

Michael Musick

Curriculum vitae

Assistant Professor of Media Arts
University of Montana
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Musician, Media Artist, Improviser, Technologist, and Tuba Player
Research in Music & Creative Technology, with emphasis in; interactive music systems,
sonic ecosystems, sound studies, digital signal processing, and soundscape

EDUCATION

Ph.D. Music Technology

New York University – Department of Music and Performing Arts Professions;
The Steinhardt School
January 2017

Dissertation: *Practice-Led Research / Research-Led Practice Identifying the Theory and
Technique of Sonic Space Ecosystems*

Tae Hong Park (chair), Alex Ruthmann, Douglas Repetto,
Robert Rowe (external reader), Scott Miller (external reader)

M.A. Media Arts

University of Michigan – Department of Performing Arts Technology;
School of Music, Theatre & Dance
2012

M.M. Tuba Performance

University of Southern California – Thornton School of Music
2009

B.M. Tuba Performance with certificate in Music Technology

University of Colorado – College of Music
2007

UNIVERSITY EMPLOYEMENT

2016 – present Assistant Professor, School of Media Arts,
College of Visual and Performing Arts, University of Montana.

PUBLICATIONS

Journal Articles

Musick, Michael, and Tae Hong Park. 2014. "SoundScapes, the Internet of Things, and the Media Artist." Edited by Tae Hong Park. *Journal SEAMUS: The journal of the Society for Electro-Acoustic Music in the United States*. 25 (1-2): 12–24.

Musick, Michael. 2013. "What Is Music Technology." Edited by Tae Hong Park. *Journal SEAMUS: The journal of the Society for Electro-Acoustic Music in the United States*. 24 (1-2): 25–32.

Peer-Reviewed Conference Proceedings

Musick, Michael, Jonathan P Forsyth, and Rachel Bittner. "Building a Harmonically Ecosystemic Machine: Combining Sonic Ecosystems with Models of Contemporary Harmonic Language." *41st International Computer Music Conference (ICMC)*. Denton, TX, USA: 2015.

Forsyth, Jonathan P, Rachel Bittner, Michael Musick, Juan P Bello. "Improving and Adapting Finite State Transducer Methods for Musical Accompaniment." *41st International Computer Music Conference (ICMC)*. Denton, TX, USA: 2015.

Musick, Michael, and Tae Hong Park. "Timbral Hauntings: An Interactive System Re-Interpreting the Present in Echoes of the Past." *40th International Computer Music Conference (ICMC) and 11th Sound and Music Computing (SMC) Conference*. Athens, Greece: 2014. 254–261.

Musick, Michael. "Examining the Analysis of Dynamical Sonic Ecosystems: In Light of a Criterion for Evaluating Theories." *40th International Computer Music Conference (ICMC) and 11th Sound and Music Computing (SMC) Conference*. Athens, Greece: 2014. 154–161.

Musick, Michael, Johnathan Turner, and Tae Hong Park. "Interactive Auditory Display of Urban Spatio-Acoustics." *The 20th International Conference on Auditory Display (ICAD-2014)*. New York, NY, USA: 2014.

Park, Tae Hong, Michael Musick, et al. "Citygram One: One Year Later...." *40th International Computer Music Conference (ICMC) and 11th Sound and Music Computing (SMC) Conference*. Athens, Greece: 2014. 491–498.

Park, Tae Hong, Johnathan Turner, Michael Musick, et al. "Sensing Urban Soundscapes." *Mining Urban Data (MUD) Workshop Proceedings of the EDBT/ICDT 2014 Joint Conference*. Athens: 2014.

Boren, Braxton, Michael Musick, Jennifer Grossman, et al. "I HEAR NY4D : Hybrid Acoustic and Augmented Auditory Display for Urban Soundscapes." *Proceedings of the 20th International Conference on Auditory Display (ICAD)*. New York, NY, USA: 2014.

Musick, Michael, Braxton Boren, Areti Andreopoulou. "I Hear NY3D: An Ambisonic Installation Reproducing NYC Soundscapes." *135th Audio Engineering Society (AES) Convention*. New York, NY, USA: 2013.

Boren, Braxton, Areti Andreopoulou, Michael Musick, et al. "I Hear NY3D: Ambisonic Capture and Reproduction of an Urban Sound Environment." *Audio Engineering Society Conference: Convention 135* 2013.

Park, Tae Hong, Johnathan Turner, Christopher Jacoby, et al. "Locative Sonification: Playing The World Through Citygram." *Proceedings of the 2013 International Computer Music Conference (ICMC)*. Perth, Australia: 2013.

