

# SOPHIA BRUECKNER

## CURRICULUM VITAE

Assistant Professor  
Stamps School of Art & Design  
University of Michigan - Ann Arbor

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### EDUCATION

MS, Media Arts and Sciences, 2014  
Massachusetts Institute of Technology, Cambridge, MA  
Advisor: Pattie Maes

MFA, Digital + Media, honors, 2012  
Rhode Island School of Design, Providence, RI  
Advisor: Kelly Dobson

Sc.B. Applied Mathematics/Computer Science, magna cum laude, 2005  
Brown University, Providence, RI

### PROFESSIONAL EXPERIENCE

- 2015- Assistant Professor, Stamps School of Art & Design, University of Michigan, Ann Arbor, MI  
With a courtesy appointment in the School of Information and an affiliation with Digital Studies.
- 2014 User Experience Designer, Otsuka Pharmaceutical, 2014  
Designed sci-fi-inspired hardware and software experience of a new health technology (research, interaction design, and CAD).
- 2013-14 Instructor, MIT Media Lab, Cambridge, MA
- 2014 Instructor, Rhode Island School of Design, Providence, RI
- 2012-14 Research Assistant, MIT Media Lab, Cambridge, MA  
Fluid Interfaces Group with advisor Pattie Maes.
- 2011-12 Instructor of Record, Rhode Island School of Design, Providence, RI
- 2011-12 Research Assistant, Rhode Island School of Design, Providence, RI  
With advisor Kelly Dobson.
- 2011-12 Instructor of Record, Rhode Island School of Design, Providence, RI
- 2011 Software Engineer Intern, Google Research, Cambridge, MA  
Worked with Martin Wattenberg and Fernanda Viégas on an experimental data visualization project.
- 2010 Software Engineer Intern, Google Research, Mountain View, CA

Worked with then CEO Eric Schmidt and Java founder and Chief Software Architect Joshua Bloch to design and implement an experimental software prototype.

- 2005-8 Software Engineer, Google, Mountain View, CA  
Front-end development and UX design of iGoogle, Google's personalized homepage (22.5 million users and 20% of all visits to Google's homepage in 2008). Designed and wrote some of the most popular iGoogle apps (millions of users). Worked closely with business partners including CBS, the New York Times, Sports Illustrated, Entertainment Weekly, the Wall Street Journal, and others on iGoogle apps.
- 2001-2 Research Assistant, Brown Department of Engineering, Providence, RI  
Researched thin films in materials science/mechanical engineering departments.

## AFFILIATIONS

- 2017- Association of Professional Futurists  
2016- Courtesy Appointment, School of Information, University of Michigan  
2016- Digital Studies Affiliation, University of Michigan  
2013- Fellow, The Dalai Lama Center for Ethics and Transformative Values

## AWARDS AND HONORS

- 2018 \$350k, Co-PI with Christian Sandvig for Michigan Humanities Collaboratory grant for "Sensing Algorithms: A Collaboratory" with William A. Calvo-Quirós, John Granzow, and Cathlyn Newell.  
  
Invited visiting artist for 3 weeks on sci-fi and wearable tech in the fashion department at California College of the Arts in San Francisco.
- 2017 Rogers Edge Award, Stamps School of Art & Design, University of Michigan. Recognizing a creative practice that moves beyond disciplinary boundaries and brings together different kinds of people and ideas.  
  
Affiliate Artist in Residence, Autodesk Pier 9, Jun 1-Jul 31, San Francisco, CA  
  
Artist in Residence, Autodesk Pier 9, Feb 1-May 31, San Francisco, CA
- 2016 \$100k grant from National Academies Keck Futures Initiative for Global Heartbeat Project with Kentaro Toyama  
  
#whitemirror, invited sci-fi event on positive futures, Los Angeles, CA  
  
Ars Electronica Future Innovators Summit, Linz, AT  
  
BMW rad°hub, invited design/futures event, Los Angeles, CA  
  
Nominated for University of Michigan's Golden Apple Teaching Award  
  
University of Michigan Road Scholar  
  
Invited Juror, Bowling Green State University Undergraduate Exhibition, Bowling Green, OH  
  
Artist Collaboration with Art and Machine Intelligence team in Google Research, (Funding cut; award not disbursed)

