

Alexa F. Siu



Professional Experience

Graduate Research Assistant (2015 - Present)

Stanford University SHAPE Lab

Advised by Sean Follmer

- Investigating multimodal perception and interaction to support people who are blind in accessing spatial information.
- Engaging in participatory design to work with community stakeholders and develop new workflows that leverage novel haptic interfaces.
- Published papers at CHI, UIST 🏆, ASSETS 🏆, W4A.

Research Intern (Summer 2019)

Microsoft Research Ability Team

- Explored the design of multisensory accessible VR interactions.
- System architecture, hardware development, and user evaluation of a novel VR controller that renders kinesthetic and tactile feedback.
- Led cross-team collaborations & managed tight project timelines.
- Published papers at CHI 🏆 & UIST '20.

Research Intern (Summer 2018)

HP Labs Immersive Experiences Lab (IXL)

- Investigated 3D printed interactives leveraging auxetic structures and HP's novel tech. Balanced research agenda and product-driven goals.
- Presented at the quarterly HP Labs all-hands meetings and contributed demo to the HP customer welcome center.
- Published abstract at SCF '19.

Undergraduate Research Assistant (Summer 2014)

Stanford University CHARM Lab

- Designed and conducted a controlled study to characterize the effect of time delay and filtering on user perception of haptic displays.
- Published paper at Transactions on Haptics '15.

Relevant Publications

Virtual Reality Without Vision: A Haptic and Auditory White Cane to Navigate Complex Virtual Worlds (ACM CHI '20)

Alexa F. Siu, Mike Sinclair, Rob Kovacs, Christian Holz, Eyal Ofek, and Edward Cutrell

🏆 best paper honorable mention (Top 5%)

shapeCAD: An Accessible 3D Modelling Workflow for the Blind and Visually Impaired Via 2.5D Shape Displays (ACM ASSETS '19)

Alexa F. Siu, Son Kim, Joshua A. Miele and Sean Follmer

🏆 best paper nominee

shapeShift: 2D Spatial Manipulation and Self-Actuation of Tabletop Shape Displays for Tangible and Haptic Interaction (ACM CHI '18)

Alexa F. Siu, Eric J. Gonzalez, Shenli Yuan, Jason B. Ginsberg, and Sean Follmer

🏆 best demo honorable mention

Teaching Experience

Designing for Accessibility (Spring 2020)

Design Impact Master's Project I (Fall 2019)

Intro to the Design of Smart Products (Spring 2018 & 2019)

Stanford University

Introduction to Artificial Intelligence (Spring 2015)

Introduction to Bioengineering Statistics (Fall 2014)

Georgia Institute of Technology

Education

Stanford University

PhD in Mechanical Engineering

Human-Computer Interaction

2017-2021 (Expected)

Stanford University

MS in Mechanical Engineering

Mechatronics, Dynamics & Design

2015 - 2017

Georgia Institute of Technology

BS in Biomedical Engineering

Minor in Computer Science (AI)

2011 - 2015

Skills

Mechatronics (circuits, embedded systems)

Programming (Python, C#, C++, R)

Experience & interaction prototyping

(Unity, Adobe, Figma)

Rapid prototyping (fabrication, mechanical design, 3D CAD)

Human-centered design methods (user analysis, co-design, WoZ, contextual inquiry)

Selected Awards

NSF Grant. Learning by Touch: Preparing Blind Students to Participate in the Data Science Revolution. (2020)

Microsoft Dissertation Grant (2019)

Doctoral Consortium. @UIST & ASSETS. (2019)

Bill Moggridge Design Award (2018)

Honorable Mention Fastco Innovation by Design Awards (2018)

NSF GRFP (2015)

Academic Service

Information Co-Director @TACCESS

Website Manager @Stanford HCI

Reviewer @CHI, UIST, TACCESS, WHC & more

Featured in

GIZMODO

TechCrunch

THE WALL STREET JOURNAL

CORE77

FASTCOMPANY

National Science Foundation
WHERE DISCOVERIES BEGIN