### 19<sup>th</sup> Conference on New Interfaces for Musical Expression – NIME 2019 Porto Alegre, Brazil 3-6 June 2019

## Programme

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### MUSIC

Salão de Atos of UFRGS Monday, 3<sup>rd</sup> June 2019 At 20:00

### TROIS MACHINS DE LA GRÂCE AIMANTE (CORETET NO. 1)

**Rob** Hamilton

Rensselaer Polytechnic Institute, Troy, United States

### iCONS

Rodrigo F. Cádiz

Pontificia Universidad Catolica de Chile, Santiago, Chile

### **UNCERTAIN RHYTHMS**

Paul Stapleton

Sonic Arts Research Centre, Belfast, United Kingdom

#### VERSE N.1

Luiz Naveda Natacha Lamounier State University of Minas Gerais, Belo Horizonte, Brazil State University of Minas Gerais, Belo Horizonte, Brazil

### **VRENGT: A SHARED BODY-MACHINE INSTRUMENT FOR MUSIC-DANCE PERFORMANCE**

Alexander Refsum Jensenius Cagri Erdem Katja Henriksen Schia University of Oslo, Norway University of Oslo, Norway University of Oslo, Norway

#### TANTO MAR

André Lopes Martins Paulo Assis Universidade de São Paulo - USP, Brazil Universidade de São Paulo - USP, Brazil

### **TEMPO TRANSVERSAL - FLAUTA EXPANDIDA**

Cássia Carrascoza Bomfim	Universidade de São Paulo - USP, Brazil
Felipe Merker	Federal University of Pelotas, Pelotas, Brazil

Salão de Atos of UFRGS Tuesday, 4<sup>th</sup> June 2019

At 20:00

At 20:00

GIRA	João Nogueira Tragtenberg	SENAI Innovation Institute for ICT, Recife, Brazil
	Filipe Calegario	SENAI Innovation Institute for ICT, Recife, Brazil
BAD M	OTHER / GOOD MOTHER - AN	
	Annina Rüst	Florida Atlantic University, Jupiter, United States
COLLIG	GATION	
	James Dooley	Royal Birmingham Conservatoire, Birmingham, United Kingdom
SELF-I	BUILT INSTRUMENT	
	Jiyun Park	Academy of Media Art Cologne, Cologne, Germany
BORRO		SINGING SYNTHESIS FEATURING T-VOKS AND C-VOKS
	Boris Doval Christophe d'Alessandro	Institut Jean Le Rond d'Alembert, Paris, France CNRS Sorbonne Université, Paris, France
	Grégoire Locqueville	Institut Jean Le Rond d'Alembert, Paris, France
	Xiao Xiao	MIT Media Lab, Cambridge, United States
DIY BI	ONOISE	
	Sabina Hyoju Ahn	Kunstuniversität Linz, Linz, Austria
MUSIC	URSOR	
	Martim Galvão	Brown University, Providence, United States
PYTHA	GOREAN DOMINO	
	Ana Dall'Ara-Majek Takuto Fukuda	CIRMMT,Montreal, Canada CIRMMT Montreal, Canada
		Agulha Night Club Thursday, 6 <sup>th</sup> June 2019

**KEYNOTE** 

Ana María Romano Gomez

Universidad El Bosque, Colombia

### WE BASS: INTER(ACTIONS) ON A HYBRID INSTRUMENT

Miguel Antar Paulo Assis University of São Paulo, São Paulo, Brazil University of São Paulo, São Paulo, Brazil

### FLEXSYNTH: BLENDING MULTI-DIMENSIONAL SONIC SCENES

Tom Ajin Jiji McGill University, Montreal, Canada

### FIBER OPTIC MIDI CONTROLLER

Jesse Simpson

New York University, United States

### SOUND OF COMPUTING THE SIGNAL ANALYSIS OF GRAVITY WAVES

Edgar Berdahl

School of Music, Louisiana State University, Baton Rouge, Louisiana, United States

### **PANDEMONIUM TRIO**

Barry J. Cullen

Sonic Arts Research Centre, Belfast, United Kingdom

Miguel Ortiz Paul Stapleton Sonic Arts Research Centre, Belfast, United Kingdom Sonic Arts Research Centre, Belfast, United Kingdom

**OPEN JACK NIGHT** 

### **INSTALLATIONS**

Recife/PE, Brazil

UM Coletivo, Recife/PE, Brazil

### **Centro Cultural and Sala dos Sons of UFRGS** Porto Alegre, 3<sup>rd</sup> – 6<sup>th</sup> June 2019

### MARKOV MAGIC CIRCLE

Sofy Yuditskaya

### Sala dos Sons of UFRGS

Music Dept, NYU/GSAS, NYC, New York, United States

**TOUCHING AFFECTIVE** 

Hannah E. Wolfe

**CHOWNDOLO** 

Giacomo Lepri

Alessia Milo Fabio Morreale

## Hall 312

Media Arts and Technology, University of California, Santa Barbara, Santa Barbara, California, United States

#### **Room 312**

Centre for Digital Music, Queen Mary University, London, United Kingdom Queen Mary University of London, London, United Kingdom Creative Arts and Industries, University of Auckland, Auckland, New Zealand

### MATERIA ANIMATA

Ricardo Scholz

Iuru Brainer Araújo Tregne

### **GUAÍBA'S SOUND ISLAND**

Camila Proto

Federal University of Rio Grande do Sul, Porto Alegre/RS, Brazil

### SOMACOUSTICS

Maros Suran Bomba Palle Dahlstedt

Aalborg University, Aalborg, Denmark Dept. of Communication, Aalborg University, Aalborg, Denmark Dept. of Computer Science and Engineering, University of Gothenburg, Gothenburg, Sweden

### ACTING VOICES - Madrigale a Sei Vasi

**Room 305** 

#### Room 308 Informatics Centre, Universidade Federal de Pernambuco,

### Hall 308

**Room 304** 

Paulo Vitor Itaboraí	Universidade de São Paulo, São Paulo, Brazil
Alex Buck	CalArts, Santa Clarita, California, United States

### **Embodied Sonic Meditation: Resonance of the Heart**

Jiayue Cecilia Wu Donghao Ren University of Colorado , Denver, Colorado, United States University of California, Santa Barbara, California, United States

