also devotes time to developing new and

innovative ways of breaking cheap electronic toys (Circuit Bending) and (re)constructing circuitry for sonic creation (Hardware Hacking).

REMI Sings – Christopher Alden (Biblioteket, Chateau Neuf)

REMI Sings is an electroacoustic performance for the bio-inspired Rhizomatic Experimental Musical Interface (REMI) and accordion. REMI is an interactive networked musical organism that receives sonic input from its environment, processes it based on the ever changing structure of its interior network, and generates a unique musical output. This rhizomatic network is a software structure modelled after the functioning and growth patterns of biological rhizomes, specifically the mycorrhizal association that form vital nutrient pathways for the majority of the planet's land-plant ecosystems. The performance REMI Sings highlights this interface's interactive nature, creating a dialogue between human performer and non-human musical intelligence.

Christopher Alden Composer, programmer, and instrumentalist currently studying at New York University's Interactive Telecommunications Program, where his research focuses on interactive music systems for composition and performance. Before ITP, he received his undergraduate degree in Music Theory and Composition at NYU where he studied composition under Marc Antonio-Consoli

Suspended Beginnings – Diemo Schwarz and Victoria Johnson (Biblioteket, Chateau Neuf)

The performance between electric violinist Victoria Johnson and Diemo Schwarz playing his interactive corpus-based concatenative synthesis software CataRT is an improvisation with two brains and four hands controlling one shared symbolic instrument, the sound space, built-up from nothing and nourished in unplanned ways by the sound of the instrument, explored and consumed with whatever the live instant filled it with. It creates a symbiotic relationship between the player of the instrument and that of the software. Live corpus-based concatenative synthesis permits here a new approach to improvisation, where sound from an instrument is recontextualised by interactive, gesture-controlled software. Not knowing what can happen is an integral part of the performance.

Victoria Johnson works with electric violin, live electronics, improvisation and musical technological issues in her artistic work. Trained as a classical violinist in Oslo, Vienna and London, she gave her debut recital in Oslo in

1995. She has established herself internationally as a soloist, chamber musician and improviser in contemporary, improvised and experimental, cross-disciplinary music and art.

Diemo Schwarz Researcher and developer at Ircam, composer of electronic music, and musician on drums and laptop with gestural controllers. His compositions and live performances, in solo as Mean Time Between Failure, or improvising with other musicians, explore the possibilities of corpus-based concatenative synthesis to re-contextualise any sound source by rearranging sound units into a new musical framework using interactive navigation through a timbral space.

The Loop – Jason Dixon, Tom Davis, Jason Geistweidt and Alain B. Renaud (Klubbscenen, Chateau Neuf)

The Loop explores the possibilities of co-located performance, decentralized composition, and the acoustics of network. This performance begins with a brief improvisation presenting acoustic sources to excite the network. This material is shared, transformed, and reintroduced into the composition. This process continues through successive generations until a predetermined time or a point at which the composition naturally concludes. The result is an integrated meta-instrument and an emergent composition, with no one artist being the sole performer or composer. Remote participants are represented locally by a mono speaker enabling the audiences to hear the transformation of audio through the networked instrument.

Jason Dixon Irish composer currently based in Norwich where he is in the process of completing his PhD in composition. His work explores issues of language, perception and memory in music. More recently he has been focusing on the Irish storytelling tradition and its place in contemporary Ireland.

Tom Davis Digital artist working mainly in the medium of sound installation. His practice and theory based output involves the creation of technology led environments for interaction. Davis is currently a lecturer at the University of Bournemouth and holds a PhD from the Sonic Arts Research Centre, Belfast.

Jason Geistweidt Sound artist based at the University or Tromsø, Norway, researching mixed-reality stages and performance systems. He is a former

faculty member of Interactive Arts and Media department at Columbia College Chicago. He holds PhD in electro-acoustic composition from the Sonic Arts Research Centre, Queens University, Belfast.

Alain B. Renaud Alain's research focuses on networked music performance systems with an emphasis on the creation of strategies to interact over a network musically and the notion of shared networked acoustic spaces. He is a lecturer in at Bournemouth University, England and holds a PhD from the Sonic Arts Research Centre.