SELECT ARTISTIC WORK

S(e)oul Sound(e)scapes A soundscape installation that explores the relationship of sound in urban settings through live, sensor-driven information from around the world.
2017, *Neotopia: Data and Humanity Exhibition at Art Center Nabi. Seoul, South Korea.*

Ecosystemic Improvisation System no. 3 An agent based improvisation system
2017, *New York City Electroacoustic Music Festival (NYCEMF). New York, NY.*

Sonic Space no. 9; for deliberate sonic sculpture agents (2015-2016) A sonic ecosystem installation composition for an unspecified number of sonic, raspberry-pi based interactive sculptures.
2016, *Society for Electroacoustic Music in the United States (SEAMUS) Conference. Georgia Southern University; Statesboro, GA.*
2016, *New York City Electroacoustic Music Festival (NYCEMF). New York, NY.*

PRECUNEUS: Sonic Space No. 8; Iteration No. 4 (2016) Sonic ecosystem composition for concert presentation with performer.
2016, *at the Fridman Gallery in NYC as part of the CT-SWaM:: spatial sound concert for New Ear Festival.*
2016, *New York City Electroacoustic Music Festival (NYCEMF). New York, NY.*
2017, *Society for Electroacoustic Music in the United States (SEAMUS) Conference. St. Cloud State University; Minneapolis, MN.*

One Deliberate Day: Sonic Space No. 8; Iteration No. 1 (2015) Sonic Ecosystem Composition composed to accompany and be installed within the larger music performance **One Deliberate Day (2015)**.
2015, *Premiered at IMPACT Presents, produced by John Gilbert. New York, NY.*

The Harmonically Ecosystemic Machine; Sonic Space No. 7 (2015) Sonic Ecosystem

Composition. Collaboration with Jonathan P. Forsyth, and Rachel Bittner

2015, *International Computer Music Conference (ICMC)*. Denton TX.

2015, *New York University Open House*. New York City.

Interactive Soundscape Environment; InSeE (2015) Interactive installation exploring differences between real-time urban soundscape data. By the Citygram Team – Tae Hong Park, Michael Musick, Evan Kent, Jordan Juras, Andrew Phillips

2015, *International Computer Music Conference (ICMC)*. Denton TX.

2015, *The 15th International Conference on New Instruments for Musical Expression (NIME)*. Baton Rouge, LA.

2015, *Presented on Governors Island as part of Harvestwork's New York Electronic Arts Festival*. NYC, NY.

2015, *Society for Electroacoustic Music in the United States (SEAMUS) Conference*. Virginia Tech University; Blacksburg, VA.

Aggressive City Rhythms (2015) Acousmatic work based on urban sound data

2015, *Featured on "rAdioCUSTICA" by the Czech Radio Vltava*.

Timbral Hauntings: Sonic Space No. 6; Iteration No. 1 (2014) Sonic Ecosystem Composition, Installation

2014, *International Computer Music Conference (ICMC)*. Athens, Greece.

2014, *International Society for Improvising Musicians Conference (ISIM)*. New York City.

2014, *New York University Open House*. New York City.

Sonic Space No. 5; Iteration No. 2 (2014) Sonic ecosystem composition for concert presentation with performer.

2015, *International Computer Music Conference (ICMC)*. Denton, TX.

2015, *Society for Electroacoustic Music in the United States (SEAMUS) Conference*. Virginia Tech University; Blacksburg, VA.

2014, *Interactive Performance Arts Series, NYU*. New York City.

2014, *International Conference of Auditory Display (ICAD)*. New York City.

I Hear NY4D (2014) Immersive Ambisonic Installation of Urban Soundscapes and Real-Time Social Media Data. Co-Creators: Jenn Grossman, Mike Tierney, Samuel Nasach

2014, *International Conference of Auditory Display (ICAD)*. New York, USA.

Interconnected Feedback Rooms (2014) Distributive performance of sonic exploration spaces.

Co-Creators: Chris Jacoby, John Turner

2013, *New York University, Music Technology Open House*. New York City.

Sonic Space No. 5; Iteration No. 1 (2013) Sonic Ecosystem Composition, Installation

2015, *New York City Electroacoustic Music Festival (NYCEMF)*. NYC, NY.
2014, *International Society for Improvising Musicians Conference (ISIM)*. New York City.
2013, *International SuperCollider Conference*. Boulder, CO.

