

# Lauren Hayes

ASSISTANT PROFESSOR · SOUND STUDIES

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## Background

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### Education

#### PhD Creative Music Practice

AUDIO-HAPTIC RELATIONSHIPS AS COMPOSITIONAL AND PERFORMANCE STRATEGIES

- Funded by HSS College Award and Funds for Women Graduates
- Examined by Prof. Simon Emmerson and Prof. Raymond MacDonald

*University of Edinburgh*  
2009–2013

#### MSc Digital Composition and Performance

DISTINCTION

*University of Edinburgh*  
2007–2009

#### MA Mathematics and Philosophy

2:1 (HONS.)

*University of Edinburgh*  
1998–2002

### Academic Experience

#### Assistant Professor

SCHOOL OF ARTS, MEDIA AND ENGINEERING

*Arizona State University*  
2016–present

#### Visiting Assistant Professor

SCHOOL OF ARTS, MEDIA AND ENGINEERING

*Arizona State University*  
2015

#### Lecturer

SCHOOL OF ARTS AND CULTURES

- Temporary, undergraduate.

*Newcastle University*  
2014

#### Lecturer

REID SCHOOL OF MUSIC

- Temporary, undergraduate.

*University of Edinburgh*  
2012–2013

#### Project Supervisor and Tutor

REID SCHOOL OF MUSIC

*University of Edinburgh*  
2008–2014

### Research Interests

Digital Composition and Performance  
Interdisciplinary Improvisation  
Site-specificity in Musical Systems  
Sound Art  
Sound Studies  
Music in Health and Well-Being  
Haptic Technology  
Embodied Cognition and Interaction  
Creative Music Practice

### Teaching Interests

Sound Studies  
History of Electronic Music  
History of Improvisation  
Real time performance systems and design  
Embodied Music Cognition

# Research Products

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## Major Research Products

### Journal Publications (published, refereed)

Hayes, L. 2019. Beyond Skill Acquisition: Improvisation, Interdisciplinarity, and Enactive Music Cognition. *Contemporary Music Review*. London: Taylor & Francis. [Q2 Music 2017]

Hayes, L. 2017. From Site-Specific to Site-Responsive: Sound Art Performances as Participatory Milieux. *Organised Sound*, 22(1). Cambridge: Cambridge University Press. 82–92. [Q1 Music 2017]

Hayes, L. 2017. Sound, Electronics and Music: a radical and hopeful experiment in early music education. *Computer Music Journal*. 41(3). MIT Press. 36–49.<sup>1</sup> [Q1 Music, Q2 Media Technology 2017]

Hayes, L. 2013. Haptic Augmentation of the Hybrid Piano. *Contemporary Music Review*, 32(5). London: Taylor & Francis. 499–509. [Q2 Music 2017]

Hayes, L and Michalakos, C. 2012. Imposing a Networked Vibrotactile Communication System for Improvisational Suggestion. *Organised Sound*, 17(1). Cambridge University Press. 36–44. [Q1 Music 2017]

### Conference Papers (published, refereed)

Hayes, L. and Marquez-Borbon, A. 2020. Nuanced and Interrelated Mediations and Exigencies (NIME): Addressing the Prevailing Political and Epistemological Crises. In *Proceedings of New Interfaces for Musical Expression 2020*. Birmingham, UK. [Best Paper Award].

Hayes, L. 2015. Enacting Musical Worlds: Common Approaches to using NIMEs within both Performance and Person-Centred Arts Practices. In *Proceedings of the International Conference on New Interfaces for Musical Expression*. Baton Rouge, USA. 299–302.

Hayes, L. 2015. *Skin Music (2012)*: an Audio-Haptic Composition for Ears and Body. In *Proceedings of the 2015 ACM SIGCHI Conference on Creativity and Cognition*. ACM. 359–360.

### Performances

Hayes, L. 2019. *Moon via Spirit* for voice and live electronics. Huddersfield Contemporary Music Festival (hcmf//) 2019, Huddersfield, UK.<sup>2</sup>

Hayes, L. 2018. Solo performance for enactive live electronic ecosystem. MOOGFEST, Durham, NC, USA.

Hayes, L. 2017. *Mini Savior Opt.* for voice and live electronics. Huddersfield Contemporary Music Festival (hcmf//) 2017, Huddersfield, UK.<sup>3</sup>

Hayes, L. 2016. *Contacto* for hybrid analogue/digital live electronics. Society for Electro-Acoustic Music in the United States (SEAMUS) International Conference 2016, Georgia Southern University, Statesboro, GA.

Hayes, L. 2015. *15 Seconds* for voice and live electronics. Hamilton Mausoleum, SONICA Festival, Hamilton, UK.<sup>4</sup>

Hayes, L. and Michalakos, C. 2015. *Mustek* for augmented instruments. EFG London Jazz Festival, King's Place, London, UK.<sup>5</sup>

Ferguson, J. R. and Hayes, L. *Cigar Boxes*. *New Interfaces for Musical Expression 2015*, Louisiana State University, Baton Rouge, LA.

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<sup>1</sup>This publication was an invitation to expand on the peer-reviewed ICMC 2016 paper which was awarded Best Paper Award in 2016 after being juried by the International Computer Music Association (ICMA).

<sup>2</sup>Jointly commissioned by FluCoMa & hcmf// and broadcast on BBC Radio 3's *New Music Show*.

<sup>3</sup>Commissioned performance as part of the hcmf// 2017 International Showcase and broadcast live on BBC Radio 3's *Hear and Now*.

<sup>4</sup>A commission by SONICA Festival comprising four sold out solo performances in Hamilton Mausoleum.

<sup>5</sup>A Seriously Talented EFG London Jazz Festival 10th Anniversary Commission.