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### DEMOS

Room 211 Porto Alegre, 4<sup>th</sup> June 2019 Demo Session: 1 & 2

### SCREENPLAY: A TOPIC-THEORY-INSPIRED INTERACTIVE SYSTEM

George Meikle	Performing Arts, Edge Hill University, Ormskirk, Lancashire, United Kingdom
MUSCULAR WIRES	
Monica Bate	Departamento de Artes Visuales, Universidad de Chile, Santiago, RM, Chile
Javier Jaimovich	Departamento de Sonido, Universidad de Chile, Santiago, RM, Chile
Francisca Morand	Departamento de Danza, Universidad de Chile, Santiago, RM, Chile

## AUDIOSTELLAR: A SAMPLER-LIKE MUSICAL INSTRUMENT FOR LATENT SOUND STRUCTURE DISCOVERY AND EXPERIMENTATION

Leandro Garber Tomás Ciccola	CONICET, CIIPME, Capital Federal, Argentina MUNTREF Art and Science, UNTREF, Buenos Aires, Argentina
HANDY INTERMODULATOR Laewoo Kang	Information Science, Cornell University, Ithaca, New York, United
	States

### **EAVI EMG board**

Embodied Audiovisual Interaction Unit, Computing Department,
Goldsmith, University of London, London, England, United
Kingdom
EAVI, Goldsmiths, University of London, London, United
Kingdom
Goldsmiths University of London, London, United Kingdom

## A "VOICE" INSTRUMENT WITH NEUTRAL VOICE AND INTONATION BASED ON VOCAL TRACT MODELS WITH SOFT MATERIAL

Kazuhiro Jo Fou Yoshimura

Faculty of Design, Kyushu University, Fukuoka, Japan Graduate School of Design, Kyushu University, Fukuoka, Japan

### STEAM SYNTH: SYNTHESIS WITH TACTILE, ELECTRONIC, ACOUSTIC AND MECHANICAL PROPERTIES

Stephen J Harhai

Handmade Electronic Instruments, Denver, Colorado

Room 211 Porto Alegre, 5<sup>th</sup> June 2019 Demo Session: 3 & 4

### COLLABORATIVE MUSICAL PERFORMANCES WITH AUTOMATIC HARP BASED ON IMAGE RECOGNITION AND FORCE SENSING RESISTORS

School of Aerospace Engineering, Tsinghua University, Yupu Lu Beijing, China Yijie Wu Department of Computer Science, The University of Hong Kong Yuxiang Ma School of Aerospace Engineering, Tsinghua University, Beijing, China School of Aerospace Engineering, Tsinghua University, Shijie Zhu Beijing, China

### AUSYNTHAR: A SIMPLE LOW-COST MODULAR SYNTHESIZER BASED ON AUGMENTED REALITY

Pedro Pablo Lucas Independent Researcher, Guayaquil, Ecuador

#### **CHORDATA: A STRING BASED MUSIC CONTROLLER**

Stevie Jonathan Sutanto	Interface Cultures, Kunstuniversität Linz, Linz, Austria
Wesley Lee Yang	Interface Cultures, Kunstuniversität Linz, Linz, Austria

### ACADEMIC FESTIVAL OVERTURE

Dietmar Hellmich Oliver Hödl

Composer, Vienna, Austria Faculty of Informatics, Cooperative Systems Research Group, University of Vienna, Vienna, Austria

### **VIRTUAL HOMO DEUS 1**

Philip Liu

Berlin University of the Arts, Berlin, Germany

Room 211 Porto Alegre, 6<sup>th</sup> June 2019 Demo Session: 5 & 6

### **EXPLORING THE CONTAINER METAPHOR FOR EQUALISATION MANIPULATION**

Christopher Dewey	School of Computing and Engineering, University of Huddersfield,
	Huddersfield, United Kingdom
Jonathan P. Wakefield	School of Computing and Engineering, University of Huddersfield,
	Huddersfield, United Kingdom

### A SPATIALLY DISTRIBUTED VIBROTACTILE ACTUATOR ARRAY FOR THE FINGERTIPS

Edgar Berdahl	Louisiana State University, Baton Rouge, Louisiana, United States
Austin Franklin	Louisiana State University, Baton Rouge, Louisiana, United States
Eric Sheffield	Louisiana State University, Baton Rouge, Louisiana, United States

### **GRAIN PRISM: HIEROGLYPHIC INTERFACE FOR GRANULAR SAMPLING**

Gabriela Bila Advincula	Media Lab - City Science, MIT, Cambridge, Massachusetts, United
	States
Don Derek Haddad	Responsive Environments, Media Lab, MIT, Cambridge,
	Massachusetts, United States
Kent Larson	MIT, Cambridge, Massachusetts, United States

### AMIGO: AN ASSISTIVE MUSICAL INSTRUMENT TO ENGAGE, CREATE AND LEARN MUSIC

Isabela Corintha	Sound Design for Digital Media, FEUP, Porto, Portugal
Giordano Cabral	Centro de Informática, Universidade Federal de Pernambuco,
	Recife, Pernambuco, Brazil
Gilberto Bernardes	Sound Design for Digital Media, FEUP, Porto, Portugal

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### **WORKSHOPS**

### Centro Cultural of UFRGS Porto Alegre, 3<sup>rd</sup> June 2019

### **NIME PRIMER WORKSHOP**

### Room 309 From 9:00 to 11:30

Dan Overholt	Sound and Music Computing, Aalborg University, Copenhagen, Denmark
Stefania Serafin	Department of Architecture, Design and Media Technology, Aarlborg University, Copenhagen, Denmark
Laurel Pardue	Department of Architecture, Design and Media Technology, Aarlborg University, Copenhagen, Denmark

#### COSMO WORKSHOP: INTRODUCTION TO EFFECT PROCESSING WITH CSOUND AND THE COSMO-DSP LIBRARY Room 211 From 9:00 to 13:00

Alex Hofmann	Dept. of Music Acoustics, *University of Music and Performing
	Arts Vienna; **Austrian Academy of Sciences, Vienna, Austria
Bernt Isak Wærstad	Norwegian Academy of Music, Music Technology, Oslo, Norway