I Hear NY3D (2013) Ambisonic Exploration Installation of Urban Soundscapes Co-Creators:
Braxton Boren, Areti Andreapolou

2013, *Audio Engineering Society (AES) Convention*, New York City, NY, USA.
2013, *New York University, Music Technology Open House*. New York City.

Coney Island is Here: (2013) Binaural Soundscape Composition

Released online (<http://michaelmusick.com/2013/07/06/nyu-sound-studies/>)

MatLab Diddys (2013) Solo Acousmatic Algorithmic Computer Pieces

Released online (<http://michaelmusick.com/2013/07/06/nyu-sound-studies/>)

Sonic Space No. 2; Iteration No. 8 (2012) Gallery Installation

2012, *Gallery Project* (www.thegalleryproject.com); Ann Arbor, MI.

Sonic Space No. 4; Iteration No. 1 – For Large Sonic Ecosystem and Creative Improvisation Ensemble (2012) Sonic Ecosystem Composition, Installation/Concert Performance

2012, *Masters Thesis Presentation: Creative Portion*; University of Michigan, Ann Arbor.

Sonic Exploration No. 1; for an Adorable Picture of a Gorilla - [Sonic Space No. 1] (2011)

Electroacoustic Performance Piece with Found Objects
2014, *Society for Electro Acoustic Music in the United States (SEAMUS) Conference*. Wesleyan University.

Purge: music for modern dance (2011)

2011, *Premiered in Ann Arbor, MI*.

It Just Starts This Way: music for modern dance (2011)

2011, *Premiered in Ann Arbor, MI*.

A Late Night Nap (2007) Live Performance Piece for SuperCollider and Tuba Player

2008, *Southwest Regional Tuba and Euphonium Conference*, Los Angeles, CA.
2007, *Rocky Mountain Regional Tuba and Euphonium Conference*, Boulder, CO.

Good Day (2006) Live performance piece for SuperCollider and Narrator

2007, *Premiered in Boulder, CO*.

RESEARCH EXPERIENCE

- 2011 – curr Sonic Spaces Project; Creative work and research into Sonic Spaces, a type of interactive music system, influenced by real-world ecosystems.
- 2012 – curr Citygram; Research in capturing, mapping, sonification, machine learning, visualizing, and creative possibilities of dynamic ‘a-visual’ urban energies.
PI – Tae Hong Park
- 2015 Holojam – NYU, Media Research Lab. Research into software protocols and interaction design for networked, immersive, virtual reality. PI – Ken Perlin.
- 2012 – 2016 Computer Music Research Group at New York University.
- 2012 – 2013 NYU Immersive Audio Group; Research into the ambisonic capture and reproduction of urban sound environments.
- 2011 – 2012 Research Assistant for Stephen Rush at the University of Michigan. Assisted with data management of musicology related projects. Also assisted with the development of technologies for live performance in multi-media opera.

UNIVERSITY TEACHING EXPERIENCE

University of Montana

Interactive Media 1 & 2

Creative Coding 1 & 2

Web Development

Web Technologies

New York University

Advanced Musical Acoustics, Graduate Level.

Advanced Digital Signal Theory, Graduate Level. Teaching Assistant.

University of Michigan

Introduction to Computer Music

University of Southern California

Popular Music in the Recording Studio. Teaching Assistant and Studio Engineer.

Summer Intensives and Institutes

- 2016 – 2017 NYU Summer Music Technology Intensive; for Undergraduates.
- 2016 – 2013 NYU Summer Institute in Music Technology.
A two-week intensive institute for high school students. Served as an instructor, and lecturer for topics in electronic music and live performance.

AWARDS AND HONORS

- 2017 Award of Distinction for *S(e)oul Sound(e)scapes* during Art Center Nabi's Global Hackathon from the Korea Foundation for the Advancement of Science & Creativity.
- 2017 NYC Media Lab; Emerging Media Technology Prototypes and Startups – Third Prize for Citygram. (<https://medium.com/@nycmedialab/nyc-media-lab-awards-25-000-in-prizes-for-emerging-media-technology-prototypes-and-startups-6e535816503c>)
- 2016 Recognition of Distinguished Service to the Program; Music Technology Program, NYU.
- 2015 Recognition of Distinguished Service to the Program; Music Technology Program, NYU.
- 2014 Best Student Paper Award; "I Hear NY4D" International Conference for Auditory Display.
- 2014 Recognition of Distinguished Service to the Program; Music Technology Program, NYU.
- 2009 Outstanding Chamber Musician of the year; University of Southern California
- 2007 Outstanding Graduating Brass Musician; University of Colorado.