Dissonance – Victor Zappi and Dario Mazzanti (Betong, Chateau Neuf)

Dissonance is an audio/visual performance in which a progressive soundtrack is created along with the exploration of an interactive virtual environment. While real instrument–generated music animates the projected worlds, the two performers are allowed to physically interact with virtual objects, changing their position, shape and color to control music and create new sounds. As the journey continues and the environment introduces new elements and new metaphors, performers are driven to explore the sonic laws that rule each scenario. Spectators wearing 3D glasses perceive the virtual environment as moving out of the screen and embracing the artists, in choreographies where real and virtual world literally overlap.

Victor Zappi PhD student and a new media artist. His research focuses on Virtual Reality and its applications in art and live performances.

Dario Mazzanti computer science engineer and multi-instrumentalist composer. He enjoys writing, recording and playing music combining his artistic streak with his interest for technology.

The Shells – Alex Nowitz (Biblioteket, Chateau Neuf)

Since 2008 I have been performing and composing music for voice and live-electronics using two Wii-remotes as gestural controllers. The live-electronics function in two ways: as an extension of my voice and as an instrument as well. The music creation is mainly based on live-sampling the voice. I also use pre-recorded sounds and my own compositions. In addition, since the beginning of 2010 we have been developing a new instrument, which goes beyond the technical possibilities of the Wii-controllers. I call this instrument the Shells. Besides motion sensors there are three more continuous controllers available: a pressure sensor, a joystick control and ultrasound for distance measurement.

Alex Nowitz Composer of vocal, chamber and electronic music as well as music for dance, theatre and opera. Furthermore, he is a voice artist, whistling and singing virtuoso who is classically trained as tenor and countertenor and presents a wide array of diverse and extended techniques. He has been artist in residence at STEIM, Amsterdam, since 2010.

BiLE (Birmingham Laptop Ensemble) – Julien Guillamat, Charles Céleste Hutchins, Shelly Knotts, Norah Lorway, Jorge Garcia Moncada, Chris Tarren (Lillesalen, Chateau Neuf)

An open playground for laptop improvisation and performance. BiLE's performance will focus on semi-structured improvisation, with players creating and manipulating sound using a variety of motion capture devices - iPhones, Wiimotes, and Xbox Kinect. The data captured by each device, along with analysed musical parameters, will be sent out over the shared network, to be used by each performer as they see fit. The aim is to allow players to latch onto other members of the group by mapping the shared data to their own software parameters, creating moments of convergence between the ensemble. BiLE takes an 'instrumental' approach to performance, with each performer having their own speaker, sonic identity and spatial location.

BiLE (Birmingham Laptop Ensemble) A collaborative group of six composers, brought together through their shared interest in live performance and improvisation. BiLE has an open and inclusive attitude towards experimentation with sound, and draws on the members' wide-ranging musical backgrounds.

Where Art Thou? Dance Jockey – Yago de Quay and Ståle Skogstad (Biblioteket, Chateau Neuf)

As artists, we have learned that throughout the history of mankind music and technology have co-evolved, shaping — and being shaped by — human expression and creativity. The variety and intricacy of these recombination processes contribute profoundly to the current diversity of performative structures and aesthetics within the arts. Where art Thou? is a 15 minute theatrical performance where sounds are controlled by sensors on the dancer's body. Blending a mixture of electronic music and sound effects with dance and acting, this novel act refocuses sensors from simplistic action-to-sound to contextualized aesthetic and dramatic expression. The name reflects the itinerant quality of the stage character as he travels through a world of sounds.

Yago de Quay Interactive media artist, musician and researcher based in Porto. His numerous installations and performances focus on user participation contributing to modify the art piece itself. They always have a strong sonic component and combine technologies to help create new modes of expression. Yago is currently finishing his M.Sc. in Sound Design and Interactive Music at the Faculty of Engineering, University of Porto.

Ståle Skogstad PhD student in the fourMs group at the University of Oslo. His research is focused on using real-time full-body motion capture technology for musical interaction. This includes real-time feature extraction from full body motion capture data and technical studies of motion capture technologies. He is currently working with the Xsens MVN inertial sensor suit.