### MAKING PREDICTIVE NIMES WITH NEURAL NETWORKS

### Room 311 From 9:00 to 18:30

Charles Patrick Martin	Research School of Computer Science, The Australian National
	University, Canberra, Australia
Jim Torresen	Department of Informatics, University of Oslo, Oslo, Norway
Tejaswinee Kelkar	Department of Musicology, University of Oslo, Oslo, Norway

### OPEN RESEARCH STRATEGIES AND TOOLS IN THE NIME COMMUNITY

### Room 309 Part 1 from 11:30 to 13:00 Part 2 from 14:30 to 16:00

University of Oslo, Oslo, Norway
Queen Mary University of London, London, United Kingdom
Norwegian University of Science and Technology,
Trondheim, Norway
Aalborg University,Copenhagen,Denmark
IRCAM, Paris, France
Virginia Tech, Blacksburg, Virginia, United States
Goldsmiths University of London, London, United Kingdom
Universidade Federal do Rio Grande do Sul,
Porto Alegre, Brazil

### ETHICS AT NIME

### Room 309 From 16:00 to 18:30

Alexander Refsum Jensenius	University of Oslo, Oslo, Norway
Rodrigo Schramm	Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil
Lamberto Coccioli	Royal Birmingham Conservatoire, Birmingham, UK
Clara Mancini	The Open University, Milton Keynes, UK
Michael J. Lyons	Ritsumeikan University Kyoto, Japan

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### PAPERS

Robotics & Mechatronics

Room 309 Tuesday, 4<sup>th</sup> June 2019 At 9:00

### **KEYNOTE**

Marcelo Wanderley	McGill University, Canada
AN ACTIVE WINE GLASS SYSTEM W	/ITH A LIQUID SLOSHING VIBRATO MECHANISM
Lior Arbel	Faculty of Architecture and Town Planning, Technion - Israel Institute of Technology, Haifa, Israel
Yoav Y. Schechner	Viterbi Faculty of Electrical Engineering, Technion - Israel Institute of Technology, Haifa, Israel
Noam Amir	Department of Communication Disorders, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel
EXPLORING DYNAMIC VARIATIONS	FOR EXPRESSIVE MECHATRONIC CHORDOPHONES
Juan Pablo Yepez Placencia	School of Engineering and Computer Science, Victoria University of Wellington, Wellington, New Zealand
Jim Murphy	New Zealand School of Music, Victoria University of Wellington, Wellington, New Zealand

# Dale CarnegieSchool of Engineering and Computer Science, Victoria University<br/>of Wellington, Wellington, New Zealand

### **EXPLORING HUMAN-MACHINE SYNERGY AND INTERACTION ON A ROBOTIC INSTRUMENT**

Sang-won Leigh	Media Lab, MIT, Cambridge, Massachusetts, United States
Abhinandan Jain	Media Lab, MIT, Cambridge, Massachusetts, United States
Pattie Maes	Media Lab, MIT, Cambridge, Massachusetts, United States

### **Theory & Evaluation**

Room 309 Tuesday, 4<sup>th</sup> June 2019 At 11:30

### **BESPOKE DESIGN FOR INCLUSIVE MUSIC: THE CHALLENGES OF EVALUATION**

Alex Michael Lucas	Sonic Arts Research Centre, Queens University Belfast, Belfast,
	United Kingdom
Miguel Ortiz	Sonic Arts Research Centre, Queen's University Belfast, Belfast,
	United Kingdom, United Kingdom
Franziska Schroeder	Sonic Arts Research Centre, Queens University Belfast, Belfast,
	United Kingdom

### MATERIAL EMBODIMENTS OF ELECTROACOUSTIC MUSIC: AN EXPERIMENTAL WORKSHOP STUDY

Enrique Tomas	Tangible Music Lab, University of Art and Design of Linz, Linz,
	Austria
Thomas Gorbach	Multidisciplinary Design Group, Institute of Design and

	Assessment of Technology, Faculty of Informatics, TU Wien, Vienna, Austria
Hilda Tellioglu	Multidisciplinary Design Group, Institute of Design and Assessment of Technology, Faculty of Informatics, TU Wien,
Martin Kaltenbrunner	Vienna, Austria Tangible Music Lab, University of Art and Design of Linz, Linz,
	Austria

### **REANIMATING THE READYMADE**

Peter Bussigel	Emily Carr University, Vancouver, Canada
Stephan Moore	Northwestern University, Dept. of Radio, Television &
-	Film, Evanston, IL, United States
Scott Smallwood	University of Alberta, Edmonton, Canada

# FICTIONAL INSTRUMENTS, REAL VALUES: DISCOVERING MUSICAL BACKGROUNDS WITH NON-FUNCTIONAL PROTOTYPES

Giacomo Lepri Andrew P. McPherson Centre for Digital Music, Queen Mary University of London, UK Centre for Digital Music, Queen Mary University of London, UK

Room 309 Tuesday, 4<sup>th</sup> June 2019 At 14:30

### MAGPICK: AN AUGMENTED GUITAR PICK FOR NUANCED CONTROL

Fabio Morreale	Creative Arts and Industries, University of Auckland, Auckland, New Zealand	
Andrea Guidi	Electronic Engineering and Computer Science, Queen Mary University of London, London, Greater London, United Kingdom	
Andrew P. McPherson	Centre for Digital Music, Queen Mary University of London, London, United Kingdom	
BENDIT_I/O: A SYSTEM FOR NETWORKED PERFORMANCE OF CIRCUIT-BENT DEVICES		
Anthony T. Marasco	Experimental Music & Digital Media, Louisiana State University, Baton Rouge, Louisiana, United States	
Edgar Berdahl	Louisiana State University, Baton Rouge, Louisiana, United States	
ILLUMIWEAR: A FIBER-OPTIC ETEXTILE	FOR MULTIMEDIA INTERACTIONS	
Josh Urban Davis	Discovery Lab, Dartmouth College, Hanover, New Hampshire, United States	
PRACTICAL CONSIDERATIONS FOR MIDI OVER BLUETOOTH LOW ENERGY AS A WIRELESS INTERFACE		
Johnty Wang	Input Devices and Music Interaction Laboratory, McGill University, Montreal, Quebec, Canada	
Axel Mulder	Infusion Systems, Montreal, Quebec, Canada	
Marcelo Wanderley	Music Technology, Schulich School of Music, McGill University Montreal, Quebec, Canada	
History & Critique	Room 309	