- 2015 Eyeo Festival Artist Fellow  
Signal Culture Toolmaker Residency, NY
- 2014 MIT Harold and Arlene Schnitzer Prize in the Visual Arts, 2nd place  
Anne and Michael Spalter collection acquires *Eye of the Beholder*
- 2012 \$4k Turbulence.org networked art commission with Catherine D'Ignazio
- 2011 RISD graduate fellowship and assistantship  
National Science Foundation grant for AVAToL Ideas Lab
- 2010 RISD graduate fellowship and assistantship
- 2008 Google's EMG (Executive Management Group) Impact Award for outstanding innovation on iGoogle

## SELECTED EXHIBITIONS

- 2019 STRP Bienniale, Eindhoven, NL  
Invited to exhibit prototype that embodies critical optimism/positive futurism.  
  
Invited solo exhibition at Pennsylvania College of Technology.
- 2018 GALLERYSKE, Bangalore, India  
Invited 2-person exhibition curated by Marialaura Ghidini.  
  
*ACM ISWC 2018*, design exhibition, Singapore  
New version of *Empathy Amulet* and *Embodisuit* in peer-reviewed design exhibition at ACM International Symposium on Wearable Computing from an international call for works.  
  
*ISEA 2018*, Durban, Africa  
*Embodisuit* in juried exhibition at International Symposium on Electronic Art from an international call for work.  
  
*The New Art Fest '18: America Online—the media imperative & the net generation*, Lisbon  
Showing two algorithmic artworks in exhibition curated by António Cerveira Pinto.  
  
*ART IN FLUX*, London, UK  
*Embodisuit* in invited exhibition.  
  
*ACM TEI 2018*, Stockholm, SE  
*Embodisuit* in juried exhibition at international Tangible Embedded Interfaces conference from an international call for work.  
  
*INTERSECTIONS*, Connecticut College, CT  
*Embodisuit* in juried exhibition at The Ammerman Center for Arts and Technology 16th Biennial Symposium.  
  
*Call & Response*, NURTUREArt, Brooklyn, NY  
Invited to show multiple works in code-themed exhibition curated by Kelly Rae Aldridge.

- 2017 *ACM SIGGRAPH Asia 2017*, Bangkok, Thailand  
*Embodisuit* in "Mind-Body Dualism" juried exhibition from an international call for work.
- Technarte Los Angeles 2017*, CA  
The *Embodisuit* was 1 of 6 selected from an international call for work related to wearable technology.
- ACM IoT 2017*, Ars Electronica Center, Linz, Austria  
*Embodisuit* in juried exhibition at international conference for Internet of Things, catalogue.
- ISEA 2017: Bio-Creation and Peace*, Art Museum of Caldas, Manizales, Colombia  
New versions of *Empathy Box* and *Empathy Amulet* in juried exhibition.
- The Jump Off*, Urban Institute of Contemporary Art, Grand Rapids, MI  
Curated by UICA's Exhibitions Curator, Heather Duffy, from a national call for work.
- HASTAC 2017*, Orlando, FL  
*Embodisuit* in *The Wearable and Tangible Possible Worlds of Digital Humanities* exhibition curated by Jacqueline Wernimont and Kim Knight.
- Not of This Earth: Contemporary Art and Science Fiction*, Boston Cyberarts Gallery, Boston, MA  
Curated by Boston Cyberarts director George Fifield and Michael Lewy.
- Body Politic*, OPEN Gallery, Boston, MA  
Curated by Laura Zittrain, catalogue.
- eTextile Summer Camp*, Paillard Centre d'Art Contemporain & Résidence d'Artistes, Poncé sur le Loir, France  
Exhibited *Embodisuit* at annual gathering of leaders in wearable technology and eTextiles.
- #EXSTRANGE*, Project Anywhere, published  
Curated by Rebekah Modrak and Marialaura Ghidini, catalogue.
- CreateWorld 2017*, Brisbane, AU  
Invited to show *Embodisuit* in an exhibition on mobile technologies at the CreateWorld conference.
- Liverpool MakeFest*, Liverpool Central Library, UK  
Exhibited *Embodisuit*.
- Google International Women's Day Summit*, Cambridge, MA  
Invited to exhibit three software-based artworks.
- Pier 9 Showcase*, Autodesk, San Francisco, CA
- 2016 *Science and Technology by Other Means*, 4S/EASST, Hangar, Barcelona, ES  
Curated by Anita Chan.
- CreateWorld 2016: The Creativity of Things*, Webb Gallery, Brisbane, AU  
Invited to show *Empathy Box* and *Amulet* in group exhibition.
- 2015 *Shaker Traditions Contemporary Translations*, Canterbury Shaker Village, NH  
Curated by museum executive director Funi Burdick.
- + / - , Joseloff and Slipe Galleries, Hartford Art School, CT  
Curated by Boston Cyberarts director George Fifield, catalogue.