## Standard Research Products

### Journal Publications (published or accepted, refereed)

Hayes, L. 2019. Investigating Autopoiesis in Site-Responsive Sonic Art. *Interference: A Journal of Audio Culture*. 7.

Hayes, L. and Stein, J. 2018. Desert and Sonic Ecosystems: Incorporating Environmental Factors within Site-Responsive Sonic Art. *Applied Sciences*, 8(1).

### Conference Papers (published, refereed)

Hayes, L and Rajko, J. 2017. Towards an Aesthetics of Touch. Proceedings of the 4th International Conference on Movement Computing (MOCO). London. [<45% acceptance rate].

Hayes, L. 2016. Sound, Electronics and Music: an evaluation of early embodied education. In Proceedings of the 2016 International Computer Music Conference. [Best Paper Award].

### Performances

Hayes, L. 2020. *Moon via Spirit* for live electronics. The 2020 Joint Conference on AI Music Creativity, KTH Royal Institute of Technology, Stockholm, Sweden [virtual conference]

Hayes, L. 2020. *Moon via Spirit* for live electronics. International Society for Music Information Retrieval Conference (ISMIR) 2020, Montreal, Canada [virtual conference]

Hayes, L. 2019. Solo evening-length performance for hybrid analogue-digital live electronics & piano and live electronics. Electric Spring 2019, Huddersfield, UK.

Hayes, L. 2018. *Mini Savior Opt.* for live electronics. The 43rd International Computer Music Conference (ICMC) 2018, Daegu, Korea.

Hayes, L. 2018. *Mini Savior Opt.* for live electronics. 5th International Conference on Movement Computing (MOCO). Casa Paganini, InfoMus, Genoa.

Hayes, L. 2016. *From Sin Waves to Robots* live improvisation. Fiftieth Anniversary of Experiments in Art and Technology (EAT) 2016. Stony Brook University, NY, USA.

Hayes, L. and Pietruszewski, M. 2016. *Lauren Sarah Hayes and Marcin Pietruszewski* improvisation for hybrid analogue/digital live electronics and pulsar synthesis. Sonorities Festival of Contemporary Music, Queens University Belfast, UK.

Hayes, L. and Smith, E. 2015. *Type Two Fun* for bass and electronics. BBC Jazz on 3 [live broadcast], Live from the Edinburgh Festival, Edinburgh, UK.

Hayes, L. 2015. *Lucky Dip* for hydrophones, swimming pool, and live electronics. ARTELPHX Festival, Phoenix, AZ, USA.

Ferguson, J. R., Hayes, L., and Michalakos, C. *Colloidal Shiver*. New Interfaces for Musical Expression 2014, Goldsmiths, University of London, London, UK.

### Installations

Hayes, L. and Stein, J. 2017. *Sounding Out Spaces: Garden Ecologies* an ecosystemic site-responsive sonic art installation. Clark Park Community Garden, Tempe, AZ, USA.

## Minor Research Products

### Journal Publications (under review, refereed)

Luo, X and Hayes, L. 2019. Vibrotactile Presentation of Fundamental Frequency Improves Melodic Contour Identification with Cochlear Implant Simulation. *Frontiers in Neuroscience: Auditory Cognitive Neuroscience* [under review]

## Book Chapters (published, refereed)

Hayes, L. 2019. PARIESA: Practice and Research in Enactive Sonic Art. In J.L. Contreras-Vidal, D. Robleto, J.G. Cruz-Garza, J.M. Azorín, C.S. Nam (Eds.) *Mobile Brain-Body Imaging and the Neuroscience of Art, Innovation and Creativity*. Springer.

## Conference Papers (published, refereed)

Lyu, J. and Hayes, L. 2020. Exploring Social Coordination through Computationally Augmented Artifacts using Auditory Feedback. In *Proceedings of The 26th International Symposium on Electronic Art (ISEA)*. Montreal.

Hayes, L. 2018. Live Electronic Music Performance: Embodied and Enactive Approaches. In *Proceedings of the 5th International Conference on Movement Computing (MOCO)*. Genoa.<sup>6</sup>

Isaac, G, Hayes, L and Ingalls, T. 2017. Cross-Modal Terrains: Navigating Sonic Space through Haptic Feedback. In *Proceedings of the International Conference on New Interfaces for Musical Expression*. Copenhagen. (24% acceptance rate).

Hayes, L. 2012. Performing Articulation and Expression through a Haptic Interface. In *Proceedings of the 2012 International Computer Music Conference*. 400–403.

Hayes, L. 2011. Vibrotactile Feedback-Assisted Performance. In *Proceedings of the International Conference on New Interfaces for Musical Expression*. Oslo, Norway. 72–75.

## Performances

Hayes, L. 2020. Solo. Diabolical Records, Salt Lake City, UT, USA.

Hayes, L. 2020. *Moon via Spirit*. MOXSONIC: Missouri Experimental Sonic Arts Festival. University of Central Missouri, MO, USA.

Wu, C., Hayes, L., Ferguson J. R. Embodied Sonic Meditation. 2019. Movement Computing (MOCO) 2019, Arizona State University, AZ, USA.

MacDonald, R. & Friends. Lie Still My Sleepy Fortunes. 2019. Edinburgh Festival, Edinburgh, UK.

Conz, R., Goeringer, L., Hayes, L., Hatakeyama, A., Marquez-Borbon, A., Pietruszewski, M., Rawlinson, R. Vasquez, E. 2018. Laboratory for Laptop and Electronics Audio Performance Practice (LLEAPP) 2018. Arizona State University, AZ, USA.