Room 309 Tuesday, 4<sup>th</sup> June 2019

### LEARNING FROM HISTORY: RECREATING AND REPURPOSING HARRIET PADBERG'S COMPUTER COMPOSED CANON AND FREE FUGUE

Richard J Savery	Georgia Tech Center for Music Technology, Atlanta, Georgia,
	United States
Jason Brent Smith	Georgia Tech Center for Music Technology, Atlanta, Georgia,
	United States
Benjamin Genchel	Georgia Tech Center for Music Technology, Atlanta, Georgia,
-	United States
Anthony Caulkins	No affiliation
Molly E Jones	No affiliation
Anna Savery	No affiliation
-	

### LATIN AMERICAN NIMES: Electronic Musical Instruments and Experimental Sound Devices in the **Twentieth Century**

Martin Matus Lerner	Universidad Nacional de Quilmes, Buenos Aires, Argentina
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### THE MODULAR BACKWARD EVOLUTION - WHY TO USE OUTDATED TECHNOLOGIES

Beat Rossmy	Mediainformatics Lab, LMU University of Munich, Munich, BY,
	Germany
Alexander Wiethoff	Media Informatics Lab, Ludwig-Maximilians University of Munich (LMU), Munich, Germany

### **EPHEMERAL INSTRUMENTS**

Vincent Goudard

Sorbonne Université, Paris, France

New Instruments & Interactions

**Room 309** Wednesday, 5<sup>th</sup> June 2019 At 9:00

#### **KEYNOTE**

Eduardo Reck Miranda

Plymouth University, United Kingdom

### ADAPTIVE MULTIMODAL MUSIC LEARNING VIA INTERACTIVE HAPTIC INSTRUMENT

Yian Zhang Yinmiao Li Daniel Chin Gus Xia

NYU Shanghai, Shanghai, China NYU Shanghai, Shanghai, China NYU Shanghai, Shanghai, China NYU Shanghai, Shanghai, China

### **BLIKSEM: AN ACOUSTIC SYNTHESIS FUZZ PEDAL**

Lloyd May	Bregman Studio, Dartmouth College, Hanover, New Hampshire,
	United States
Spencer Topel	Bregman Studio, Department of Music, Dartmouth College,
	Hanover, New Hampshire, United States Yale Quantum Institute,
	Yale University, New Haven, Connecticut, United States

### **REBUILDING AND REINTERPRETING A DIGITAL MUSICAL INSTRUMENT - THE SPONGE**

Ajin Jiji Tom	CIRMMT, Music Technology Department, McGill University,

	Montreal, Quebec, Canada
Harish Jayanth Venkatesan	Music Technology, Schulich School of Music, McGill
	University, Montreal, Quebec, Canada
Ivan Franco	Music Technology, Schulich School of Music, McGill University,
	Montreal, Quebec, Canada
Marcelo Wanderley	Music Technology, Schulich School of Music, McGill University,
,	Montreal, Quebec, Canada

### Instrument Augmentation

### Room 309 Wednesday, 5<sup>th</sup> June 2019 At 11:30

### **DRMMR: AN AUGMENTED PERCUSSION IMPLEMENT**

Digital Musics, Dartmouth College, Hanover, New Hampshire,
United States
Music, Dartmouth College, Hanover, New Hampshire, United
States Yale Quantum Institute, Yale University, New Haven,
Connecticut, United States

### THE SLOWQIN: AN INTERDISCIPLINARY APPROACH TO REINVENTING THE GUQIN

•	
Echo Ho	Tangible Music Lab - Institute of Media Studies, University of Art
	and Design, Linz, Austria
Alberto de Campo	Generative Art / Computational Art at the Institute for Time-Based
	Media, Berlin University of the Arts, Berlin, Germany

### TAMING AND TICKLING THE BEAST - MULTI-TOUCH KEYBOARD AS INTERFACE FOR A PHYSICALLY MODELLED INTERCONNECTED RESONATING SUPER-HARP

Palle Dahlstedt	Dept. of Computer Science and Engineering, University of Gothenburg, Gothenburg, Sweden Dept. of Communication,
	Aalborg University, Aalborg, Denmark

# SEPARATING SOUND FROM SOURCE: SONIC TRANSFORMATION OF THE VIOLIN THROUGH ELECTRODYNAMIC PICKUPS AND ACOUSTIC ACTUATION

Laurel Pardue	Department of Architecture, Design and Media Technology,
	Aarlborg University, Copenhagen, Denmark
	Centre for Digital Music, Queen Mary University of London, UK
Kurijn Buys	Centre for Digital Music, Queen Mary University of London, UK
Dan Overholt	Sound and Music Computing, Aalborg University, Copenhagen,
	Denmark
Andrew P. McPherson	Centre for Digital Music, Queen Mary University of London, UK
Michael Edinger	Musiklab, Copenhagen, Denmark

### Inclusion, Education & Collaboration

Room 309 Wednesday, 5<sup>th</sup> June 2019 At 14:30

# STRATEGIES TO FACILITATE RAPID CREATIVE DEVELOPMENT WITH MULTIPLE NETWORKED DEVICES USING HAPPYBRACKETS

UNSW Faculty of Art & Design, Interactive Media Lab, Sydney,
NSW, Australia
UNSW Art and Design, University of NSW, Paddington, New
South Wales, Australia
Faculty of Engineering and IT, University of Technology Sydney,
Sydney, NSW, Australia
Architecture, Design and Planning, University of Sydney, Sydney,
Australia

# ON THE INCLUSIVITY OF CONSTRAINT: CREATIVE APPROPRIATION IN INSTRUMENTS FOR NEURODIVERSE CHILDREN AND YOUNG PEOPLE

Joe Wright	Integra Lab, Royal Birmingham Conservatoire, Birmingham City
	University, Birmingham, United Kingdom
James Dooley	Integra Lab, Royal Birmingham Conservatoire, Birmingham, West
	Midlands, United Kingdom