SERVICE

Board Positions

- 2017 – 2019 College of Music National Alumni Council, University of Colorado
- 2014 – 2016 International Community of Auditory Display
- 2013 – 2016 New York City Monthly Music Hackathon
Organizing Board.

Peer Review

- 2017 **Society for Electro-Acoustic Music in the United States (SEAMUS) Conference.** Music jurist and Paper reviewer.
- 2015, 2014, & 2013 **The International Conference on New Instruments for Musical Expression (NIME).** Scientific paper reviewer and Artistic music jurist.
- 2014, & 2013 **Audio Engineer Society Convention (AES).** Scientific paper reviewer.
- 2014 **International Conference for Auditory Display (ICAD).** Artistic music jurist.

Conference Organization

- 2018 **International Computer Music Conference (ICMC)** Daegu, South Korea
Chair, Installations
- 2015 **New York City Electroacoustic Music Festival (NYCEMF).**
Co-organizer, NYU concerts, installations, and lectures.
- 2015 **Sound and Image Data Conference (SID).**
Co-organizer, installations
- 2014 **International Conference of Auditory Display (ICAD) at New York University.**
Organization and hosting assistant
- 2012 **New Interfaces for Musical Expression (NIME) at The University of Michigan.**
Concert organization and production
- 2009 **Southwest Regional Tuba and Euphonium Conference.**
Organizing assistant
- 2007 **Rocky Mountain Regional Tuba and Euphonium Conference.**
Hosting assistant

University / Departmental Service

- 2017-2020 Faculty Senator, University of Montana
- 2017/18 Faculty Development Committee, University of Montana
- 2017/18 Technology Review Committee, College of Visual and Performing Arts, University of Montana
- 2016, 2015, & 2014 NYU Music Technology Open House - Organizer
- 2015, 2014, & 2013 NYU Interactive Performance Arts Series concerts – Concert co-production

2012, 2011	Performing Arts Technology Showcase Concert Series, University of Michigan - Chair and Organizer
2005-2007	School of Music, Student Union Representation, University of Colorado - Treasurer
2007	Entrepreneurship Center Advisory Panel, University of Colorado

CONFERENCE ACTIVITY / PARTICIPATION AND OTHER INVITED TALKS

Invited Talks

Peabody Conservatory, Computer Music Department. March, 2016.

Presentations

Musick, Michael. "Composing Feedback Based Sonic Ecosystems: Examples from the Sonic Spaces Project" *Monthly Music Hackathon*. New York, NY: 2015.

Musick, Michael. "The Sonic Spaces Project; Phase One" *Society for Electro Acoustic Music in the United States (SEAMUS) Conference*, Blacksburg, VA: 2015.

Musick, Michael. "Sonification of Urban Soundscape Data: with the goal of creating immersive environments for naïve exploration" Think Tank Presentation and Poster. *20th International Conference on Auditory Display (ICAD)*. New York, NY, USA: 2014.

Park, Tae Hong, and Michael Musick. "Capturing Soundscapes via Citygram: Space to Place" *New York City Electroacoustic Music Festival (NYCEMF)*. New York, NY, USA: 2015.

Park, Tae Hong, and Michael Musick. "Playing the world through Citygram." *Society for Electro Acoustic Music in the United States (SEAMUS) Conference 2014*, Wesleyan University, CT: 2014.

Workshops

Musick, Michael. "Primary Techniques for the Composition of Feedback-Based Sonic Ecosystems" *Society for Electro Acoustic Music in the United States (SEAMUS) Conference*, Statesboro, GA: 2016.

Park, Tae Hong, Michael Musick, and Andrew Phillips. "Citygram; Soundscapes, Locative Sonification, and Acoustic Ecology" *The 15th International Conference on New Instruments for Musical Expression (NIME)*. Baton Rouge, LA, USA: 2015.

Park, Tae Hong, Michael Musick, and Andrew Phillips. "Hacking with Open Real-Time Urban Soundscape Data through Citygram" *Monthly Music Hackathon*. New York, NY: 2015.

Park, Tae Hong, and Michael Musick. "Deployment, Analysis, and Creative Composition with RSD's from the Citygram Project" *40th International Computer Music Conference (ICMC) and 11th Sound and Music Computing (SMC) Conference*. Athens, Greece: 2014.

Park, Tae Hong, Michael Musick, and John Turner. "Composing, Performing, and Creating Music via Spatio-Acoustic Big Data" *20th International Conference on Auditory Display (ICAD)*. New York, NY, USA: 2014.

