

Curriculum Vitae

Seth D. Thorn, PhD

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seththorn.net

Arts, Media + Engineering

Arizona State University

950 S. Forest Mall

Tempe, AZ 85281

Education

- 2018 PhD, Computer Music and Multimedia, **Brown University**, Providence
- 2015 MA, German Studies, **Brown University**, Providence
- 2014 MA, Computer Music and Multimedia, **Brown University**, Providence
- 2011 MA, Political Theory, **Goethe-Universität**, Frankfurt am Main
Research Cluster: *Normative Orders*
- 2007 BA, Philosophy & Critical Theory, **Northwestern University**, Evanston

Appointments

- 2021 – present Clinical Assistant Professor of Media Computing, Arts, Media + Engineering,
Arizona State University
- 2018 – 2020 Instructor of Electronic and Digital Audio, Arts, Media + Engineering,
Arizona State University
- 2017 – 2018 Faculty Associate, Arts, Media + Engineering,
Arizona State University

Awards

- 2021 Best Poster Award, **ACM Audio Mostly (AM '21)** for paper “Telematic Wearable Music: Remote Ensembles and Inclusive Embodied Education”
- 2020 First Prize Music Award, **International Society for Acoustic Information Retrieval (ISMIR '20)**
- 2018 Finalist, **Matera Intermedia Festival**, Matera, Italy (*withdrew due to illness*)
- 2018 Presentation, **Guthman Musical Instrument Competition**, Georgia Institute of Technology, Atlanta

Grant Applications (Since appointment @ ASU)

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| 2022 | “(Re)program your Violin: STEM for Strings,” Herberger Institute Research Building Investment , Arizona State University | \$10,000
<i>(in submission)</i> |
|------|---|------------------------------------|

2021 – 2024	“Engaging Teachers and Neurodiverse Middle School Students in Tangible and Creative Computational Thinking Activities,” National Science Foundation , CS for All Initiative, Co-PI (25%)	\$998,712 <i>(funded)</i>
2020	“Ocularcentrism and its Effects on Science and Technology,” National Science Foundation , STS Standard Grant, Internal PI (33%)	\$384,505 <i>(narrowly rejected: 3 very good, 1 good, 1 poor)</i>
2019 – 2020	Real-time Computational Photographic Analysis of the Violin, Herberger Research Investment Grant , Arizona State University	\$4,500 <i>(funded)</i>

Patents & Startups

2020 S. Thorn & B. Lahey, **U.S. Utility Patent**, Shoulder Rest with Haptic Feedback
 2019 – present **Matter Squared LLC**

In Submission

2022 S. Thorn & B. Lahey, “Deterritorializing the Violin with Active Shoulder Rests”
New Interfaces for Musical Expression, Auckland
 2022 S. Thorn, T. Wells, N. Kazan, M. Koro, X.W. Sha “Co-Design of Wearable Music Curriculum for Transversal Neurodiverse Computational Thinking,” **IEEE RESPECT Conference**, Philadelphia

Refereed Journal Articles

2022 “Collectively Playable Wearable Music: Practice-situated approaches to participatory relational inquiry” **Wearable Technologies** 3(1), **Cambridge University Press**
 2021 “Flows of Inhomogeneous Matter: Improvising an augmented violin”
Organised Sound (26)1, **Cambridge University Press**
 2019 “A Computational System for Violin: Synthesis and dissolution in Windowless”
Leonardo Music Journal (29), **MIT Press**

Refereed Conference Publications (Long Papers)

2020 S. Thorn, H. Willcox, and X. W. Sha, “Processual and Experiential Design in Wearable Music Workshopping” **ACM Movement & Computing**, Jersey City / Virtual
 2019 S. Thorn & X.W. Sha, “Instruments of Articulation: Signal Processing in Live Performance”
ACM International Conference on Movement & Computing, Tempe
 2019 S. Thorn & B. Lahey, “A Haptic-Feedback Shoulder Rest for the Hybrid Violin”
International Computer Music Conference, New York City
 2018 “Alto.glove: New Techniques for Augmented Violin”
New Interfaces for Musical Expression, Blacksburg