Sonolume – Domenico Sciajno (Lillesalen, Chateau Neuf)

In this AV performance, images and sound interact: the basic elements of the images (brightness, color, saturation, hue, dislocation and relocation) are sensitive to the fundamental parameters of the sound being generated at that moment. Sound waves (also controlled by light waves during the performance) cross the physical world and alter the data stream that gives life to digital video in the same way that molecules are transformed by the sound contracting and expanding air particles in space.

Domenico Sciajno Double bass player and composer of acoustic and electronic music. Thanks to his interest in improvisation and the influence of academic education, his research currently focuses on the creative possibilities provided by the interaction between acoustic instruments, indeterminacy factors and live processing by electronic devices or computers.

Wednesday 1 June 19:00

Lindemansalen, Norwegian Academy of Music

Trondheim Voices – Tone Åse, Siri Gjære, Live Maria Roggen, Heidi Skjerve, Ingrid Lode, Kirsti Huke, Anita Kaasbøll, Silje R. Karlsen

Trondheim Voices is in this performance exploring a new tool in their work with voice sound and improvisation. The ensemble is working with a tracking system for sound positioning to enable a given singer's position on stage to directly influence the sound processing, both spatialisation and effects. Through their improvisations and compositions they are exploring: a) The effect of the sound "following"' the singers' movements on stage. b) The flexible use of processed voice sound within the big vocal ensemble, through the control each singer gets over the sound output by moving on stage. c) The visualization of choices and changes regarding sound, both for the performer and the audience, through the movements of each singer on stage.

Sound: Asle Karstad. Tracking system: John Torger Skjelstad

Trondheim Voices Professional ensemble, working with the endless possibilities within the field of vocal improvisation, to find new expressions and new music. Consisting of individual soloists, Trondheim Voices wishes to develop what happens when the unique soloist quality of each singer is set to interact with each other, and to find the collective sound and feeling. All of the singers are educated at NTNU, Trondheim, Norway.

Interstices AP – Bill Hsu and Alain Crevoisier

Interstices AP is a structured audio-visual solo improvisation, using the multitouch Airplane Controller to manipulate live electronic sound and interactive animations. During the piece, Bill Hsu will be using the Airplane Controller in combination with his PSHIVA particle system software, to synthesize and interact with generative sound and animations. The visual component of Interstices AP is a physics-based simulation of a particle system. Particles, images and other components interact with physical gestures in a fluid like system; the results resemble asymmetric, constantly evolving Rorschach blots that open up a wide range of visual associations. For more details, see Bill Hsu's poster in the conference proceedings.

Bill Hsu Associate Professor of Computer Science at San Francisco State University. His work with real-time audiovisual performance systems has been presented at (among others) SMC 2009 (Porto), Harvestworks Festival

2009 (New York), Fete Quaqua 2008 (London), MIX Festival 2007 and 2009 (New York), and Stimme+ 2006 (Karlsruhe).

Alain Crevoisier Senior researcher at the Music Conservatory of Geneva, Switzerland. He is the founder of Future-instruments.net, a collaborative research network active in the field of new musical interfaces and interactive technologies. The latest realization is the Airplane controller, a portable system that makes possible to transform any flat surface, into a multitouch interface.

Flayed/Flock – Bill Hsu, Håvard Skaset, Guro Skumsnes Moe

Flayed/Flock is a structured audio-visual improvisation for three musicians, utilizing live acoustic and electronic sound and interactive animations. The visual component of Flayed/Flock is an enhanced flocking simulation that interacts with real-time audio from the performance of improvising musicians. Abstract patterns develop out of the flocking behavior; the flocks are also able to coalesce into well-defined symbols and forms such as crescents and stars, all while moving in a natural-looking manner consistent with flocking behavior. For more details, see Bill Hsu's poster in the conference proceedings.

Bill Hsu Associate Professor of Computer Science at San Francisco State University. His work with real-time audiovisual performance systems has been presented at (among others) SMC 2009 (Porto), Harvestworks Festival 2009 (New York), Fete Quaqua 2008 (London), MIX Festival 2007 and 2009 (New York), and Stimme+ 2006 (Karlsruhe).