### NIME PROTOTYPING IN TEAMS: A PARTICIPATORY APPROACH TO TEACHING PHYSICAL COMPUTING

Department of Music, Norwegian University of Science and
Technology, Trondheim, Norway
Department of Music, Norwegian University of Science and
Technology, Trondheim, Norway
University of Oslo, Oslo, Norway
Department of Mathematical Sciences, Norwegian University of
Science and Technology, Trondheim, Norway
Department of Music, Norwegian University of Science and
Technology, Trondheim, Norway

# SOUND CONTROL: SUPPORTING CUSTOM MUSICAL INTERFACE DESIGN FOR CHILDREN WITH DISABILITIES

Samuel Thompson Parke-Wolfe	Department of Computing, Goldsmiths University of London,
	United Kingdom
Hugo Scurto	STMS Ircam-CNRS-Sorbonne Université, Paris, France
Rebecca Fiebrink	Department of Computing, Goldsmiths University of London,
	London, United Kingdom

### Software & Algorithms

Room 309 Wednesday, 5<sup>th</sup> June 2019 At 17:00

#### **VENEER: VISUAL AND TOUCH-BASED PROGRAMMING FOR AUDIO**

Vesa Petri Norilo	DocMus, University of the Arts, Helsinki, Finland
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### COMPOSING AND EXECUTING INTERACTIVE MUSIC USING THE HIPHOP. JS LANGUAGE

### **T-VOKS: CONTROLLING SINGING AND SPEAKING SYNTHESIS WITH THE THEREMIN**

Xiao Xiao	MIT Media Lab, Cambridge, Massachusetts, United States Institut
	Jean Le Rond d'Alembert, Paris, France
Grégoire Locqueville	Institut Jean Le Rond d'Alembert, Paris, France
Christophe d'Alessandro	Institut Jean Le Rond D'Alembert, CNRS Sorbonne Université,
-	Paris, France
Boris Doval	Institut Jean Le Rond d'Alembert, Paris, France

# A COMPARISON OF OPEN-SOURCE LINUX FRAMEWORKS FOR AN AUGMENTED MUSICAL INSTRUMENT IMPLEMENTATION

Eduardo Meneses	IDMIL, McGill University, Montreal, Quebec, Canada CIRMMT,
	McGill University, Montreal, Quebec, Canada
Johnty Wang	Input Devices and Music Interaction Laboratory, McGill
	University, Montreal, Quebec, Canada CIRMMT, McGill
	University, Montreal, Quebec, Canada
Sergio Freire	School of Music - CEGeME, Universidade Federal de Minas
2	Gerais (UFMG), Belo Horizonte, Minas Gerais, Brazil
Marcelo Wanderley	Music Technology, Schulich School of Music, McGill University,
-	Montreal, Quebec, Canada

### **VRENGT: A SHARED BODY-MACHINE INSTRUMENT FOR MUSIC-DANCE PERFORMANCE**

RENALLY SHARED DOD'T - HACHINE INSTRUMENT FOR MODIC-DARCE I EIN ONMANCE		
Cagri Erdem	RITMO Centre for Interdisciplinary Studies in Rhythm, Time and	
	Motion, University of Oslo, Oslo, Norway	
Katja Henriksen Schia	Norwegian Contemporary Dance Company	
Alexander Refsum Jensenius	RITMO Centre for Interdisciplinary Studies in Rhythm, Time and	
	Motion, University of Oslo, Oslo, Norway	

### THE RECIPROCITY BETWEEN ANCILLARY GESTURE AND MUSIC STRUCTURE PERFORMED BY EXPERT MUSICIANS

Thais Fernandes Santos Federal University of Rio Grande do Sul, Porto Alegre, Brazil

### SOMACOUSTICS: INTERACTIVE BODY-AS-INSTRUMENT

Maros Suran Bomba	Aalborg University, Aalborg, Denmark
Palle Dahlstedt	Dept. of Communication, Aalborg University, Aalborg, Denmark
	Dept. of Computer Science and Engineering, University of
	Gothenburg, Gothenburg, Sweden

### AMBULATION: EXPLORING LISTENING TECHNOLOGIES FOR AN EXTENDED SOUND WALKING PRACTICE

Tim Shaw	Culture Lab, Newcastle University, Newcastle, United Kingdom
John Bowers	Newcastle University, Newcastle upon Tyne, United Kingdom

### **DESIGNING GESTURES FOR CONTINUOUS SONIC INTERACTION**

Atau Tanaka	EAVI, Goldsmiths, University of London, London, United
	Kingdom
Balandino Di Donato	Embodied Audiovisual Interaction Unit, Computing Department,
	Goldsmith, University of London, London, England, United
	Kingdom
Michael Zbyszynski	Goldsmiths University of London, London, United Kingdom
Geert Roks	

Mapping & Sound Generation

Room 309 Thursday, 6<sup>th</sup> June 2019 At 11:30

### **IMPROVISING A LIVE SCORE TO AN INTERACTIVE BRAIN-CONTROLLED FILM**

Richard Ramchurn	Mixed Reality Lab, The University of Nottingham, Nottingham,
	United Kingdom
Juan Pablo Martinez Avila	Mixed Reality Laboratory, The University of Nottingham,
	Nottingham, United Kingdom
Sarah Martindale	Horizon Digital Economy Research, University of Nottingham,
	Nottingham, United Kingdom
Alan Chamberlain	Mixed Reality Lab, University of Nottingham, Nottingham, United
	Kingdom
Max L Wilson	School of Computer Science, University of Nottingham,
	Nottingham, United Kingdom
Steve Benford	University of Nottingham, Nottingham, United Kingdom

## PERSPECTIVES ON TIME: PERFORMANCE PRACTICE, MAPPING STRATEGIES, & COMPOSITION WITH MIGSI

California Institute of the Arts, Santa Clarita, California, United
States
California Institute of the Arts, Valencia, California, United States
California Institute of the Arts, Valencia, California, United States

## FROM MONDRIAN TO MODULAR SYNTH: RENDERING NIME USING GENERATIVE ADVERSARIAL NETWORKS

Akito Van Troyer	Opera Of The Future, MIT Media Lab, Cambridge, Massachusetts,
	United States Electronic Production and Design, Berklee College
	of Music, Boston, Massachusetts, United States
Rebecca Kleinberger	Media Lab, MIT, Cambridge, Massachusetts, United States

