

Paper Program
Saturday, September 26, 2015

9am–10:40am

Murchison Performing Arts Center – IRR

Paper Session 1A – Composition and Improvisation I

Chair: Margaret Schedel

SIG~: Performance Interface for Schaefferian Sound-Object Improvisation
Israel Neuman

*Building a Harmonically Ecosystemic Machine: Combining Sonic Ecosystems
with Models of Contemporary Harmonic Language*
Michael Musick, Jonathan P. Forsyth, Rachel Bittner

Using Singing Voice Vibrato as a Control Parameter in a Chamber Opera
Anna Einarsson, Anders Friberg

Architecture in Motion: a Model for Music Composition
Jorge Variago

9am–10:40am

Murchison Performing Arts Center – 021

Paper Session 1B – History and Education

Chair: Tom Erbe

An Online Interactive Course on Computer Music
Roger B. Dannenberg, Jesse Stiles, Yue Zhang, Li, Qiao Zhang

Another Take on Renovating Dated Technology for Concert Performance
Richard Dudas

The Just Intonation Automat – a Musically Adaptive Interface
Jøran Rudi

Witold Lutosławski – An Algorithmic Music Composer?
Stanisław Krupowicz

– break –

Paper Program
Saturday, September 26, 2015 (continued)

11am-12pm Murchison Performing Arts Center - IRR

Paper Session 2A – Languages and Coding

Chair: Jorge Variago

Music Programming in Gibber

Charles Roberts, Matthew Wright, JoAnn Kuchera-Morin

Dynamic Message-Oriented Middleware with Open Sound Control and Odot

John MacCallum, Rama Gottfried, Ilya Rostovtsev, Jean Bresson, Adrian Freed

11am-12pm Murchison Performing Arts Center - 021

Paper Session 2B – Music Information Retrieval and Perception I

Chair: David Medine

Rhythmic Similarity Based on a Descriptor Balancing between Meter and Tempo

Sébastien Juchs, Pierre Hanna, Matthias Robine, Myriam Desainte-Catherine

Genre-specific Key Profiles

Cian O'Brien, Alexander Lerch

Sonification of Medical Images Based on Statistical Descriptors

Rodrigo F. Cadiz, Patricio de la Cuadra, Aarón Montoya, Veronica Marín,
Marcelo E. Andia, Cristian Tejos, Pablo Irarrazaval

Paper Program
Sunday, September 27, 2015

9am–10:40am

Murchison Performing Arts Center – IRR

Paper Session 3A – Digital Signal Processing and Effects I

Chair: John MacCallum

Generative Feedback Networks Using Time-Varying Allpass Filters
Greg Surges, Tamara Smyth, Miller Puckette

Audio Processing by Means of FM Synthesis Parameters: Fundamentals, Real-Time Implementation, and Preliminary Compositional Applications
Sérgio Freire

Unsampled Digital Synthesis: Computing the Output of Implicit and Non-Linear Systems
David Medine

Morphing Sound in Real Time through the Timbre Tunnel [Piece+Paper]
Johannes Kretz

9am–10:40am

Murchison Performing Arts Center – 021

Paper Session 3B – New Instruments for Musical Expression I

Chair: Steven Kemper

Haptic Control of Multistate Generative Music Systems
Bret Battey, Marinos Giannoukakis, Lorenzo Picinali

Feature Extraction and Expertise Analysis of Pianists' Motion-Captured Finger Gestures
Mickaël Tits, Joëlle Tilmanne, Nicolas d'Alessandro, Marcelo M. Wanderley

Audio Collage as an Instrument for Musical Expression: Combining Freehand and Tangible Controllers
Vanissa Law

Towards an Interactive Argentine Tango Milonga
Courtney Brown, Garth Paine

Musical Acoustics & Instrument Design: When Engineering Meets Music
Thibault Bertrand, Konrad Kaczmarek, Larry Wilen

– break –

Paper Program
Sunday, September 27, 2015 (continued)

11am-12pm Murchison Performing Arts Center – IRR

Paper Session 4A – Virtual Reality

Chair: Michael Gurevich

Interactive Virtual Soundscapes: A Research Report

Dr. Anil Çamcı, Zeynep Özcan, Damla Pehlevan

*Measuring the Effectiveness of Sonified Crossmodal Attribute Pairings Using
Contour Matching, Symmetry and Perceived Similarity*

Rob Hamilton

11am-12pm Murchison Performing Arts Center – 021

Paper Session 4B – Music Information Retrieval and Perception II

Chair: Chryssie Nanou

Fuzzy Equalization of Musical Genres

Marie González, Patricio de la Cuadra, Rodrigo F. Cadiz

*The Effects of Early-Release on Emotion Characteristics and Timbre in Non-
Sustaining Musical Instrument Tones*