Håvard Skaset (guitar) and Guro Skumsnes Moe (bass) The Oslo-based duo works intensively in the borders between improv, noise and rock. Skaset and Moe play in bands including Bluefaced People, Art Directors, Sult, Mirror Trio, SEKSTETT, Telling Stories About Trees and MOE. They have been working with Christian Wolff, Pauline Oliveros, Fred Frith, Ikue Mori, Okkyung Lee, Frode Gjerstad and many more.

Serene – L2Ork

...the one moment in the day when the world melts away and we catch a glimpse of life that just is... a celebration of this moment through juxtaposition of Taiji (Tai Chi Chuan) choreography and music...

Composer: Ivica Ico Bukvic (1976-)

13 – Ron Coulter, L2Ork

13 is a game of prime numbers and primal instincts pitting timbre against rhythm. Driven by conductor's oversight over an array of performer-specific and ensemble-wide parameters, a networked ensemble acts as one large meta-tracker where each individual performer contributes its own gesture-driven motives or tracks. The ensuing meta-tracker texture is superimposed against improvised acoustic percussion in a search of a meaningful discourse and ultimately musical synergy.

Composer: Ivica Ico Bukvic (1976-)

Citadel – Aurora Martin, L2Ork

Citadel for soprano and L2Ork draws inspiration from a famous poem "Himna Slobodi" (Hymn to Freedom) by the 17th century Croatian poet Ivan Gundulic. As the first piece ever written for the newfound ensemble, it relies upon pervasive tonality, in many ways posing as an electronic counterpart to a traditional string ensemble. Using the infinite-bow metaphor to create lush tonal harmonies the piece forms a compelling aural foundation for a lyrical showcase of soloist's vocal talent.

Composer: Ivica Ico Bukvic (1976-)

L2Ork Founded by Dr. Ivica Ico Bukvic in May 2009, is part of the latest interdisciplinary initiative by the Virginia Tech Music Department's Digital Interactive Sound & Intermedia Studio (DISIS). As an emerging contemporary intermedia ensemble with a uniquely open design, L2Ork thrives upon the quintessential form of collaboration found in the western classical orchestra and its cross-pollination with increasingly accessible human-computer interaction technologies for the purpose of exploring expressive power of gesture, communal interaction, discipline-agnostic environment, and the multi-dimensionality of arts.

Members: Ivica Ico Bukvic (Director), John Elder, Hillary Guilliams, Bennett Layman, David Mudre, Steven Querry, Philip Seward, Andrew Street, Elizabeth Ullrich and Adam Wirdzek

Wednesday 1 June 21:00

Chateau Neuf

V'Oct (Ritual) – Mark Bokowiec and Julie Wilson-Bokowiec (Betong, Chateau Neuf)

V'Oct(Ritual) places the audience inside a circular liminal space of sonic evocation and features the Bodycoder System© the first generation of which was developed by the artists in 1995. The Bodycoder interface is a flexible sensor array worn on the body of a performer that sends data generated by movement to an MSP environment via radio. All vocalisations, decision making, navigation of the MSP environment and qualities of expressivity are selected, initiated and manipulated by the performer, uniquely, this also includes access to gestural control of live 8-channel spatialization. This piece is fully scored with few moments of improvisation.

Julie Wilson-Bokowiec has created new works in opera/music theatre, contemporary dance and theatre and has worked with Lindsey Kemp, Genesis P-Orridge, Psychic TV and Hermann Nitsch. Julie is a Research Fellow at CeReNem (Centre for Research in New Music) at the University of Huddersfield.

Mark Bokowiec is the manager of the electroacoustic music studios and the Spacialization and Interactive Research Lab at the University of Huddersfield where he also lectures in interactive performance, interface design and composition. Mark began creating work with interactive technologies in 1995.

mikro:strukt – Satoshi Shiraishi and Alo Allik (Betong, Chateau Neuf)

mikro:strukt is a collaborative performance in which the custom-built e-clambone provides an acoustic source for the ensuing audiovisual environment. E-clambone is custom-built electronic instrument that consists of an aerophone supplied with haptic sensors and digital signal processing algorithms. The performance seeks to integrate elements of electro-acoustic improvisation, timbre composition and artificial intelligence based approach to autonomous audiovisual composition and explore micro level timbre composition in real time.