*Altered Books: Digital Interventions*, SIGGRAPH, CA  
Curated by Copper Giloth and Hye Yeon Nam.

*Signal from Noise*, CCS Galleries and Hessel Museum of Art, Bard College, NY  
Curated by Elizabeth Larison.

*Stimulus – Response – Affect*, Oakland University, MI  
Curated by Colleen Ludwig and Vagner Whitehead, catalogue.

*Print Screen International Digital Culture Festival*, Holon Cinematheque, Israel  
Curated by Liat Berdugo.

*LISTENING: An irregular evening of Music, Poetry, and Radiophonic Art*, The Lilypad, Cambridge, MA  
Curated by Connor Gillies and Audrey Mardavich.

2014 *Sound/System*, Peabody Essex Museum, Salem, MA

Schnitzer Prize Exhibition, Wiesner Art Gallery, MIT, Cambridge, MA

*Crossover*, Boston Cyberarts Gallery, Boston, MA  
Curated by Boston Cyberarts director George Fifield, catalogue.

*OPENSIGNAL Festival*, Brown University, Providence, RI  
Sound installation, curated by the OPENSIGNAL artist collective.

*COLLISION20: bilocate*, Boston Cyberarts Gallery, Boston, MA  
Curated by William Tremblay and Georgina Lewis.

*The Emperor's New Aesthetic*, Emmanuel Gallery, Denver, CO  
Curated by David Fodel and Matt Jenkins.

2013 *Paper to Pixels*, Infrared5, Boston, MA  
Curated by Infrared5 CEO and Creative Director Rebecca Smith Allen.

*Video Snack*, Bogart Studios, Brooklyn, NY  
Curated by Lauren Francescone.

*Phases*, Boston Harbor Islands Pavilion, Boston, MA  
Software installation at national park welcome center located in Boston's Rose Kennedy Greenway, curated by Boston Cyberarts director George Fifield.

*iSkyTV*, Turbulence, <http://www.turbulence.org>  
Networked art commission from Turbulence with Catherine D'Ignazio.

Media Lab @ SXSW Interactive event/exhibition with my sci-fi students, Austin, TX

*The Other Festival*, MIT Media Lab, Cambridge, MA

*Circumtext*, Fictilis, Portland, OR  
Curated by Andrea Steves and Timothy Furstnau.

2012 *#101112*, Spacebar Gallery, Linz, AT  
Curated by Nina Wehnert.

*Brunel Electronic and Analogue Music (BEAM) Festival*, London, UK

Curated by Atau Tanaka.

*Showcase / The Thesis Book*, Sol Koffler Gallery, Providence, RI  
Curated by Anne West.

*RISD MFA Thesis Show*, Providence, RI

*COLLISION17:transformer*, AXIOM Center for New and Experimental Media, Boston, MA  
Curated by William Tremblay and Georgina Lewis.

*From This Point Forward*, Gelman Gallery, Providence, RI  
Curated by Paloma Barhaugh-Bordas and Genevieve Lowe.

*Fonlad Digital Arts Festival*, Portugal  
Curated by José Vieira.

*SONiKFest*, Brooklyn, NY  
Curated by Mitsu Hadeishi and Seyhan Musaoglu.

*The First Show*, Multiplexer, Las Vegas, NV  
Curated by David Sanchez Burr.

*Transceiver*, Bemis Center for Contemporary Art, Lincoln, NE  
Curated by Angeles Cossio, Jeff Thompson, and Joel Damon.

*Transceiver*, Drift Station Gallery, Lincoln, NE  
Curated by Angeles Cossio, Jeff Thompson, and Joel Damon.

*Mediated Realities*, Cohen Gallery, Granoff Center, Providence, RI  
Curated by J. Susie Hwang.