Park, Tae Hong, and Michael Musick. "Playing the world through Citygram." *Society for Electro Acoustic Music in the United States (SEAMUS) Conference 2014*, Wesleyan University, CT: 2014.

Paper Session Chair

"Distributed and Mobile Music." *International Computer Music Conference, 2015*. University of North Texas.

SELECT PERFORMANCE EXPERIENCE

- 2012/2015 **U.S. Grant: A Flux-kit Opera. By Stephen Rush. (2011)**
 Lead Acting Role (U.S. Grant), Electronics, and Tuba.
 2012, Performances in Michigan and New York.
 2015, Performances in Michigan and Indianapolis for the Indy Fringe Festival.
- 2010 – 2012 **Digital Music Ensemble (DME)**
 Highlights included the
 Composition of an outdoor installation, *Gypsy Pond Music XII*.
 Complete performance of Robert Ashley's *In Memoriam...* cycle, other multi-media operas.
 Presentation of Cage's *Cartridge Music* with dancers performing Cunningham choreography.
- 2010 – 2012 **University of Michigan Creative Arts Orchestra (CAO)**
 Practice and performance of freely improvised music in a large group setting.
 Highlights include performances at the *International Society for Improvised Music Conference* in 2011 and 2012, collaborations with many world-renowned improvisers, and an east coast tour in 2012.
- 2010 **The Playground Ensemble**
 A New Music Ensemble in Denver Colorado.

- 2007 – 2009 **The Anything Collaborative**
 I was the co-director and a founding member of this contemporary improvisation orchestra based out of Los Angeles. In addition to the practice and performance of large group free improvisation, we also worked to educate the surrounding community through school outreach.
- 2007 – 2008 **American Youth Symphony – Assistant Tuba**
- 2008 **The Shorty Rogers Big Band; Los Angeles, CA - Tuba**
- 2007 **Colorado Light Opera – Principal Tuba**
- 2005 – 2009 **Colorado Spring Philharmonic – Assistant Tuba**

NON-ACADEMIC WORK

Audio Engineering and Concert Production Work Experience

- 2008 – 2009 Studio Manager and Head Engineer, University of Southern California Studio Music.
- 2008 – 2009 Internship at Sanctum LA Recording Studio in Santa Monica, CA.
- 2007 – 2009 Recording Engineer for Student Recitals, University of Southern California.
- 2007 – 2008 Stage Manager, University of Southern California, Thornton School of Music.
- 2004 – 2007 Recording Engineer and Stage Manager, University of Colorado School of Music Productions.
- Ongoing Freelance recording and mix engineer for recitals, and studio work.

Audio Engineering Project Highlights

- 2013 Kirsten Carey, "Ulysses" – Mix Engineer
- 2012 Patrick Booth, "On The Shoulders of Giants" – Recording and Mix Engineer
- 2012 Derek Worthington, "Lovely Properties" – Recording and Mix Engineer
- 2010 Ukuelel Loki's Gadabout Orchestra, Self Titled EP – Producer, Recording Engineer, Performer
- 2009 Baffoons, Bell Times – Recording Engineer for live tracks
- 2009 Jim Self, single "WooJoo" – Assistant Engineer
- 2008 yOya, Self Titled EP – Recording and Mix Engineer
- 2008 Sock-Oom-Pow, Self Titled EP – Recording Engineer

Music Technology Based Teaching Experience

2014-Present Basics of SuperCollider Workshops.

2009 After School Hip-Hop Production and Music Technology Classes for middle schoolers. Denver Public Schools in partnership with the Cole Beacon Outreach Program.

General Music Teaching Experience

2003 – 2015 Brass and Tuba Clinician, for high schools.

2002 – 2013 Private Tuba Instruction.

2013 Tuba Instructor, The Cavaliers Drum and Bugle Corp.

2007 – 2008 Recorder Class, University of Southern California Outreach Program. Weekly recorder class for 3rd-5th grade students in South Central Los Angeles elementary schools.

2007 – 2008 Brass Sectional and Private Lesson Instruction, University of Southern California Outreach Program. 6th-8th grade students in South Central Los Angeles middle schools.

2003 – 2006 Pomona High School Band and Marching Band in Arvada CO, Brass Instructor. Won three state championship titles.

PROFESSIONAL MEMBERSHIPS/AFFILIATIONS

International Computer Music Association (ICMA)

International Community for Auditory Display (ICAD)

Society for Electro Acoustic Music in the United States (SEAMUS)

New Music World – Global Associate

Audio Engineering Society (AES)

New York City SuperCollider MeetUp group

International Tuba and Euphonium Association (ITEA)