Satoshi Shiraishi Electro-acoustic instrument designer/performer from Japan, currently living in The Hague, The Netherlands. He originally started his music carrier as a rock guitarist. After the meeting with computer music, he moved to The Netherlands to pursue his own way of playing computer generated sound on a stage.

Alo Allik (Estonia) has a musically and geographically restless lifestyle, which has taken him through diverse musical worlds including DJ-ing and producing electronic dance music, live laptop jams, electroacoustic composition, free improvisation, audiovisual installations and performances.

Study No. 1 for Overtone Fiddle – Dan Overholt and Lars Graugaard (Klubbscenen, Chateau Neuf)

This generative / improvisatory work uses an iPod Touch and a tactile sound transducer attached to the Overtone Fiddle's resonant body as a mobile system to lay out a variety of animated and transformed sound sources over time.

Dan Overholt Associate Professor in the Department of Architecture, Design and Media Technology at Aalborg University, Denmark. He received a PhD in Media Arts and Technology from the University of California, Santa Barbara, a M.S. from the MIT Media Lab, and studied Music and Electronics Engineering and at CSU, Chico. As a musician, he composes and performs internationally with experimental human-computer interfaces and musical signal processing algorithms.

Lars Graugaard Free-lance composer, laptop performer and researcher. He holds a PhD in Artistic and Technological Challenges of Interactive Music from Oxford Brookes University and a MS in flute performance from the Royal Danish Academy of Music. His main interest is the systematic study of music's expressive capacity applied to score composing, realtime interactive performance, generative and emergent music.

Distributed Composition #1 – Doug Van Nort, Pauline Oliveros and Jonas Braasch (Betong, Chateau Neuf)

This piece is written in consideration of two distinct paradigms: telematic music performance and human-machine improvisation. Specifically this work is a structured improvisation for three humans and one intelligent agent, being constrained by sections that determine which pairing (duos, trios) of

performers are active. Instrumentation also changes between sections in a way that blurs the line of agency and intent between acoustic human performers, laptop tablet-based human performer, and agent improviser, as the two remote (NY, Stanford) acoustic performers (v-accordion, soprano saxophone) engage with the on-stage laptop performer (GREIS system) and ambient presence of the agent performer (spatialization, loops, textures).

Doug Van Nort Experimental musician and digital music researcher whose work includes composition, improvisation, interactive system design and cross-disciplinary collaboration. His writings can be found in Organised Sound and Leonardo Music Journal among other publications, and his music is documented on Deep Listening, Pogus and other labels.

Pauline Oliveros (1932) is a composer and improviser, teaches at RPI, plays a Roland V Accordion in solo and ensemble improvisations. Her works are available through download, cassette, CD, DVD, and Vinyl releases. Oliveros founded the Deep Listening Institute, Ltd. based in Kingston NY.

Jonas Braasch Eexperimental soprano saxophonist and acoustician with interests in Telematic Music and Intelligent Music Systems. He has performed with Curtis Bahn, Chris Chafe, Michael Century, Mark Dresser, Pauline Oliveros, Doug van Nort and Stuart Dempster – among others. He currently directs the Communication Acoustics and Aural Architecture Research Laboratory at RPI.

7-of-12 dialectologies – Daniel Schorno and Haraldur Karlsson (Betong, Chateau Neuf)

The formalistic identity of "7-of-12" consists of a showcase format for "penta digit instrumental inventions" diffused in quadrophonic audio and 3d interactive video projection. The dialectic intertwining of Karlsson's abstract art and Schorno's sonetic world extends into a composition of 12" duration. Eponymous instrument group "EIG"' consist of two former classmates of Sonology where they among other things studied the making of alternative electronic instruments. The performance"7-of-12 dialectologies" is an outcome of collaborated teachings and methodology in dialogue with past performances.

Daniel Schorno Composer, born in Zurich in 1963. Studied composition in London with Melanie Daiken and electronic and computer music in The Hague, with Joel Ryan and Clarence Barlow. Invited by Michel Waisvisz he

led STEIM - the re-nown Dutch Studio for Electro Instrumental Music, and home of "New Instruments" - as Artistic Director until 2005. He is currently STEIM's composer-in-research and creative project advisor.