Chuck-jee Chau, Bin Wu, Andrew Horner

VizScore: An On-Screen Notation Delivery System for Live Performance

Seth Shafer

12pm-2pm Murchison Performing Arts Center – Brock Grand Lobby

Poster Session I – Studio Reports

Brooklyn College Center for Computer Music

Douglas Geers, Nicholas R. Nelson, Red Wierenga

Studio Report 2015: New York University (NYU) Music Technology Program

Jaesong You, Andrew Telichan, Michael Musick, Tae Hong Park

Studio Report: Music Technology at the Pennsylvania State University

Mark Ballora

Peabody Computer Music: 46 Years of Looking to the Future

Dr. Geoffrey Wright, Dr. McGregor Boyle, Mr. Joshua Armenta, Mr. Ryan
Woodward, Ms. Sunhuimei Xia

Studio Report: Arizona State University

Garth Paine, Barry Moon

Wesleyan University Electronic Music Studios Report

Ron Kuivila, Paula Matthusen

fxFD, A Digital Approach to the No-Input Practice

Dominic Thibault

Paper Program
Monday, September 28, 2015

9am–10:20am Murchison Performing Arts Center – IRR

Paper Session 5A – Physical Modeling

Chair: Rob Hamilton

The Intrinsic Value of Timbre in Doppelganger
Asbjørn Blokkum Flø, Hans Wilmers

State Space Models: Virtual World for Composition
Rosalia Soria-Luz

*Specifying Sounding Frequency of a Voice Model during Live Interactive
Saxophone Performance*
Jennifer Hsu, Tamara Smyth

9am–10:20am Murchison Performing Arts Center – 021

Paper Session 5B – Computer Music Aesthetics and Theory

Chair: Douglas Geers

*Cross-Modality in Multi-Channel Acousmatic Music: The Physical and Virtual in
Music Where There Is Nothing to See*
Adrian Mooore

Low-Level Topology of Spatial Texture
Erik Nyström

*Developing a Socio-Historical Model for Electro-Acoustic Music Analysis: The
Challenge from an Adornian Perspective*
Jaeseong You, Andrew Telichan, Tae Hong Park

Exploratory Analysis on Expressions in Two Different 4/4 Beat Patterns
Kyungho Lee, Michael J. Junokas, Mohammad Amanzadeh, Guy E. Garnett

– break –

10:40am–12pm Murchison Performing Arts Center – IRR

Paper Session 6A – Composition and Improvisation II

Chair: Cat Hope

Improving the Musical Expressiveness of Tesla Coils with Software
Jason Long, Josh Bailey, James McVay, Dale A. Carnegie, Ajay Kapur

*Automatic Transcription of Japanese Taiko Drumming Using the Microsoft
Kinect*
Willian Hua, Andrea Salgian

Neural Versus Symbolic Rap Battle Bots
Dekai Wu, Karteek Addanki

Piece Description: Growth of the Universe (in log time)
Mark Ballora

Paper Program
Monday, September 28, 2015 (continued)

10:40am–12pm

Murchison Performing Arts Center – 021

Paper Session 6B – Distributed and Mobile Music

Chair: Michael Musick

Simple Synchronisation for Open Sound Control

Sebastian Madgwick, Thomas Mitchell, Carlos Barreto, Adrian Freed

Computer Music through the Cloud: Evaluating a Cloud Service for Collaborative Computer Music Applications

Antonio Deusany de Carvalho Junior, Marcelo Queiroz, Georg Essl

iSuperColliderKit: A Toolkit for iOS Using an Internal SuperCollider Server as a Sound Engine

Akinori Ito, Kengo Watanabe, Genki Kuroda, Ken'ichiro Ito

12pm–2pm

Murchison Performing Arts Center – Brock Grand Lobby

Poster Session II

Flatter Frequency Response from Feedback Delay Network Reverbs

Hans Anderson, Kin Wah Edward Lin, Clifford So, Simon Lui

Hierarchical Genomes in a Genetic Algorithm for Control of a Guitar Synthesizer

Timothy M. Walker

Spatial Modulation Synthesis

Ryan McGee

Initial Survey Results from The LilyPond Consortium

Michael Solomon, Urs Liska, Trevor Bača

Physical Modeling Synthesis of the Stone Chime Instrument "Pyeongyeong"

Jae hyun Ahn, Richard Dudas

Building the Erbe-Verb: Extending the Feedback Delay Network Reverb for Modular Synthesizer Use

Tom Erbe

Noisebox: Design and Prototype of a New Digital Musical Instrument

John Sullivan

Paper Program
Tuesday, September 29, 2015

9am–10:20am

Murchison Performing Arts Center – IRR

Paper Session 7A – Spatialisation

Chair: Ilya Rostovtsev

Twenty Years of Ircam Spat: Looking Back, Looking Forward

Thibaut Carpentier, Markus Noisternig, Olivier Warusfel

*Spectromorphology and Spatiomorphology of Sound Shapes: Audio-Rate AEP
and DBAP Panning of Spectra*

Stuart James

Binaural Navigation for the Visually Impaired with a Smartphone

Lee Tae Hoon, Manish Reddy Vuyyuru, T Ananda Kumar, Simon Lui

9am–10:20am

Murchison Performing Arts Center – 021

Paper Session 7B – Algorithmic Composition I

Chair: Cian O'Brien

*Improving and Adapting Finite State Transducer Methods for Musical
Accompaniment*