Hayes, L. 2018. *Visitor Ion Map* improvisation for voice, live electronics, and enactive performance system. 16th Biennial Symposium for Arts and Technology, Ammerman Center for Arts and Technology, Connecticut College, CT, USA.

Hayes, L. 2018. *Simian or Pivot?* improvisation for voice, live electronics, haptic feedback, and enactive performance system. Alliance of Women in Media Arts and Technology Conference (AWMAT) 2018, University of California: Santa Barbara, CA.

Rajko, J., Hayes, L. et al. 2018. *Me, My Quantified Self, and I*. Multimedia performance and installation. Unexpected Gallery, Phoenix, AZ, USA.<sup>7</sup>

Hayes, L. 2017. *A Vision Import* for hybrid analogue/digital live electronics. Your Brain on Art: International Conference on Mobile Brain-Body Imaging, Valenica, Spain.

Hayes, L. and Pietruszewski, M. 2017. *Margaret* improvisation for hybrid analogue/digital live electronics and pulsar synthesis. Ambient Audiences: Sonic Structures, The Fruitmarket Gallery, Edinburgh, UK.

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<sup>6</sup>This extended abstract accompanies the performance that was presented at the conference.

<sup>7</sup>This was a large-scale work produced and directed by Jessica Rajko, and presented over three evenings. I contributed as performer, musician, and haptic technologist.

Hayes, L. 2017. *Riot Map Vision* for hybrid analogue/digital live electronics. New Music Gathering, Bowling Green University, Ohio, USA.

Hayes, L. 2016. *Shimmera* for hybrid analogue/digital live electronics. Electronic Music Midwest, Lewis University, IL, USA.

Hayes, L. 2016. *Shimmera* for hybrid analogue/digital live electronics. A Body of Knowledge: Embodied Cognition and the Arts, University of California: Irvine, CA, USA.

Hayes, L. 2015. *Patience* for toy piano and live electronics. Performed by Xenia Pestova, St. Catherine's, London, UK.

Hayes, L. 2015. *transient* for prepared piano and live electronics. Something Said Only Once (SSOO), Flagstaff, AZ, USA.

Hayes, L., Pestova, X., and Schroeder, F. 2015. *Fluxtrio*. Embodied Audio-Visual Interaction Group (EAVI) XIV, Goldsmiths, University of London, UK.

## **Supporting Research Products**

### **Doctoral Thesis Abstract (peer reviewed)**

Leonardo ABstracts Service [LABS], 2020

Hayes, L. 2014. Audio-Haptic Relationships as Compositional and Performance Strategies. [PhD Thesis]. University of Edinburgh.

### **Doctoral Thesis (unpublished)**

Hayes, L. 2014. Audio-Haptic Relationships as Compositional and Performance Strategies. [PhD Thesis]. University of Edinburgh.

### **Commentary (published, invited)**

Hayes, L. 2017. Some Thoughts on Friction and Physicality Within Past and for Future NIME Research. In NIME Reader. Springer. 189–191.

### **Conference Abstracts**

Hayes, L. 2020. Beyond Skill Acquisition: Improvisation, Interdisciplinary, and Enactive Music Cognition. Creativity and Improvisation in Thought, Practice, and Mind, University of Nebraska, Omaha, NE, USA. POSTPONED DUE TO COVID-19

Hayes, L. 2020. Sound, Electronics, and Music: A Radical and Hopeful Experiment in Early Music Education. Music Technology Pedagogy Summit, Westminster College, Salt Lake City, UT, USA.

Hayes, L. 2020. Sounding Out Spaces: Investigating Autopoiesis In Site-Responsive Sonic Art. CHIMEFest 2020: CIRCULATIONS: Symposium on Live Audio Feedback in Art, University of Chicago, IL, USA.

Hayes, L. and Stein, J. 2018. Sounding Out Spaces: Site-Responsive Sonic Art. Alliance for the Arts in Research Universities (a2ru) 2018 National Conference, Athens, GA, USA.

Hayes, L. 2018. Enacting Musical Worlds through New Technologies: Haptics, Music Perception, Improvisation, and Emergence. Enactivism: Theory and Performance, Department of Philosophy, University of Memphis, TN, USA.

Luo, X., Long, S., Gerard, K., Isaac, G., and Hayes, L. 2018. Using Vibro-tactile Stimulation to Improve Cochlear Implant Performance in Pitch-related Listening Tasks. Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, CA, USA.

Hayes, L. 2017. Shimmera. Proceedings of the 2016 Conference Body of Knowledge: Embodied Cognition and the Arts, University of California, Irvine, CA, USA.<sup>8</sup>

Hayes, L. 2017. Sound Art and Creativity. The 2nd International Conference on Neuroscience and the Arts, Valencia Spain. [invited talk]

Hayes, L. 2017. Site-Responsive Sonic Art. Sound+Environment, Hull University, Hull, UK.

Hayes, L. 2015. Site-Responsive Performance. SONICA Festival, Glasgow, UK. [invited artist talk]

Hayes, L. and Michalakos, C. 2013. Augmented Instruments, Technology and Improvisation. Sound, Sight, Space and Play (SSSP), De Montfort University, De Montfort. [invited keynote talk with Christos Michalakos]

Hayes, L. 2013. Invited artistic talk, EarZoom Festival, Ljubljana, Slovenia.

Hayes, L. 2012. (A)live Electronics: Multimodal and enactive approaches to digital music from the performer's perspective. Interactive Keyboard Symposium, Goldsmiths, University of London, London, UK.

Hayes, L. 2012. Multimodal and enactive approaches to digital music from the performer's perspective. Music Research Seminar, University of Edinburgh, Edinburgh, UK.

Hayes, L. 2012. Haptic Augmentation of the Hybrid Piano. Symposium for the Performance of Electronic and Experimental Composition (SPEEC) 2012. University of Oxford, Oxford, UK.