### **AUTOMATIC RECOGNITION OF SOUNDPAINTING FOR THE GENERATION OF ELECTRONIC MUSIC SOUNDS**

David Antonio Gómez	Jáuregui Estia-Recherche, ESTIA, Bidart, France
Irvin Dongo	Informatique, École Supérieure Des Technologies Industrielles
-	Avancées, Bidart, Aquitaine, France
Nadine Couture	Estia-Recherche & LaBRI, ESTIA, Bidart, Pays Basque, France

### Artificial Intelligence & Machine Learning

<u>Room</u> 309 Thursday, 6<sup>th</sup> June 2019 At 14:30

### **GENERATING CONVINCING HARMONY PARTS WITH BLSTM NETWORK**

Andrei Faitas	Department of Informatics, University of Oslo, Oslo, Norway
Synne Engdahl Baumann	Department of Informatics, University of Oslo, Oslo, Norway
Torgrim Rudland Næss	University of Oslo, Oslo, Norway
Jim Torresen	Department of Informatics, University of Oslo, Oslo, Norway
Charles Patrick Martin	Department of Informatics, University of Oslo, Oslo, Norway

## AN INTERACTIVE MUSICAL PREDICTION SYSTEM WITH MIXTURE DENSITY RECURRENT NEURAL NETWORKS

Charles Patrick Martin	Department of Informatics, University of Oslo, Oslo, Norway
Jim Torresen	Department of Informatics, University of Oslo, Oslo, Norway
	RITMO Centre for Interdisciplinary Studies in Rhythm, Time, and
	Motion, University of Oslo, Oslo, Norway

### AUGMENTING PARAMETRIC SYNTHESIS WITH LEARNED TIMBRAL CONTROLLERS

Jeff Gregorio	ExCITe Center, Drexel University, Philadelphia, Pennsylvania,
	United States
Youngmoo Kim	ExCITe Center, Drexel University, Philadelphia, Pennsylvania, United States

## SMALL DYNAMIC NEURAL NETWORKS FOR GESTURE CLASSIFICATION WITH THE RULERS (A DIGITAL MUSICAL INSTRUMENT)

Vanessa Yaremchuk Carolina Brum Medeiros Marcelo Wanderley McGill University, Montreal, Quebec, Canada McGill University, Montreal, Quebec, Canada Music Technology, Schulich School of Music, McGill University, Montreal, Quebec, Canada

### **POSTERS**

Room 311 Porto Alegre, 4<sup>th</sup> June 2019 Poster Session: 1 & 2

### STELLAR COMMAND: A PLANETARIUM BASED COSMIC PERFORMANCE INTERFACE

Angelo Fraietta UNSW Art and Design, University of NSW, Paddington, Nev South Wales, Australia	Angelo Fraietta	UNSW Art and Design, University of NSW, Paddington, New South Wales, Australia
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### **COMPOSING UNDERSTANDINGS: MUSIC, MOTION, GESTURE AND EMBODIED COGNITION**

Guilherme Bertissolo UFBA

### UFBA, Salvador/BA, Brazil

### THE HALF-PHYSLER: AN OSCILLATING REAL-TIME INTERFACE TO A TUBE RESONATOR MODEL

Alex Hofmann	Dept. of Music Acoustics, University of Music and Performing Arts Vienna; Austrian Academy of Sciences, Vienna, Austria
Vasileios Chatziioannou	Department of Music Acoustics, University of Music and
	Performing Arts Vienna, Vienna, Austria
Sebastian Schmutzhard	Acoustics Research Institute, Austrian Academy of Sciences,
	Vienna, Austria
Gökberk Erdogan	Electrical&Electronics Engineering, Bogazici University, Istanbul,
-	Turkey
Alexander Mayer	Department of Music Acoustics – Wiener Klangstil, University of
	Music and Performing Arts Vienna, Vienna, Austria

### SIBILIM: A LOW-COST CUSTOMIZABLE WIRELESS MUSICAL INTERFACE

Helena de Souza Nunes	Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil
Federico Visi	www.federicovisi.com, Berlin, Germany
Lydia Wohl Helena Coelho	Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil
Rodrigo Schramm	Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

### TAPTOP, ARMTOP, BLOWTOP: EVOLVING THE PHYSICAL LAPTOP INSTRUMENT

Doga Cavdir	Center for Computer Research in Music and Acoustics (CCRMA),
-	Stanford University, Stanford, California, United States
Juan Sierra	CCRMA, Stanford University, Stanford, California, United States
Ge Wang	CCRMA, Stanford University, Stanford, California, United States

## WHERE IS THE QUIET: IMMERSIVE EXPERIENCE DESIGN USING THE BRAIN, MECHATRONICS, AND MACHINE LEARNING

McLean J Macionis	California Institute of the Arts, Valencia, California, United States
Ajay Kapur	California Institute of the Arts, Valencia, California, United States

### TOWARDS THE CONCEPT OF DIGITAL DANCE AND MUSIC INSTRUMENTS

João Nogueira Tragtenberg Creativity and Innovation for Music Manufacturing, SENAI Innovation Institute for ICT, Recife, PE, Brazil

Filipe Calegario	Creativity and Innovation for Music Manufacturing, SENAI Innovation Institute for ICT, Recife, PE, Brazil
Giordano Cabral	Centro de Informática, Universidade Federal de Pernambuco,
Geber L. Ramalho	Recife, Pernambuco, Brazil Centro de Informática, Universidade Federal de Pernambuco,
	Recife, Pernambuco, Brazil

### **PICO: A PORTABLE AUDIO EFFECT BOX FOR TRADITIONAL PLUCKED-STRING INSTRUMENTS**

Julian Jaramillo	Escola de Comunicações e Artes, Universidade de São Paulo, São
	Paulo, Brazil
Fernando Iazzetta	Escola de Comunicações e Artes, Universidade de São Paulo, São Paulo, SP, Brazil

### THE WORLDWIDE WEB IN AN ANALOG PATCHBAY

Don Derek Haddad	Responsive Environments, Media Lab, MIT, Cambridge,
	Massachusetts, United States
Joe Paradiso	Responsive Environments, MIT Media Lab, Cambridge,
	Massachusetts, United States