*Come Here, I Need You*, Gelman Gallery, Providence, RI  
Curated by Amanda Thackray and Rain Vasquez.

*Older Than Bambi*, Sol Koffler Gallery, Providence, RI

basic.fm April radio programme, The Pixel Palace, UK

*Mirror Images*, Krefit Gallery, Ann Arbor, MI  
Juried by Gallery Project Directors Gloria Prischet and Rocco DePietro.

*Or a Motel*, EiM Gallery, Toronto, Canada  
Curated by Eric Powell and Matt Griffin.

2010

*GLI.TC/H*, Amsterdam, NL  
Curated by Nick Briz, Rosa Menkman, Jon Satrom, and Evan Meaney.

*GLI.TC/H*, Chicago, IL  
Curated by Nick Briz, Rosa Menkman, Jon Satrom, and Evan Meaney.

*Chopped & Stretched*, Drift Station Gallery, Lincoln, NE  
Curated by Angeles Cossio and Jeff Thompson,

*On the Threshold of Something Else, Something Other...*, Sol Koffler Gallery, Providence, RI  
Curated by Tamara Johnson.

- 2009 *Framed*, solo show at Scout, Santa Cruz, CA
- Three curated group exhibitions at Cabrillo College, Santa Cruz, CA

## PUBLICATIONS

- 2018 Sophia Brueckner. "Empathy Amulet: A Wearable to Connect with Strangers". *ACM ISWC 2018 International Symposium on Wearable Computing*.
- Sophia Brueckner and Rachel Freire. "Embodisuit: A Wearable Platform for Embodied Knowledge". *ACM ISWC 2018 International Symposium on Wearable Computing*.
- Sophia Brueckner and Rachel Freire. "Embodisuit: A Wearable Platform for Embodied Knowledge". *In arts track proceedings of ACM TEI 2018 Conference on Tangible Embedded Interfaces*.
- Rachel Freire, Paul Strohmeier, Cedric Honnet, Jarrod Knibbe, and Sophia Brueckner. "Designing eTextiles for the Body: Shape, Volume, & Motion". *In workshop proceedings of ACM TEI 2018 Conference on Tangible Embedded Interfaces*.
- 2017 Sophia Brueckner and Rachel Freire. "Embodisuit: A Wearable Platform for Embodied Knowledge". *In arts track proceedings of ACM IoT Conference on Internet of Things*.

## SELECTED PRESS

- 2018 *CNET*, Embodisuit featured in upcoming print publication  
Podcast on how sci-fi inspires inventors with Brittney Gallagher and Evernote co-founder Phil Libin  
*EdSurge* podcast, [Ready Player One: Science Fiction's Vision for The Future of Education](#)  
*Study International News*, [Designing for Social Change](#)  
*University Record*, [Spotlight: Sophia Brueckner](#)  
*Click on Detroit*, [University of Michigan rolls out hot topic, current event courses for fall semester](#)  
*FashNerd*, digital magazine on Fashion Tech, Wearables, IOT and Sustainable fashion, [Exploring the Next Wave Of Smart Garments](#)
- 2017 [College Art Association Education Podcast](#), interview on using sci-fi in design education  
*Inc.*, [Want to Future-Proof your Career?](#)  
*Emergence*, Stamps School magazine, [Sophia Brueckner on Tech, Humanity, Futures](#)  
*The Michigan Daily*, [Dreamers and Disruptors at TEDxUofM](#)  
*Upload VR*, [White Mirror: A Positive Vision for the Future of Technology](#)
- 2016 *APEX Experience* magazine, [Narrative Devices: What Can IFE Learn From Sci-Fi?](#)
- 2015 *Wired*, [How to Use GIFs to Teach Computers About Emotions](#)  
*Hackaday*, [Play Music With Your Painting](#)  
*Synthopia*, [Sophia Brueckner's Touch Sensitive Musical Painting](#)  
*Hartford Courant*, [Cutting-Edge Tech Sculpture Exhibit at University of Hartford Gallery](#)
- 2014 *Smithsonian Magazine*, [How America's Leading Science Fiction Authors are Shaping Your Future](#)  
*Los Angeles Times*, [The MIT Media Lab Class That Makes Science Fiction Real](#)  
*Scientific American*, [Students Combine Arts and Science While Exploring "Transhumanism"](#)  
*Fast Company*, [Take Note, Facebook: How Colleges Are Training Designers To Treat Users Like More Than Lab Rats](#)  
*Huffington Post*, [When Science Fiction Gets Real](#)  
*Fast Company*, [Mad Scientist 101: A New MIT Class Aims To Turn Science Fiction Tech Into The Real Thing](#)  
*The Creators Project*, [Brown, MIT, And RISD Are Implanting Art Into Their Transhumanist Experiments](#)  
*Chicago Tribune*, [Why Sci-Fi is Obsessed with the Near Future](#)