Hayes, L. 2011. Vibrotactile Feedback for Digital Music Performance. Sound Thought, Glasgow, UK.

## Reviews

Hayes, L. 2017. Robert Henke - Lumiere II.2 Tivoli Vredenburg, Grote Zaal at ICMC 2016. Utrecht, Netherlands. Array: The Journal of the ICMA. [concert review]

## Performances

Hayes, L. 2020. Solo. The Lunchbox, Phoenix, AZ, USA.

Hayes, L. 2020. *Mini Savior Opt.* for live electronics. Stop! Silence! Now! Aside Theatre, Phoenix, AZ, USA.

Hayes, L. with Elizabeth K Bayer, Josh Bennett, Megan DeJarnett, Gabby Isaac, Keith Kelly, Brett Reed. 2020. Solo and collective improvisations. OME Presents Lauren Sarah Hayes, The Lost Leaf, Phoenix, AZ, USA.

Hayes, L. 2019. *Mini Savior Opt.* for live electronics. Turn Up Multimedia Festival, University of Arizona, Tucson, AZ, USA.

Hayes, L. 2017. Improvisation for live electronics. Oh My Ears Festival, Mesa Arts Center, Mesa, AZ, USA.

Hayes, L. 2017. *Riot Map Vision* for hybrid analogue/digital live electronics. Southwest Electronic Music Festival, Arizona State University, AZ, USA.

Hayes, L. 2016. *n-seconds* for live electronics. Trunk Space, Phoenix, AZ, USA.

Guzzanti, P. and Hayes, L. 2016. Collaborative improvisation for live electronics and dancer. Jam Jar Series / Moving On Music, Black Box Theatre, Belfast, UK.

Hayes, L. 2015. *Patience* for toy piano and live electronics. Performed by Xenia Pestova, Radical dB, Zaragoza, Spain.

## Installations

Hayes, L. and McConnell, J. 2016. *Skin Music II* an audio-haptic installation. EMERGE Festival: The Future of Big Analytics, Arizona State University, AZ, USA.<sup>9</sup>

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<sup>8</sup>This abstract accompanies the performance that was presented at the conference.

<sup>9</sup>Jack McConnell was an undergraduate student research assistant.

Hayes, L. 2016. *Scorched Earth* (ohrenhoch remix 2016) a sonic art installation. Ohrenhoch, der Geräuschladen, Berlin.

### **Film Music**

Hayes, L. 2014. *Contactor* [Absence of Wax] used as film soundtrack for *Myszochujek* [dir. Kristof Babaski]. Official selection at Glasgow Short Film Festival 2015, Slamdance 2015, Leeds International Film Festival 2014, Schnitt International Shortfilmfestival 2014, Encounters 2014, OTTAWA International Animation Festival, EIFF 2014, and Pictoplasma Berlin Festival 2014.

### **Residencies**

Ars Bioarctica, Finnish Bioart Society and the Kilpisjärvi Biological Station, Faculty of Biological and Environmental Sciences, University of Helsinki. Art-science residency with Tobias Feltus. 2017.

AirTime by Serious and Creative Scotland. Artistic week-long residency at Tollbooth, Stirling. 2014.

McFall's Electronics Project. Musician in residence with McFall's Chamber creating piece for string quartet, live electronics and vibrotactile feedback system. 2013.

Studio for Electro-Instrumental Music (STEIM), Amsterdam. Artistic residency developing wireless vibrotactile technology. 2012.

ElektronMusicStudion, Stockholm, Sweden. Invited guest composer. 2011.

### **Research Related Awards**

Best Paper Award, International Conference on New Interfaces for Musical Expression, with Adnan Marquez-Borbon. 2020.

Alliance for the Arts in Research Universities (a2ru) Faculty Fellow Grant. 2017.

Best Paper Award, International Computer Music Conference, International Computer Music Association. 2016.

Mayo Symposium Scholarship Grant for Artists, Arizona Commission on the Arts. 2016.

PRSF Women Make Music Award with Dr Xenia Pestova and Dr Franziska Schroeder. 2015.

## Press

- 2020 **ASU professor shares research at conference and performs at musical festival**, <https://asunow.asu.edu/20200302-asu-professor-shares-research-conference-and-performs-musical-festival> *ASU Now*
- 2019 **Transylvania to provide front-row seat to national digital arts, music scene**, <https://www.transy.edu/1780/2019/09/transylvania-to-provide-front-row-seat-to-national-digital-arts-music-scene/> *1780*
- 2018 **Interview in Voyage Phoenix**, <http://voyagephoenix.com/interview/check-lauren-sarah-hayess-artwork/> *Voyage Phoenix*
- 2018 **Artists and engineers are taking a cross disciplinary LLEAPP at ASU**, <http://www.statepress.com/article/2018/04/spartcult-how-art-and-engineering-coincide-in-producing-new-creatives> *State Press*
- 2017 **Studying the textures of sound**, <https://herbergerinstitute.asu.edu/news/asu-assistant-professor-share-digital-music-research-loop-2017> *Herberger News*
- 2017 **hcmf// Review of Mini Savior Opt.**, [http://www.heraldscotland.com/arts\\_ents/15690045.Scots\\_composer\\_James\\_Dillon\\_on\\_why\\_being\\_mixed\\_up\\_is\\_really\\_no\\_bad\\_thing/](http://www.heraldscotland.com/arts_ents/15690045.Scots_composer_James_Dillon_on_why_being_mixed_up_is_really_no_bad_thing/) *The Herald, Scotland*
- 2017 **Assistant Professor Researches Haptic Technology**, <http://www.statepress.com/article/2017/10/spartcult-assistant-professor-researches-haptic-technology> *State Press*
- 2016 **Studying the textures of sound**, <https://asunow.asu.edu/20160128-creativity-studying-textures-sound> *ASU Now*
- 2015 **SONICA 2015 Review of 15 Seconds**, <http://www.fluid-radio.co.uk/2015/11/sonica-2015-2/> *Fluid Radio*
- 2015 **SONICA 2015 Review of 15 Seconds**, <http://thequietus.com/articles/19247-things-learned-at-sonica-review> *The Quietus*