### A PHYSICAL INTELLIGENT INSTRUMENT USING RECURRENT NEURAL NETWORKS

Torgrim Rudland Næss	University of Oslo, Oslo, Norway
Charles Patrick Martin	Department of Informatics, University of Oslo, Oslo, Norway

### **EXPRESSIVE POTENTIALS OF MOTION CAPTURE IN MUSICAL PERFORMANCE**

Nicolas Bazoge	University of Rennes 2, Rennes, France
Bruno Bossis	EA Arts: Pratiques et Poétiques, Université Rennes 2, Rennes,
	France
Ronan Gaugne	Universidad Rennes, Inria, CNRS, IRISA, Rennes, France

### A BASSLINE GENERATION SYSTEM BASED ON SEQUENCE-TO-SEQUENCE LEARNING

Music Technology Group, Universitat Pompeu Fabra, Barcelona,
Barcelona, Spain
Music Technology Group, Universitat Pompeu Fabra, Barcelona,
Barcelona, Spain

### A MIDI CONTROLLER MAPPER FOR THE BUILT-IN AUDIO MIXER IN UNITY GAME ENGINE

Pedro Pablo Lucas

Independent Researcher, Guayaquil, Ecuador

Room 311 Porto Alegre, 5<sup>th</sup> June 2019 Poster Session: 3 & 4

### BORDER: A LIVE PERFORMANCE BASED ON WEB AR AND A GESTURE CONTROLLED INSTRUMENT

Kiyu Nishida	Karlsruhe University of Arts and Design, Karlsruhe,
	Germany School of Design, Kyushu University, Fukuoka, Japan
Akishige Yuguchi	Graduate School of Information Science, Nara Institute of Science
	and Technology, Nara, Japan
Kazuhiro Jo	Faculty of Design, Kyushu University, Fukuoka, Japan YCAM,
	Yamaguchi, Japan
Paul Modler	Karlsruhe University of Arts and Design, Karlsruhe,
	Germany School of Design, Kyushu University, Fukuoka, Japan
Markus Noisternig	IRCAM, CNRS, Sorbonne University, Paris, France

### INSPECTING AND INTERACTING WITH MEANINGFUL MUSIC REPRESENTATIONS USING VAE

Ruihan Yang	New York University, Shanghai, China
Tianyao Chen	New York University, New York, New York, United States
Yiyi Zhang	New York University, New York, New York, United States
Gus Xia	New York University, Shanghai, China

### EL MAPA NO ES EL TERRITORIO: SENSOR MAPPING FOR AUDIOVISUAL PERFORMANCES

Fabian Sguiglia	CONICET, Buenos Aires, Argentina Escuela de Artes,
	Universidad Nacional de Quilmes, Bernal, Buenos Aires,
	Argentina
Pauli Coton	Universidad de las Artes, Buenos Aires, Argentina
Fernando Toth	Universidad de Buenos Aires, Buenos Aires, Argentina

### **CORETET: A VIRTUAL REALITY STRING QUARTET FOR THE 21ST CENTURY**

Rob Hamilton

Department of Arts, Rensselaer Polytechnic Institute, Troy, New York, United States

## PARAMETERIZED MELODY GENERATION WITH AUTOENCODERS AND TEMPORALLY-CONSISTENT NOISE

Aline Weber	Institute of Informatics, Federal University of Rio Grande do Sul,
	Porto Alegre, RS, Brazil
Lucas Nunes Alegre	Institute of Informatics, Federal University of Rio Grande do Sul,
	Porto Alegre, Rio Grande do Sul, Brazil
Jim Torresen	Department of Informatics, University of Oslo, Oslo, Norway
Bruno C. da Silva	Institute of Informatics, Federal University of Rio Grande do Sul,
	Porto Alegre, RS, Brazil

## SEARCHING FOR THE PERFECT INSTRUMENT: INCREASED IMMERSION THROUGH INTERACTIVE EVOLUTIONARY INSTRUMENT DESIGN

Dhruv Chauhan	University of Bristol, Bristol, United Kingdom
Peter Bennett	University of Bristol, Bristol, United Kingdom

### **CD-SYNTH: A ROTATING, UNTETHERED, DIGITAL SYNTHESIZER**

Patrick Chwalek	Media Lab, MIT, Cambridge, Massachusetts, United States
Joe Paradiso	Media Lab, MIT, Cambridge, Massachusetts, United States

### ENHANCING THE EXPRESSIVITY OF THE SENSEL MORPH VIA AUDIO-RATE SENSING

Razvan Paisa	Aalborg University, Copenhagen, Denmark
Dan Overholt	Sound and Music Computing, Aalborg University, Copenhagen,
	Denmark

### **INTRODUCING LOCUS: A NIME FOR IMMERSIVE EXOCENTRIC AURAL ENVIRONMENTS**

Disha Sardana Human Centered Design, Virginia Tech, Blacksburg, Virginia,	
United States	
Woohun Joo Human Centered Design, Virginia Tech, Blacksburg, Virginia,	
United States	
Ivica Ico Bukvic SOPA, DISIS, ICAT, Virginia Tech, Blacksburg, Virginia, Unit	ted
States	
Greg Earle ECE Dept., Virginia Tech, Blacksburg, Virginia, United States	

### **MESH GARDEN: A CREATIVE-BASED MUSICAL GAME FOR PARTICIPATORY MUSICAL PERFORMANCE**

Experimental Music & Digital Media, Louisiana State University, Baton Rouge, Louisiana, United States
ECTIONS FOR DATA-DRIVEN MUSICAL INTERFACES
CeReNeM, University of Huddersfield, Huddersfield, UK
CeReNeM, University of Huddersfield, Huddersfield, UK
CeReNeM. University of Huddersfield, Huddersfield, UK

# NETWORKED HEAD-MOUNTED DISPLAYS FOR ANIMATED NOTATION AND AUDIO-SCORES WITH SMARTVOX

Jonathan Bell	PRISM, Aix-Marseille University, Marseille, PACA, France
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### **REACH: A KEYBOARD-BASED GESTURE RECOGNITION SYSTEM FOR LIVE PIANO SOUND MODULATION**