Refereed Conference Publications (Short Papers + Extended Abstracts)

- 2021 “Telematic Wearable Music: Remote Ensembles and Inclusive Embodied Education” **ACM Audio Mostly 2021**, Trento / Virtual [*Best Poster Award*]
- 2021 “Machinic Intersection: Not—Yet—Chaconne” **9th Conference on Computation, Communication, Aesthetics & X**, Graz / Virtual
- 2020 “Hybrid Violin Performance: Model-Free, Abductive Experiment” **ACM Movement & Computing**, Jersey City / Virtual
- 2019 “Signal Processing as Practice: Trial-and-Error Revision of the Sensorimotor Dynamics of a Hybrid Violin” **ACM International Conference on Creativity & Cognition**, San Diego
- 2019 “Transference: A Hybrid Computational System for Improvised Violin Performance” **ACM International Conference on Tangible, Embedded, and Embodied Interactions**, Tempe

Refereed Conference Workshops

- 2019 B. Metchley et al., “Composing Ecosystemically in Responsive Environments with Gestural Media, Objects, and Textures” **ACM Tangible, Embedded and Embodied Interaction**, Tempe
- 2019 X. W. Sha et al., “Co-constructing Events in Responsive Environments” **ACM Movement and Computing**, Tempe

Commissioned Translations

- 2014 C. Menke, “The Aesthetic Possibility of the Work of Art” **Qui Parle: Critical Humanities and Social Sciences** (23:1)

Manuscripts in Preparation

- 2022 “Embodying Telematic Ensembles” **Personal and Ubiquitous Computing**, Springer
- 2022 S. Thorn, B. Lahey, “Augmented Shoulder Rests: Active Acoustics for the Violin” **New Interfaces for Musical Expression**
- 2022 Y. Lyu, S. Thorn, C. Rawls, A. Kidane, and X.W. Sha, “Affective Engagement via Synchrony-sensing Tableware” **AltCHI**

Grand Awards @ Brown

2016	Brown Arts Initiative Grant, Brown University	\$600
2014	International Graduate Colloquium Fund, Brown University	\$5,000
2013	Creative Arts Council, Brown University	\$1,000
2013	Open Graduate Education, Brown University	\$1,000
2013	Mellon Foundation “Brown in the World” Grant, Brown University	\$1,000
2013	Watson Institute, Brown University	\$1,000

Residencies

- 2018 Artist Residency, **Playa Foundation Art + Science Residency**, Summer Lake, Oregon
(*Unable to attend due to forest fires*)
- 2018 Artist Residency, **Hewnoaks Artist Colony**, Lovell, Maine
- 2017 Artist Residency, **I-Park Foundation**, East Haddam, Connecticut

Graduate & Research Fellowships

- 2016 Open Graduate Education Dissertation Fellowship, Brown University
- 2011 Outstanding Incoming Graduate Student Fellowship, **Tisch Foundation**, Brown University
- 2007 – 2008 Student Research Fellowship, **Fulbright Foundation**, Frankfurt am Main
- 2007 – 2008 Student Research Fellowship, **German Academic Exchange Service (DAAD)**, Frankfurt am Main (*declined in favor of Fulbright*)

Sponsored (Paid) Talks

- 2021 Ableton + Max for Live Presentation, **Cornish College of the Arts**, Seattle

Selected Talks & Presentations

- 2021 Artist Roundtable, **9th Conference on Computation, Communication, Aesthetics & X**, Graz / Virtual
- 2020 Presentation, **ACM International Conference on Movement and Computing**, Jersey City / Virtual
- 2019 Artist Roundtable, **New York City Electroacoustic Improvisation Summit**, New York City
- 2019 Presentation, **ACM International Conference on Movement and Computing**, Tempe
- 2019 Presentation, **International Computer Music Conference**, New York City
- 2018 Presentation, **Conference on New Interfaces for Musical Expression**, Blacksburg
- 2018 Artist Talk, **Digital Culture Speaker Series**, Arizona State University, Tempe
- 2018 Presentation, **SPLICE Festival**, Western Michigan University, Kalamazoo