## Research Support

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### FUNDING FROM FEDERAL AND STATE AGENCIES

2016	<b>City of Tempe   City of Tempe and ASU Partnership Grant</b> , Sounding Out Spaces, Contribution: 50%, PI, Co-PI: Julian Stein	\$5,000
2015	<b>Creative Scotland, Youth Music Initiative</b> , Sound, Electronics & Music, Contribution: 100%, PI, Co-PI: Nancy Douglas	\$10,000
2014	<b>Creative Scotland, Youth Music Initiative</b> , Sound, Electronics & Music, Contribution: 100%, PI, Co-PI: Nancy Douglas	\$34,000

### FUNDING FROM INTERNAL SOURCES

2017	<b>Seed Grant   Herberger Research Council</b> , Wearable rehabilitation systems for visual activity sensing and audio/haptic feedback, Contribution: 50%, Co-PI, PI: Robert LiKamWa	\$12,000
2017	<b>Interdisciplinary Project Collaboration Grant   Herberger Research Council</b> , LLEAPP: Laboratory for Laptop and Electronic Audio Performance Practice, Contribution: 100%, PI	\$4,610
2016	<b>Interdisciplinary Project Collaboration Grant   Herberger Research Council</b> , HEAR-ME: A Multi-sensory Investigation into Enhanced Music Perception of Cochlear Implant Users, Contribution: 50%, PI, Co-PI: Xin Luo	\$4,964.94

### FULL PROPOSALS FROM FEDERAL AND STATE AGENCIES PENDING FUNDING

2020	<b>NSF: HCC</b> , Brain-Body Interfaces to promote creativity and musical training on children through embodied improvisation [Multi-institution grant], Contribution: 100%, Co-PI, PI: Jose Contreras-Vidal	\$600,000
2020	<b>NIH</b> , Prosody Production Training with Multisensory Feedback for Cochlear Implant Users, Contribution: 5%, Co-PI, PI: Xin Luo	\$408,195
2020	<b>NIH: Resubmission</b> , Using Vibrotactile Stimulation to Enhance Cochlear Implant Performance, Contribution: 5%, Co-PI, PI: Xin Luo	\$408,195

### FULL PROPOSALS DECLINED FOR FUNDING

2020	<b>NEA</b> , Sound Health Network, Contribution: 10%, Co-PI, PI: Sandra Stauffer	\$300,000
2020	<b>NEA</b> , Laboratory for Laptop and Electronic Audio Performance Practice (LLEAPP), Contribution: 100%, PI	\$47,842
2019	<b>NIH</b> , Using Vibrotactile Stimulation to Enhance Cochlear Implant Performance, Contribution: 5%, Co-PI, PI: Xin Luo	\$409,013
2019	<b>NIH</b> , Assaying neuromodulatory effects of inclusive musical training on children using mobile brain-body imaging and music technologies, ASU Contribution: 60%, PI, Co-PI: Sha Xin Wei	\$930,529
2019	<b>NEA</b> , Sounding Out Spaces: Desert Ecologies, Contribution: 100%, PI	\$43,530
2019	<b>NEA</b> , HEAR-ME (Haptic Electronic-Audio Research into Musical Experiences), Contribution: 80%, PI, Co-PI: Xin Luo	\$43,530
2019	<b>Women and Philanthropy</b> , Haptic Electronic-Audio Research into Musical Experiences (HEAR-ME), Contribution: 80%, PI, Co-PI: Xin Luo	\$97,724
2018	<b>NEA</b> , Sounding Out Spaces: Desert Ecologies, Contribution: 100%, PI	\$100,001
2018	<b>NSF</b> , Planning Grant: Engineering Research Center for Art, Technology, Health, Engineering and Science (ATHENS), Contribution: 25%, Co-PI, PI: Jose Contreras-Vidal	\$72,965
2018	<b>Arizona State University Foundation (ASUF)</b> , Diversity and Inclusion Lunch - TEI 2019, Contribution: 33%, Co-PI, PI: Althea Pergakis	\$4,999
2018	<b>DOD-ARMY: Army Medical Research Acquisition Activity (USAMRAA)</b> , Enhancing Hearing Function of Cochlear Implant Users through Vibro-tactile Stimuli, Contribution: 25%, Co-PI, PI: Xin Luo	\$730,766
2017	<b>NEA</b> , Media Arts: Sounding Out Spaces: Desert Ecosystems, Contribution: 100%, PI	\$100,001
2017	<b>NSF</b> , SCH: INT: Low-power signal processing and resource-constrained dynamical modeling, Contribution: 20%, Co-PI, PI: Pavan Turaga	\$1,998,833
2017	<b>Arizona State University Foundation (ASUF): Women and Philanthropy</b> , Engendering Multi-sensory Person-Centered Arts Practice in Autism, Contribution: 50%, PI, Co-PI: Todd Ingalls	\$64,379
2017	<b>Arizona State University Foundation (ASUF): Women and Philanthropy</b> , Realtime interactive media for movement training, Contribution: 33%, Co-PI, PI: Todd Ingalls	\$98,230
2016	<b>NEA</b> , Sounding Out Spaces, Contribution: 100%, PI	\$99,813
<b>LIMITED SUBMISSION PROPOSALS DECLINED FOR ADVANCEMENT</b>		
2018	<b>NEA</b> , Research Labs: Haptic Electronic Audio Research into Musical Experience (HEAR-ME), Contribution: 50%, PI, co-PI: Xin Luo	
2017	<b>NEA</b> , Research Labs: Music, Improvisation and Technology for Health and Well-being, Contribution: 50%, PI, Co-PI: Todd Ingalls	\$146,928