Jonathan P. Forsyth, Rachel M. Bittner, Michael Musick, Juan P. Bello

*Automatic Piano Reduction from Ensemble Scores Based on Merged-Output
Hidden Markov Model*

Eita Nakamura, Shigeki Sagayama

Composing with Kulitta

Donya Quick

– break –

10:40am–12:00pm

Murchison Performing Arts Center – IRR

Demonstrations I

Wearable Sound System for Dance and Music

Felipe Otondo, Rodrigo Torres

The Decibel ScorePlayer: New Developments and Improved Functionality

Cat Hope, Lindsay Vickery, Stuart James

*(n.b.: Participants are invited to bring their iPad and encouraged to bring their
laptops to the demonstration!)*

Paper Program
Wednesday, September 30, 2015

9am–10:40am Murchison Performing Arts Center – IRR

Demonstrations II

Network Gyre - Exercising the Network's Rhythmic Potential
Ethan Cayko

9am–10:40am Murchison Performing Arts Center – 021

Paper Session 8 – Digital Signal Processing and Effects II

Chair: Kimberlee Graham-Knight

The XQIFFT: Increasing the Accuracy of Quadratic Interpolation of Spectral Peaks via Exponential Magnitude Spectrum Weighting
Kurt James Werner

Augmenting Room Acoustics and System Interaction for Intentional Control of Audio Feedback
Seunghun Kim, Graham Wakefield, Juhan Nam

Extending Brass & Woodwind Instruments with Acoustic-Aggregate-Synthesis
Paul Clift, Adrien Mamou-Mani, René Caussé

– break –

10am–12pm Paul Voertman Concert Hall

Piece+Paper Concert and Presentations

Chair: TBA

Sound Spatialisation from a Composer's Perspective
Hans Timmermans

Antony: A Reimagining
John MacCallum, Matthew Goodheart, Adrian Freed

Notes on "Culture of Fire" for Analog Neural Network Synthesizer, Geiger Muller Counters and Computer
Scot Gresham-Lancaster

Audio Spray Gun 0.8 – the Generation of Large Sound-Groups and Their Use in Three-Dimensional Spatialisation
Richard Garrett

materialssoundmusic: a Computer-Aided Data-Driven Composition Environment for the Sonification and Dramatization of Scientific Data Streams
Marco Buongiorno Nardelli

An Approach to the Generation of Real-Time Notation via Audio Analysis: The Semantics of Redaction
Lindsay Vickery

Paper Program
Wednesday, September 30, 2015 (continued)

11am-12pm

Murchison Performing Arts Center – IRR

Demonstrations III

*In and Out, Over and Under: An Interactive Audio-Visual Installation
Responding to Percy Grainger's Free Music and the Grainger Museum*
Roger Alsop

12pm-2pm

Murchison Performing Arts Center – Brock Grand Lobby

Poster Session III

TosCA: an OSC Communication Plugin for Object-Oriented Spatialization
Authoring
Thibaut Carpentier

*The Effects of Pitch and Dynamics on the Emotional Characteristics of Piano
Sounds*
Chuck-jee Chau, Andrew Horner

Media Modules: Intermedia Systems in a Pure Functional Paradigm
Mark Santolucito, Donya Quick, Paul Hudak

*Gesture Capture, Processing, and Asynchronous Playback within Web Audio
Instruments*
Benjamin Taylor, Jesse Allison

*Rasping Music: Remodeling Early Minimalist Music through Mechatronic Sound-
Sculpture*
Mo H. Zareei, Ajay Kapur, Dale A. Carnegie

Mapping Tone Helixes to Cylindrical Lattices Using Chiral Angles
Hanlin Hu, Brett Park, David Gerhard

*Mirror Mind: New Possibilities for Overall Interactive Design in New Music-Media
Theatre*
Yi Qin, Da-Lei Fang, Zhi-Bo Xu, Yan Da

Brain-Computer Interfaces and Their Application as an Audiovisual Instrument
Yago de Quay, João Beira

Paper Program
Thursday, October 1, 2015

9am–10:20am Murchison Performing Arts Center – IRR

Paper Session 9A – Algorithmic Composition II

Chair: Donya Quick

"There is pleasure...": An Improvisation Using the AAIM Performance System
Simon Fay

RCCM Canons: Not Only a Problem of Cage
Alba Francesca Battista, Carlos Maximiliano Mollo, Nicola Monopoli

Minimal Fitness Functions in Genetic Algorithms for the Composition of Piano Music
Rodney Waschka II

9am–10:20am Murchison Performing Arts Center – 021

Paper Session 9B – New Instruments for Musical Expression II

Chair: Mark Ballora

Kinesonic Composition as Choreographed Sound: Composing Gesture in Sensor-Based Music
Aurie Hsu, Steven Kemper

Adaptive Music Technology: History and Future Perspectives
Kimberlee Graham-Knight, George Tzanetakis

Composition Techniques for the Ilinx Vibrotactile Garment
Ian Hattwick, Ivan Franco, Marcello Giordano, Deborah Egloff, Marcelo M. Wanderley, Valerie Lamontagne, Ian Arawjo, Chris Salter, Maurizio Martinucci

– break –