Selected Performances

- 2021 **9th Conference on Computation, Communication, Aesthetics & X**, Graz / Virtual
- 2020 **International Society for Music Information Retrieval**, Montreal / Virtual
- 2020 **International Conference on Movement and Computing**, Jersey City / Virtual
- 2019 **International Conference on Movement and Computing**, Tempe
- 2019 **International Computer Music Conference + New York City Electroacoustic Music Festival**, New York City
- 2019 **ACM International Conference on Tangible, Embedded and Embodied Interactions (TEI)** Tempe
- 2019 **New York City Electroacoustic Improvisation Summit**, New York City
- 2018 **New York City Electroacoustic Music Festival**, New York

- 2018 **New Interfaces for Musical Expression Conference**, Blacksburg
 2018 **SPLICE Festival**, Western Michigan University, Kalamazoo
 2013 **International Computer Music Conference**, Perth
Dahinterstehend, a piece for Drumkat, performed by Prof. Vanessa Tomlinson

Bibliography (Chapters, Journals, Online)

- 2020 Sam McGuire and Zbyněk Matějů, *The Art of Digital Orchestration*, Taylor & Francis
 2020 Megan Patzem, “ASU faculty awarded patent for shoulder rest that lets violinists feel the sound,” **Arizona State University News**
 2019 David Wallace, “ASU President Michael Crow: innovator and disruptor,” **Arizona Republic**
 2018 “Digital Culture,” **HIDA Disrupt Magazine** 1, Arizona State University
 2016 John Ferguson and Andrew Brown, “Fostering a Post-Digital Avant-Garde: Research-led teaching of music technology” **Organised Sound**, Cambridge University Press

Selected Workshops and Outreach

- 2021 **Canal Convergence 2021: Art & Technology**, Scottsdale
 2019 Augmented violin workshop, **Synthesis Center**, Arizona State University
 2019 “Designing Alternative Controllers for Audio Applications” **Young Engineers Shape the World (YESW)**, Ira A. Fulton Schools of Engineering, Arizona State University, (September, October 2019)
 2019 “Audio Circuits Lab” **Digital Culture Summer Institute** (June 2019), School of Arts, Media and Engineering, Arizona State University
 2018 “Circuit Bending,” **Digital Culture Summer Institute** (June 2018), School of Arts, Media and Engineering, Arizona State University

Courses Taught (Undergraduate)

- AME 111 Introduction to Digital Culture
 AME 112 Computational Thinking
 AME 294 Circuit Bending (new course / special topics)
 MDC 311 Composing and Performing for Hybrid Ensembles (AME + School of Music)
 AME 394 Synthesis and Expression (new course / special topics)
 AME 394 Hyperinstruments (new course / special topics)
 AME 485 Digital Culture Capstone I
 AME 486 Digital Culture Capstone II
 AME 494 Wearable Music (new course / special topics)
 AME 499 Individualized Instruction
 AME 411 / MDC 411 Advanced Interactive Sound (AME + School of Music)

Courses Taught (Graduate)

- AME 511 / MDC 511 Advanced Interactive Sound (AME + School of Music)
 AME 593 Applied Graduate Project

AME 790

Reading and Conference

Student Committees

2022 Applied Project Chair, Cole Mcleod, M.A. Student, Arts, Media + Engineering
2021 – 22 Honors Thesis Director, Julian Voitek, Arts, Media + Engineering
2021 Honors Thesis Reader, Isabel Estes, Arts, Media + Engineering
2020 – ongoing Dissertation Committee Member, Shomit Barura, Doctoral Candidate, Arts, Media + Engineering
2021 Mentor, Frank Wang, **National Science Foundation Research Experience for Undergraduates** (NSF REU), Arts, Media + Engineering, Arizona State University