- 2013 *The Harvard Crimson*, [Motion Picture](#)  
*Fast Company*, [From MIT, An Interactive Book That Makes You Feel Character's' Pain](#)  
*Rhizome*, [Locative Media Revisited](#)  
*MIT News*, [MIT students win annual Schnitzer Prize in the visual arts](#)  
*Boston Magazine*, [What If Books Physically Replicated the Protagonist's Emotions?](#)  
*Providence Business News*, [R.I., Mass. students collaborate on STEAM](#)  
*The Atlantic*, [Why Today's Inventors Need to Read More Science Fiction](#)  
*The Atlantic*, [The History of Invisibility Cloaks, as Told by People in the Future](#)  
*Wired*, [Science Fiction to Science Fabrication](#), Bruce Sterling  
*io9*, [At MIT, engineers are taught that scifi is crucial to do good science](#)  
*MIT Spectrum*, [Why Should Inventors Read Science Fiction?](#)  
*Studio 360*, WNYC, NPR, [At MIT, An Ethics Class for Inventors](#)  
*Digital Culture*, KPFK 90.7 FM, [Sci-Fi to Sci-Fab: Bringing Science Fiction to Inventors](#)  
*Sky News*, UK, TV interview  
 Digital Village Radio  
*The Shift*, CKNW, Vancouver  
*WGN Radio*, Chicago  
*Newstalk Radio Ireland*  
*Wisconsin Radio News*, WTMJ  
*Ripley's Believe It or Not*  
*Wait, Wait, Don't Tell Me*, NPR
- 2012 *KVNO News*, [WEB EXTRA: Bemis Underground's Transceiver: Drift Station](#)  
*The Reader*, [Lincoln Calling](#)

## INVITED TALKS

- 2019 Pennsylvania College of Technology, Technology & Society Colloquia Series
- 2018 GALLERYSKY, Bangalore, India  
 Artist talk.
- [Eyeo Festival](#), Minneapolis, MN  
 Artist talk on Embodisuit.
- Sketching in Hardware, Detroit, MI  
 Artist talk on the Embodisuit, internet of things, and making hardware accessible.
- Tangible Embedded Interfaces (TEI) 2018, nominated by conference attendees and organizers  
 out of hundreds there to be on open panel talking about art, design, science, and engineering,  
 Stockholm
- Creative Tech Week, panelist on IoT, hardware prototypes, and interactive design, NYC
- College for Creative Studies, visiting critic for grad Interaction Design Thesis Reviews, Detroit
- Intersections: 16th Biennial Symposium on Arts & Technology, Connecticut College, CT
- Living a Digital Life lecture series, University of Michigan
- Becoming Digital Conference, Taubman School of Architecture, University of Michigan
- Humanity and Technology lecture series, Lawrence Technological University
- Art & Gaming Symposium, University of Michigan and the Ann Arbor District Library
- 2017 [TEDx](#), 1 of 8 invited speakers, talk on sci-fi, technology ethics, and critical optimism, Ann Arbor,



MI

Parsons School of Design, VergeNYC, NYC

Technarte Los Angeles 2017, CA

ACM SIGGRAPH Asia 2017, Bangkok, Thailand

ISEA 2017: Bio-Creation and Peace, Manizales, Colombia

Carnegie Mellon University, [Human Computer Interaction Institute Seminar Series](#), PA

Rhode Island School of Design, Digital + Media, visiting artist, RI

ACM IoT 2017, Ars Electronica Center, Linz, Austria

Lenovo + Healthdesignby.us Innovation Co+Lab, University of Michigan

Emergent Research Series, University of Michigan Library

Literati, talk about *Captured by an Algorithm* and #exstrange eBay exhibition, Ann Arbor, MI

2016 Pratt Institute, Digital Arts Lecture Series, NYC

Critical Making and Body Politics, panelist, School of Information, University of Michigan