Haraldur Karlsson Visual artist, born in Reykjavik 1967. Haraldur studied Multi-media in the art academy in Iceland, Media-art in AKI in Enschede and Sonology in the Royal conservatories The Hague. Haraldur is mainly focused on interactive audio/video/3D installations and performances, and instrumental computer controllers. His fire instrument "TFI"' is part of the Little Solarsystem "LSS" navigation system that is an audio/video/3D performance.

TweetDreams – Luke Dahl and Carr Wilkerson (Klubbscenen, Chateau Neuf)

TweetDreams uses real-time Twitter data to generate music and visuals. During the performance tweets containing specific search terms are retrieved from Twitter. Each tweet is displayed and plays a short melody. Tweets are grouped into trees of related tweets, which are given similar melodies. We invite the audience to participate in TweetDreams by tweeting during performance with the term *#Nime2011*. This term is used to identify tweets from the audience and performers. Global search terms are used to bring the world into the performance. Any tweet with these terms occurring anywhere in the world becomes part of the piece.

Luke Dahl Musician and engineer currently pursuing a PhD at Stanford University's CCRMA. His research interests include new musical instruments and performance ensembles, musical gesture, rhythm perception, and MIR. He has composed works for the Stanford Laptop and Mobile Phone Orchestras and also creates electronic dance music.

Carr Wilkerson System Administrator at CCRMA specializing in Linux and Mac OS systems. He is a controller and software system builder and sometime performer/impresario, instructor and researcher.

IV

Installations

BM 0.1 – Leo Peschta

Location 3rd floor, University Library

The BM's are single-track drum computers, which generate sound by hitting the object they are mounted on. They consist of a simple 16-step sequencer, a solenoid which "pushes" on the object if a step is selected, a battery pack and a RF sender and receiver to enable them to synchronize with other BM's near by. They can be mounted with their vacuum cups to any plain surface or screwed on any other object. The BM's can be programmed while running and therefore also can be used as a "live-instrument."

Leo Peschta Born 1978 Austria. After studies of photography and graphic design Leo Peschta attended the Academy of Applied Arts Vienna graduating 2007 in Digital-Media-Arts. He received international awards and stipends including the Heinrich-Klotz Stipendium (2003) and the robot-choice award(2008). He works as media artist in Vienna primarily in the field of robotics.

ORFI – An Open Interactive Field – MusicalFieldsForever – Anders-Petter Andersson, Birgitta Cappelen, Fredrik Olofsson

Location Foyer, University Library

ORFI is an open interactive field, consisting of many soft wireless modules to interact with. The field is open to many interpretations, ways of interacting and roles to take. ORFI is an interactive installation created by the group MusicalFieldsForever, exhibited around the world. ORFI is also a result within research by design in interaction design and interactive music composition, and a political physical statement regarding power structures in society and the democratic potential of new technologies. ORFI is part of the 5 year research project RHYME to promote wellbeing for families with disabilities. Partners in RHYME are University of Oslo, Oslo School of Architecture & Design, Center for Music & Health at Norwegian Academy of Music. The name of the installation "Orfi" comes from "Or" for origami and "fi" for "field." But Orfi also refers to Orpheus, the father of music in Greek mythology. He who according to the myth could make rocks dance. The Orfi modules or cushions, if you like, communicate wireless with each other. So you can freely build, throw, play, sing in and with the modules as you like. Orfi responds in changeable graphics, light and music, when you bend the wings of the modules.

ROOM#81 – Nicolas d'Alessandro and Roberto Calderon

Location Foyer, Chateau Neuf

ROOM#81 is a digital art installation which explores how visitors can interact with architectural and vocal cues to intimately collaborate. The main space is split into two distinct areas separated by a soft wall, i.e. a large piece of fabric tensed vertically. Movement within these spaces and interaction with the soft wall is captured by various kinds of sensors. People's activity is constantly used by an agent in order to predict their actions. Machine learning is then achieved by such agent to incrementally modify the nature of light in the room and some laryngeal aspects of synthesized vocal spasms. The combination of people closely collaborating together, light changes and vocal responses creates an intimate experience of touch, space and sound.

