

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
(in submission) |
|------|---|-----------------------------|

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