MISC, School of Information, University of Michigan

Digital Studies, University of Michigan

STS Mini-Conference, School of Information, University of Michigan

2015 Stimulus - Response - Affect, Oakland University, MI

TechShop, artist talk focusing on digital fabrication, Detroit, MI

ReThinking Mindfulness, Massachusetts Institute of Technology, invited artist talk by Dalai Llama Center for Ethics and Transformative Values, Cambridge, MA

2014 [@party demoparty](#), Cambridge, MA

MassArt Dynamic Media, guest critic, Cambridge, MA

RISD Digital + Media, guest critic, Providence, RI

2013 [LISA \(Leaders in Software and Art\)](#), the New School, NYC

2012 Artist lecture, Brown University, RI

2011 Rose Whelan Society for Women in Mathematics, invited panelist on women in applied math, Brown University, RI

## WORKSHOPS

2017 Designing eTextiles for the Body: Shape, Volume & Motion, TEI 2018, Stockholm

Sci-fi workshop, ISEA 2017: Bio-Creation and Peace, Manizales, Colombia

RISD Digital + Media, workshop with grad students on sci-fi, social prosthetics, and digital fabrication

2016 Sci-fi workshop, Innovation, Economic Driver, Disruption: Utopias and Critiques of Making and Hacking, 4S/EASST, Barcelona

Sci-fi workshop, FemTechNet Signal/Noise Conference, Ann Arbor, MI

Augmented Human design workshop, School of Medicine/School of Information/Center for Entrepreneurship, University of Michigan

2013 Sci-fi workshop, Better World by Design Conference, Providence, RI

## **OTHER TALKS**

2017 Co-organized two salons on technology ethics at Autodesk Pier 9 with a diverse group of experts from the Bay Area.

2007-8 As one of the most popular iGoogle app developers in the world, I gave many Google Gadget API talks throughout the world including at Google Developer Day in Tokyo, Google Developer Night in Seoul, several universities in Japan, Google London, and Google Mountain View reaching thousands of developers.

## **CURATION**

### **Wearables Exhibition, University of Michigan Museum of Art, Ann Arbor, MI, 2021**

Co-curating exhibition tying together modern wearable technologies with historic uniforms, armor, and other clothing for the UMMA in 2021.

### **Come As You AR, Hatcher Gallery, Ann Arbor, MI, 2018**

Curated exhibition to introduce humanities faculty to AVMR technologies at the invitation of the Provost's office.

## **TEACHING**

### **Sci-Fi Prototyping**

University of Michigan, Fall 2016, Fall 2017

Combining sci-fi, speculative futures, functional prototypes, and the ethics of design/invention.

### **Digital Fabrication**

University of Michigan, Fall 2015, Spring 2016, Fall 2016, Spring 2018

CAD/CAM, laser cutting, 3D printing, 3D scanning, CNC milling, etc.

### **Creative Programming**

University of Michigan, Fall 2015, Spring 2016

Rhode Island School of Design, 2010-2012

Processing (Java) courses at U of M and workshops in RISD Foundation Studies and RISD Digital + Media.

### **Visiting Artist at for WEARtech Course on Sci-Fi and Wearable Technologies**

California College of the Arts, Fashion Department, Summer 2018

Invited visiting artist for 3 weeks to share expertise on science fiction, futures, and wearable technology in the Fashion Design department.

### **Human + Computer**

Massachusetts Institute of Technology, Rhode Island School of Design, Brown, Wintersession 2014  
Wearables, human augmentation, and alternative communication devices. The course combined an introduction to the Arduino GSM module (used to make DIY cell phones), an overview of digital fabrication processes (laser cutting, CNC milling, 3d printing), critical and speculative design, and sci-fi readings culminating in an exhibition at RISD Exposé.

### **Science Fiction to Science Fabrication**

MIT Media Lab, Fall 2013

Science fiction, prototyping, and the ethics of design/invention for graduate students at the MIT Media Lab and Harvard.

### **Exploring Sci-Fi**

Rhode Island School of Design, Wintersession 2011

Designed syllabus and taught course combining science fiction, art theory readings, and studio work for graduates and undergraduates.

### **Integrative Project**

University of Michigan, 2017-2018

Yearlong senior project and thesis for Art & Design students culminating in an exhibition and performances.