#### COLLABORATOR ON EXTERNAL PROPOSALS

2020 **NEH**, NEH Collaborative Research Grant, PI: Rebecca Cypess

2018 **SSHRC**, Partnership Development Grants, PI: Doug Van Nort

## Service

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### Professional Memberships

2019- **European Science Foundation**, College of Expert Reviewers

2018- **International Computer Music Association**, At-Large Director

2016- **New BBC Radiophonic Workshop**, Member

### Service Related Awards

2020 **ASU Sun Award**, for exemplary service, demonstrating leadership, & innovation

### Invited Talks

**UNO Music Technology Guest Lecturer Series feat. Lauren Hayes - Virtual** *lecture / recital [virtual]*  
UNIVERSITY OF NEBRASKA, OMAHA, SCHOOL OF MUSIC, NE, USA 2020

**Fluid Evolution: New Developments for an Ageing Instrument for Improvisation** *talk*  
UNIVERSITY OF HUDDERSFIELD, CERENEM, HUDDERSFIELD, UK 2019

**Creating Sound in Context** *talk*  
LIGHTHOUSE GALLERY, SONICA FESTIVAL, GLASGOW, UK 2015

### Conference Workshops Organized

**Co-Constructing Events in Responsive Environments** *MOCO*  
WITH XIN WEI SHA, JESSICA RAJKO, ET AL, ARIZONA STATE UNIVERSITY, AZ, USA 2019

**Composing Ecosystemically in Responsive Environments with Gestural Media, Objects and Textures** *TEI*  
WITH BRANDON MECHTLEY, TODD INGALLS, ET AL, ARIZONA STATE UNIVERSITY, AZ, USA 2019

**Laboratory for Laptop/Live & Electronic Audio/Art Performance Practice** *LLEAPP*  
ARIZONA STATE UNIVERSITY, AZ, USA 2018

**Workshop on Design Strategies for Audio-Haptic Composition** *ICMC*  
DAEGU, SOUTH KOREA 2018

**Site-Responsive Sonic Environments** *MOOGFEST*  
WITH TODD INGALLS, DURHAM, NC, USA 2018

<b>Music for Ears and Bodies: Haptics, Vibrotactile Feedback and Touch</b> WITH GABRIELLA ISAAC (GRADUATE STUDENT), DURHAM, NC, USA	<i>MOOGFEST</i> 2018
<b>The Brain on Music: Music, Improvisation and Technology for Health and Well-being</b> INVITED WORKSHOP WITH THE BRAIN CENTER, UNIVERSITY OF HOUSTON, TX, USA	<i>University of Houston</i> 2018
<b>From Finger-Tinglers to Bass Shakers – Vibrotactile haptics for feeling sound</b> INVITED WORKSHOP FOR ABLETON, BERLIN, GERMANY	<i>LOOP</i> 2017
<b>Improvising Electronics Workshop</b> INVITED WORKSHOP FOR HCMF//, UNIVERSITY OF HUDDERSFIELD, UK	<i>hcmf//</i> 2017
<b>Aesthetics of Touch: Performance Practices and New Media Design</b> WITH JESSICA RAJKO, UNIVERSITY OF CALIFORNIA, SANTA BARBARA, CA, USA	<i>AWMAT</i> 2017
<b>Improvisation with Electronics Workshop</b> INVITED WORKSHOP WITH CHRISTOS MICHALAKOS, UNIVERSITY OF SHEFFIELD, UK	<i>Sound Junction</i> 2014
<b>Inventor Composer Coaction</b> UNIVERSITY OF EDINBURGH, UK	<i>ICC</i> 2012
<b>Conference Panel Participation</b>	
<b>Center for the Study of Women in Society and School of Music and Dance, Eugene, OR</b> PARTICIPANT IN DON'T CALL ME A FEMALE COMPOSER—GENDER IMBALANCE IN ELECTRONIC/ELECTROACOUSTIC MUSIC - CANCELLED DUE TO COVID-19	<i>University of Oregon</i> 2020
<b>Uncommon Senses III: The Future of the Senses</b> ROUND TABLE ON HAPTICS WITH DAVE BIRNBAUM, DAVID PARISI, MARK PATERSON, JESSICA RAJKO, MONTREAL, CANADA - CANCELLED DUE TO COVID-19	<i>Concordia University</i> 2020
<b>Human and the Machine</b> INVITED PANEL MEMBER, ATHENS, GA, USA	<i>a2ru x Moogfest</i> 2018
<b>Feminist Perspectives on Computer Music Practice</b> INVITED PANEL MEMBER, DAEGU, KOREA	<i>ICMC</i> 2018
<b>The Politics of Sensation: Towards and Aesthetics of Touch</b> PANEL SELECTION WITH JESSICA RAJKO [REMOTE PRESENTATION], TORONTO, CANADA	<i>XIX ISA World Congress of Sociology</i> 2018
<b>Beyond Curriculum Roundtable: New Perspectives in Music Education</b> INVITED PANEL MEMBER, FUNKHAUS, BERLIN	<i>Ableton LOOP</i> 2017
<b>A Sense of Touch: Haptics in New Musical Instruments</b> INVITED PANEL MEMBER, FUNKHAUS, BERLIN	<i>Ableton LOOP</i> 2017