Niccolò Granieri	Integra Lab, Royal Birmingham Conservatoire, Birmingham City
	University, Birmingham, West Midlands, United Kingdom
James Dooley	Integra Lab, Royal Birmingham Conservatoire, Birmingham City
	University, Birmingham, United Kingdom

### HA DOU KEN MUSIC: DIFFERENT MAPPINGS TO PLAY MUSIC WITH JOYSTICKS

Gabriel Lopes Rocha	Computer Science Department, Federal University of São João del-
	Rei, São João del-Rei, Minas Gerais, Brazil
João Teixera Araújo	Computer Science Department, Federal University of São João del-
	Rei, São João del-Rei, Minas Gerais, Brazil
Flávio Luiz Schiavoni	Computer Science Department, Federal University of São João del-
	Rei, São João del-Rei, Minas Gerais, Brazil

Room 311 Porto Alegre, 6<sup>th</sup> June 2019 Poster Session: 5 & 6

### INTIMAL: WALKING TO FIND PLACE, BREATHING TO FEEL PRESENCE

Ximena Alarcon Diaz	RITMO Centre for Interdisciplinary Research in Rhythm, Time
	and Motion - Dep. of Musicology, University of Oslo, Oslo,
	Norway
Victor Evaristo Gonzalez Sanchez	RITMO Centre for Interdisciplinary Studies in Rhythm, Time and
	Motion, University of Oslo, Oslo, Norway
Cagri Erdem	RITMO Centre for Interdisciplinary Studies in Rhythm, Time and
	Motion, University of Oslo, Oslo, Norway

### THE SCALE NAVIGATOR: A SYSTEM FOR NETWORKED ALGORITHMIC HARMONY

Nathan Turczan	MTIID, California Institute of the Arts, Valencia, California,
	United States
Ajay Kapur	California Institute of the Arts, Valencia, California, United States

### HMUSIC: A DOMAIN SPECIFIC LANGUAGE FOR MUSIC PROGRAMMING AND LIVE CODING

Andre Rauber Du Bois	Universidade Federal de Pelotas, Pelotas, RS, Brazil
Rodrigo Geraldo Ribeiro	Departament of Computer Science, Universidade Federal de Ouro
	Preto, Ouro Preto, Minas Gerais, Brazil

### HYPESAX: SAXOPHONE ACOUSTIC AUGMENTATION

Cristohper Ramos Flores	New Zealand School of Music, Victoria University of Wellington,
	Wellington, New Zealand
Jim Murphy	New Zealand School of Music, Victoria University of Wellington,
	Wellington, New Zealand
Michael Norris	New Zealand School of Music, Victoria University of Wellington,
	Wellington, New Zealand

### ABDUCTION, DIAGRAMS AND ALGORITHMS FOR INTERACTION WITH LIVE-ELECTRONICS

Daniel F. Puig	Universidade Federal do Sul da Bahia, UFSB, Itabuna, Bahia,
-	Brazil

#### 'BLENDING DIMENSIONS' WHEN COMPOSING FOR DMI AND SYMPHONIC ORCHESTRA

Oliver Hödl

### Faculty of Informatics, Cooperative Systems Research Group,

University of Vienna, Vienna, Austria

### ESMERIL - A INTERACTIVE AUDIO PLAYER AND COMPOSITION SYSTEM FOR COLLABORATIVE **EXPERIMENTAL MUSIC NETLABELS**

Cristiano Figueiró	IHAC, UFBA, Salvador, Bahia, Brazil
Guilherme Soares	CECULT, UFRB, Santo Amaro, Bahia, Brazil
Bruno Rohde	Universidade Federal da Bahia, Salvador, Bahia, Brazil
MPOSING IN SPACE-TIME WIT	TH RAINBOWS: A FRAMEWORK FOR SPATIAL META-COMPOSITION

### COMPOSING IN SPACE-TIME WITH RAINBOWS: A FRAMEWO

Robert S JarvisExertion Games Lab, RMIT, Melbourne, VIC, AustraliaFlorian Floyd MuellerExertion Games Lab, RMIT University, Melbourne, VIC, AustraliaDarrin Sean VerhagenDigital Media/School of Design/Audiokinetic Exertion RMIT University, Melborne, VIC, Australia

### TECHNOLOGICAL INTERFACES APPLIED IN DANCE PERFORMANCE TO CREATE MUSIC AND GARMENT MOVEMENTS

Natacha Lamounier	Federal University of Minas Gerais, Belo Horizonte, Brazil
Luiz Naveda	Post Graduate Program in Arts, State University of Minas Gerais,
	Belo Horizonte, Minas Gerais, Brazil
Adriana Bicalho	Federal University of Minas Gerais, Belo Horizonte, Brazil

### **OTOKIN: MAPPING FOR SOUNDSPACE EXPLORATION THROUGH DANCE IMPROVISATION**

Palle Dahlstedt	Dept. of Computer Science and Engineering, University of Gothenburg, Gothenburg, Sweden Dept. of Communication,
Ami Skånberg Dahlstedt	Aalborg University, Aalborg, Denmark Dept. of Drama, Theatre & Dance, Royal Holloway University of
	London, London, United Kingdom Academy of Music and Drama, University of Gothenburg, Gothenburg, Sweden

### SHOW THEM MY SCREEN: MIRRORING A LAPTOP SCREEN AS AN EXPRESSIVE AND COMMUNICATIVE **MEANS IN COMPUTER MUSIC**

Sang Won Lee	Computer Science, Virginia Tech, Blacksburg, Virginia, United States	
WARDS & TELEMATIC DIMENSION CRACE		

### TOWARDS A TELEMATIC DIMENSION SPACE

Patrick Müller

Institute for Computer Music and Sound Technology, Zurich University of the Arts, Zurich, Switzerland

### **EOLOS: A WIRELESS MIDI WIND CONTROLLER**

Juan Mariano Ramos	CONICET, CABA, Argentina Escuela Universitaria de Artes, Universidad Nacional de Quilmes, Bernal, Argentina
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### **CREATING ORDER AND PROGRESS**

Angelo Fraietta

UNSW Art and Design, University of NSW, Paddington, New South Wales, Australia