### **Fab Lab Technical Assistant, Haystack Mountain School of Crafts, Deer Isle, ME, 2013-2014**

Managed Haystack's Fab Lab and assisted instructors and students in applying digital fabrication processes (ShopBot, laser cutter, vinyl cutter, etc.) to traditional crafts.

### **Teaching Assistant, MIT, RISD, and Brown, 2001-2005, 2010-2013**

Classes taught: How To Make Almost Anything (digital fabrication and electronics production), Intro to Creative Programming (Processing), Intro to Algorithms and Data Structures, Javanese Gamelan, and Head TA managing a team of TAs for Advanced Algorithms (graduate level algorithms).

## **SERVICE TO PROFESSION**

### **ACM SIGCHI Designing Interactive Systems (DIS) Conference, 2019**

Associate chair for Designing for Change committee.

### **ACM Tangible Embedded Interfaces (TEI) Conference, 2019**

Co-chair of student design competition.

### **ACM New Musical Interfaces (NIME) Conference, 2018**

Invited reviewer for the installations category at the International Conference on New Interfaces for Musical Expression, which gathers researchers and musicians from all over the world to share their work on interface design, human-computer interaction, and computer music.

### **ACM Mexican Conference on Human-Computer Interaction (MexIHC), 2018**

Papers Technical Program Committee for the 7th MexIHC. This conference is the premier forum in Mexico for researchers to present advances in human-computer interaction.

## **ACM Internet of Things Conference (IoT), 2018**

Program Committee for 8th International Conference on the Internet of Things.

## **UNIVERSITY SERVICE**

### **Provost's Working Group on AVMR, 2018-2019**

Building a framework for exploring the possibilities of AVMR technology as a resource for reimagining teaching and learning on our campus, in support of our mission as a robust research institution with a liberal arts model at its core.

### **Facilities Committee, 2015-2018**

Building spaces to accommodate new technologies including digital fabrication studio, electronics, etc. as well as foster a collaborative maker culture.

### **AVMR Campus Steering Committee, 2016-2018**

Represented Stamps in university-wide effort to collaborate with industry in developing curriculum, supporting research, and building physical lab spaces such that U of M becomes a leader in the AR/VR/MR space. Met with leadership in CA and WA at Microsoft, Google, Oculus, Disney, Samsung, etc. to secure partnerships.

### **Undergraduate Committee, 2018**

Overseeing the overall quality and character of the undergraduate educational experience. Monitoring student learning and the depth and breadth of their education.

### **Design Salon Committee, 2015-2018**

Organizing diverse salons to create research opportunities and increase Stamps' reputation in the field of design.

### **Creative Resources Committee, 2016**

Supporting and increasing the visibility of the creative work and research of my colleagues.

### **Safety Committee, 2016-2017**

Maintaining a high level of safety standards and establishing new procedures with a particular focus on students safely learning to use equipment themselves.

### **Hiring Committee for Director of Duderstadt Center, 2016**

Interdepartmental committee to hire a director that supports interdisciplinary research, new technologies, and makerspaces.

### **Bicentennial Anniversary Committees, 2016-2017**

Contributing sci-fi/futures expertise and ideas to the future-related aspects of U of M's big celebration.

### **Michigan Road Scholar Selection Committee, 2017**

Choosing a diverse group of faculty and staff from all U of M campuses to go on the Road Scholar trip.

## **SKILLS**

C/C++, JavaScript, HTML5, Java, Python, Cinder, openFrameworks, Processing, OpenGL, Kinect, openCV, Max/MSP, Arduino, AVR embedded programming, MatLab

SolidWorks, Rhino, Fusion 360 CAD/CAM, Inventor, AutoCAD, QCAD, SketchUp, Vectric Cut2D/Cut3D/VCarve, Mastercam, RhinoCam, Eagle, Magics, MeshLab, NetFabb, Linux, Adobe Creative Suite, Gimp, Inkscape

CNC machining including 5-axis and metal, laser cutting, waterjet cutting, vinyl cutting, vacuum forming, electronics production, 3D printing, 3D scanning

Molding and casting, woodworking, metalworking, glass frameworking, sewing

Polish, French

Lead rock climber, both traditional and sport

Scruggs style/two-finger/clawhammer banjo, fingerstyle guitar, classical piano