**Who's Afraid of the Big Bad Electroacoustic Music?**

INVITED PANEL MEMBER, BOWLING GREEN UNIVERSITY, OHIO, USA

*New Music Gathering*

2017

**Electronic Music**

INVITED PANEL MEMBER, BOWLING GREEN UNIVERSITY, OHIO, USA

*New Music Gathering*

2017

**Fifty Years of Experiments in Art and Technology Colloquium**

INVITED PANEL MEMBER, STONY BROOK UNIVERSITY, NY, USA

*fEAT*

2016

**Conference Program Committee**

**Sound and Music Computing Conference, SMC 2020**

SCIENTIFIC PROGRAM COMMITTEE

*Torino, Italy*

2020

**New Instruments for Musical Expression, NIME 2020**

PROGRAM COMMITTEE - PAPERS

*Birmingham, UK*

2020

**Sound and Music Computing Conference, SMC 2019**

SCIENTIFIC PROGRAM COMMITTEE

*Malaga, Spain*

2019

**New Instruments for Musical Expression, NIME 2019**

PROGRAM COMMITTEE - PAPERS

*Porto Alegre, Brazil*

2019

**Tangible Embedded and Embodied Interaction, TEI 2019**

PAPER CHAIR

*Arizona State University,  
AZ, USA*

2018–2019

**New Instruments for Musical Expression, NIME 2018**

PROGRAM COMMITTEE - PAPERS

*Virginia Tech, VA, USA*

2018

**New Instruments for Musical Expression, NIME 2017**

PROGRAM COMMITTEE - PAPERS

*Copenhagen, Denmark*

2017

**Professional Awards Juror**

**Best Paper Award**

INTERNATIONAL COMPUTER MUSIC ASSOCIATION

*New York, NY, USA*

2019

**The Oram Awards**

PRS FOUNDATION AND THE NEW BBC RADIOPHONIC WORKSHOP

*Macclesfield, UK*

2018

**The Oram Awards**

PRS FOUNDATION AND THE NEW BBC RADIOPHONIC WORKSHOP

*Margate, UK*

2017

## Journal Reviewer

- 2020 **Leonardo Journal**, MIT Press
- 2020 **Journal of New Music Research**, Routledge
- 2020 **Journal of Interdisciplinary Music Studies**, JIMS
- 2019 **Multimodal Technologies and Interaction**, MDPI
- 2019 **Leonardo Music Journal**, MIT Press
- 2018 **IEEE Transactions on Haptics**,
- 2018 **IEEE Transactions on Human-Machine Systems**,

## Conference Reviewer

2020	<b>International Computer Music Conference, ICMC 2020</b> , Santiago, Chile	<i>Papers</i>
2020	<b>New Instruments for Musical Expression, NIME 2020</b> , Birmingham, UK	<i>Music</i>
2019	<b>New Instruments for Musical Expression, NIME 2019</b> , Porto Alegre, Brazil	<i>Music</i>
2017	<b>Conference on Human Factors in Computing Systems, CHI 2018</b> , Montreal, Canada	<i>Papers</i>
2017	<b>Electroacoustic Improvisation Symposium, EIS 2018</b> , Brooklyn, NY, USA	<i>Music</i>
2017	<b>ACM Tangible Embedded and Embodied Interaction, TEI 2018</b> , Stockholm, Sweden	<i>Papers</i>
2017	<b>New Instruments for Musical Expression, NIME 2017</b> , Copenhagen, Denmark	<i>Music</i>
2017	<b>International Computer Music Conference, ICMC 2017</b> , Shanghai, China	<i>Papers</i>
2017	<b>International Conference on Movement and Computing, MOCO 2017</b> , London, UK	<i>Papers</i>
2017	<b>Sound and Music Computing, SMC 2017</b> , Espoo, Finland	<i>Papers</i>
2017	<b>Sound + Environment 2017</b> , Hull, UK	<i>Papers &amp; Artworks</i>
2016	<b>Designing Interactive Systems, DIS 2016</b> , Brisbane, Australia	<i>Papers &amp; Notes</i>
2016	<b>International Festival and Conference on Sound in the Arts, Science and Technology, ISSTA 2016</b> , Derry/Londonderry, Ireland	<i>Papers</i>
2016	<b>International Computer Music Conference, ICMC 2016</b> , Utrecht, Netherlands	<i>Papers</i>
2016	<b>New Instruments for Musical Expression, NIME 2016</b> , Brisbane, Australia	<i>Papers, Music, &amp; Installations</i>
2015	<b>International Computer Music Conference, ICMC 2015</b> , Texas, USA	<i>Papers</i>
2015	<b>Balance-Unbalance, BunB 2015</b> , Arizona, USA	<i>Papers</i>
2015	<b>New Instruments for Musical Expression, NIME 2015</b> , Louisiana, USA	<i>Music</i>
2014	<b>New Instruments for Musical Expression, NIME 2014</b> , London, UK	<i>Papers &amp; Music</i>
2012	<b>Network Music Festival</b> , Birmingham, UK	<i>Music</i>

