

Frank Liu

I am a Ph.D. Student at Arizona State University, advised by Robert Likamwa in the Meteor Studio. I am interested in enhancing human computer interaction experiences through mixed reality and machine learning, advancing education and encouraging overall health and wellness. I enjoy working on projects that incorporate my diverse skillset in signal processing, physical prototyping, machine learning and human-computer interaction.

PhD Candidate
Electrical, Computer &
Energy Engineering
Arizona State University
Tempe, AZ
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EDUCATION

PhD Computer Engineering, Arizona State University
2018 - Present Advisor: Robert Likamwa

BS Electrical Engineering, University of Washington
2014 - 2018 Advisor: Hanchuan Li, Shwetak Patel

HONORS & AWARDS

Dean's Fellowship, Arizona State University
- Awarded to top 4% of admitted graduate students with significant leadership and research capabilities
Ira A. Fulton Fellowship, Arizona State University

Priscilla and Melvin Wilson Endowed Scholar, University of Washington
Electrical Engineering Departmental Honors
IEEE HKN Honors Society, University of Washington
- Scholastic achievement in the top 30% of graduating class
Husky Leadership Certificate, University of Washington

PEER-REVIEWED PUBLICATIONS

- P2 *SWISH: A shifting-weight interface of simulated hydrodynamics for haptic perception of virtual fluid vessels*
Shahabedin Sagheb, Alireza Bahremand, **Frank Liu**, Assegid Kidane, Robert Likamwa
ACM UIST 2019, New Orleans, Louisiana
- P1 *A Spatial Audio System for the Internet-of-Things*
Frank Liu, Robert Likamwa
Demo: Hotmobile 2019, Santa Cruz, California
Awarded: NSF Student Travel Grant

INTERNSHIP EXPERIENCE

Summer 2018	National Taiwan University - IoX Center, Gongguan, Taiwan Research Intern. Mentor: Professor Bing You Award of Excellence: Significant contributions in shipping android application SoberComm, allows alcohol dependent individuals and their family members to monitor alcohol usage
Spring 2018	Roxy Device, Seattle, Washington Startup Intern. Lead generation and public outreach for customer acquisition. Built, assembled, and QA tested Roxy Device hardware systems.
Winter 2018	Microsoft, Redmond, Washington Consultant. Created labs, lessons and course content for the "Introduction to Device Programming" EDX (MICROSOFT COURSE) [DEV295X] using Microsoft's IOT Pack for Raspberry Pi for audience of thousand+ students
Spring 2017	Verizon Wireless, Bellevue, Washington Systems Performance Intern. Supported Systems Performance/Radio Frequency engineers in evaluating and improving areas of poor coverage using internal SP / RF tools

TEACHING EXPERIENCE

Arizona State University	Spring 2019: Teaching Assistant for AME 394, "Introduction to Mixed Reality"
University of Washington	Fall 2016, Spring 2017, Spring 2018: Grader and Teaching Assistant for EE215, "Introduction to Circuits"
Coding with Kids	Spring 2017, Classroom Instructor Taught coding course curriculum for scratch at local elementary schools.

SERVICE

Reviewer	Mobisys 2019
Volunteer	TEI 2019
Mentor	Summer 2019, Advanced Robotics at the University of Washington
Member	Fall 2017 – Spring 2018, The College of Engineering Student Advisory Council Interviewed students and faculty about mental health on campus and prepared a recommendation report to improve student well-being on campus.

INVITED TALKS

Scholar-Donor Recognition 2018	From my exemplary leadership and service on campus, I was personally invited by Michael Bragg, Dean of the College of Engineering, as a speaker for the 2017-2018 Scholar-Donor Recognition Luncheon.
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SELECTED PRESS

Sunhacks **State Press.** Sunhacks provides an inclusive outlet for ASU students

Advanced Robotics
at the University of
Washington **UW Daily.** Robotics team breaking down obstacles... literally
Seattle Times. These attack robots and their UW creators will take on the world at RoboMaster competition in China
Seattle Times. UW students and their attack robots hit bumps in China — then a hotel hair dryer saved the day
Bloomberg. China's High-Stakes Robot Wars

REFERENCES

Robert Likamwa likamwa@asu.edu

Shwetak Patel shwetak@cs.washington.edu