Nicolas d'Alessandro Researcher and musician who has been exploring the interactive side of artificial voice production for the last eight years. He built several digital instruments for performing synthetic speech and singing, such as the handsketch. PhD in Applied Sciences from the University of Mons (Belgium) and is now Research Associate at the University of British Columbia (Canada).

Roberto Calderon Architect and artist interested in in the human perception and interaction with ubiquitous technology and interactive environments. His work deals with public displays, interactive architecture, wearable and mobile devices. He is interested in the concept of agent-based architecture able to form intimate relationships with its inhabitants. Currently pursuing his PhD at the Media and Graphics Interdisciplinary Centre at the University of British Columbia.

Stefanie Müller Computer scientist and author interested in transferring the story behind everyday experiences into interactive artwork. Thereby, she is drawing on her experiences as a writer of modern poetry for which she received several scholarships. Stefanie is working as an anthologist and recently published two books in collaboration with the Canadian photographer Darren Holmes.

V

Exhibition

Exhibition on Sonic Interacion Design

Norwegian Museum of Science, Technology and Medicine
29 May – 21 August 2011
http://sid.bek.no

Sound can be one of the principal channels conveying information, meaning, and aesthetic/emotional qualities in interactive contexts. The 12 works of this exhibition showcase the use of Sonic Interaction Design within arts, music and design, and also provide examples of sonification for research and artistic purposes:

- Akousmaflore - Scenocosme: Grégory Lasserre & Anaïs met den Ancxt (FR), 2006
- Auditory Augmentation at your Fingertips - Rene Tunnermann, Till Bovermann & Thomas Hermann (FI/DE), 2010
- Aura: The stuff that forms around you - Steve Symons (UK), 2007
- Crush-2 - Natasha Barrett & Karen Mair (NO), 2011
- KII Voicetopological - Michael Markert (DE), 2007
- MindBox - Christian Graupner, Roberto Zappalà, Norbert Schnell & Nils Peters (DE/IT/FR), 2010
- Random Access Lattice - Gerhard Eckel (AT), 2011
- Sonic Chair - Thomas Hermann & Risto Kõiva (DE/EE), 2008
- Sonic Helmet - Satoshi Morita (JP/GE), 2008
- Swinging Suitecase - Jessica Thompson (CA), 2010

- The Movement I-X - Espen Sommer Eide (NO), 2011
- Thicket - Packard and Ott (US), 2010

The accompanying catalogue presents information about the exhibition, all featured works, the people behind them, and includes a wealth of images and illustrations.

The exhibition is one of the final outcomes of a four-year EU research project, COST IC0601 Action on Sonic Interaction Design (SID), that has been running from 2007 to 2011. The exhibition takes place at the Norwegian Museum of Science, Technology and Medicine, and opens in conjunction with NIME 2011: The International Conference on New Interfaces for Musical Expression. It is curated by Trond Lossius and Frauke Behrendt, and produced by BEK - Bergen Center for Electronic Arts.

Supported by Arts Council Norway, COST IC0601 Action on Sonic Interaction Design (SID), COST: European Cooperation in Science and Technology " Year of Visibility" and Lydgalleriet.

Program overview

	Sunday	Monday	Tuesday	Wednesday
08:30		Registration	Registration	Registration
09:00	Pre-NIME	Opening	Paper session F	Paper session K
09:30	activities	Keynote:		
10:00		Kvifte		
10:30		Coffee break		Coffee break
11:00		Paper session A	Coffee break	Paper session L
11:30			Keynote:	
12:00			Rokeby	
12:30		Lunch break	Lunch break	Lunch break
13:00				
13:30		Poster session B	Poster session G	Poster session M
14:00		Demo session C	Demo session H	Demo session N
14:30		Paper session D	Paper session I	Keynote: Jorda
15:00	Registration			
15:30	(Music Academy)	Coffee break	Coffee break	Coffee break
16:00		Paper session E	Paper session J	NIME discussion
16:30				
17:00	Transportation	Transportation	Dinner break	Dinner break
17:30		Reception		
18:00	Opening concert	(Oslo City Hall)		
18:30	SID exhibition			
19:00	Reception		Concert	Concert
19:30	(Technical	Transportation		
20:00	Museum)	Club concert		
20:30	Transportation			
21:00			Club concert	Club concert
21:30				
22:00				
22:30				