## College Level

**AME & Music Liaison Committee**

2018–2019

FOR MUSIC AND INTERDISCIPLINARY DIGITAL MEDIA PERFORMANCE DEGREES

## School Level

### Search Committee

MEDIA COMPUTING CLINICAL FACULTY

2020

### Graduate Program Committee

DESIGNING AND APPROVING DEGREE PROGRAMS FOR MEDIA ARTS & SCIENCES PHD AND MA DIGITAL CULTURE

2019–present

### AME Doctoral Admissions Committee

FOR GRADUATE ADMISSIONS TO THE MEDIA ARTS & SCIENCES PHD DEGREE PROGRAM

2019–present

### International Program Liaison

ENGAGING INTERNATIONAL NETWORKS

2019–present

### Search Committee

EXPRESSIVE ROBOTICS AND MECHATRONICS TENURE TRACK FACULTY

2018–2019

### AME Masters Admissions Committee

FOR GRADUATE ADMISSIONS TO THE MA DIGITAL CULTURE DEGREE PROGRAM

2017–present

### AME Listening Group

FOUNDER AND MENTOR FOR OFFICIAL ASU STUDENT GROUP

2016–present

## Student Research Supervision

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### Graduate Students

#### Jay Williams

MA DIGITAL CULTURE

Fall 2020–present  
Advisor

#### Eric Cureno

MA ETHNOMUSICOLOGY

Fall 2020–present  
Co-Advisor

#### Noemy Esparza-Isaacson

MFA INTERMEDIA & DIGITAL TECHNOLOGY

Fall 2020  
15Hr Review Committee

#### Ri Lindegren

MFA DANCE & INTERDISCIPLINARY DIGITAL MEDIA AND PERFORMANCE

Spring 2020–present  
Committee

#### Shomit Barua

PHD MEDIA ARTS AND SCIENCES

Spring 2020–present  
Second Advisor

#### Dan Shannon-Spence

MA DIGITAL CULTURE

Spring 2020  
Advisor

#### Taylor Cohen

MA DIGITAL CULTURE

Spring 2019–Spring 2020  
Advisor



<b>Yanjun Luo</b> PHD MEDIA ARTS AND SCIENCES	<i>Fall 2018–present</i> <i>Second Advisor</i>
<b>Oswaldo Emiddio Vasquez Hadjilyra</b> PHD MEDIA ARTS AND SCIENCES	<i>Spring 2018–present</i> <i>Contributing &amp; Committee</i>
<b>Shaun Ylatupa-Mcwhorter</b> MA DIGITAL CULTURE	<i>Spring 2017–Spring 2019</i> <i>Advisor</i>
<b>Gabriella Isaac</b> MA DIGITAL CULTURE	<i>Fall 2017</i> <i>Contributing</i>
<b>Brenda McCaffrey</b>  PHD MEDIA ARTS AND SCIENCES	<i>Dec 2016 - May 2018</i> <i>Contributing &amp;</i> <i>Comprehensive Exam</i> <i>Committee</i>
<b>Garrett Johnson</b> PHD MEDIA ARTS AND SCIENCES	<i>Spring 2016–present</i> <i>Contributing &amp; Committee</i>

## External Graduate Students

<b>Patty Preece</b> MA, CENTRAL QUEENSLAND UNIVERSITY, AUSTRALIA	<i>Spring 2020–present</i> <i>Advisor</i>
<b>Stanzi Vaubel</b> PHD SOUND STUDIES, UNIVERSITY OF COLORADO	<i>Spring 2019–Summer 2020</i> <i>Committee</i>
<b>Aude Gouaux-Langlois</b> MA SOUND STUDIES AND SONIC ARTS, UNIVERSITY OF THE ARTS, BERLIN (UDK) Student successfully passed exam and gained masters in Summer 2018.	<i>Spring and Summer 2018</i> <i>Secondary Advisor &amp;</i> <i>Examiner</i>

## Undegraduate Students

<b>Isabel Estes</b> BA DIGITAL CULTURE	<i>Spring 2021-present</i> <i>Barrett Honors Thesis</i>
<b>Roy Poonawala</b> BA DIGITAL CULTURE	<i>Fall 2020</i> <i>Honors Enrichment</i> <i>Contract</i>
<b>Jacob Janezic</b> BA DIGITAL CULTURE	<i>Fall 2020 - Spring 2020</i> <i>Honors Thesis Advisor</i>
<b>Christian Cuciniello</b> BA DIGITAL CULTURE	<i>Fall 2020</i> <i>Independent Study</i>

<b>Isabel Estes</b> BA DIGITAL CULTURE	<i>Spring 2020 Honors Enrichment Contract</i>
<b>Elisabeth Partin</b> BA DIGITAL CULTURE	<i>Fall 2019 Second Honors Thesis Advisor</i>
<b>Joshua Staples</b> BA DIGITAL CULTURE	<i>Fall 2019 Honors Thesis Advisor</i>
<b>Jacob Janezic</b> BA DIGITAL CULTURE	<i>Fall 2019 Honors Enrichment Contract</i>
<b>Anthony John Arellano</b> BA DIGITAL CULTURE	<i>Spring 2019 Independent Study</i>
<b>G. Cooper Jones</b> BA DIGITAL CULTURE (MEDIA PROCESSING)	<i>Spring 2018–Fall 2018 Honors Thesis Advisor</i>
	<i>Fall 2018 Honors Enrichment Contract</i>
<b>Dominic Bonelli</b> BS ELECTRICAL ENGINEERING	<i>Spring 2019–Fall 2019 Honors Thesis Advisor</i>
	<i>Spring 2019 Honors Enrichment Contract</i>
	<i>Spring 2018–Fall 2018 Independent Study</i>
<b>Jack McConnell</b> BA DIGITAL CULTURE (MUSIC)	<i>Fall 2017–Spring 2018 Independent Study</i>
<b>Mark Guzman</b> BA DIGITAL CULTURE (MUSIC)	<i>Fall 2017–Spring 2018 Independent Study</i>
	<i>Spring 2016 Honors Enrichment Contract</i>
<b>James Gosnell</b> BA DIGITAL CULTURE (MUSIC)	<i>Spring 2017 Independent Study</i>

**Garrett Burnett**

BA DIGITAL CULTURE (MUSIC)

*Spring 2015  
Honors Enrichment  
Contract*