

Yasha S. Iravantchi

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EDUCATION	University of Michigan , Ann Arbor, MI Ph.D., Computer Science and Engineering Advisor: Alanson Sample	Sep 2019 - Present
	University of Michigan , Ann Arbor, MI M.S.E., Computer Science and Engineering	Aug 2020
	Harvard College , Cambridge, MA S.B., Engineering Sciences: Electrical Engineering & Biomedical Engineering	May 2014
WORK EXPERIENCE	PhD Research Intern - Nimble XR Meta Reality Labs, Redmond, WA Advisor: Eve (Yi) Zhao	Sep 2021 - Jan 2022
	Design Specialist in Electrical Engineering Active Learning Labs, Harvard University, Cambridge, MA	Jun 2014 - Jun 2017
	Product Design and Engineering Intern Design Catapult, Inc., Fountain Valley, CA	Summers 2009-2013
PUBLICATIONS	<p>13. Laura Aguilera, Yasha Iravantchi, Alanson Sample, Marcos Lazaro Alvarez, Bahillo Martinez Alfonso, Elba Caneon. Privacy-Preserving Automatic Collection of Acoustic Voiding Events. <i>To Appear In The 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'23)</i>, 2023</p> <p>12. Yasha Iravantchi, Yi Zhao, Kenrick Kin, Alanson Sample. SAWSense: Using Surface Acoustic Waves for Surface-bound Event Recognition <i>To Appear In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '23)</i>, 2023 [Link] Best Paper Award</p> <p>11. Amani Alkayyali, Yasha Iravantchi, Jaylin Herskovitz, Alanson Sample. UbiChromics: Enabling Ubiquitously Deployable Interactive Displays with Photochromic Paint. <i>In ACM Interactive Surfaces and Spaces (ACM ISS)</i>, 2022 [Link]</p> <p>10. Mingke Wang, Qing Luo, Yasha Iravantchi, Xiaomeng Chen, Alanson Sample, Kang G Shin, Xiaohua Tian, Xinbing Wang, Dongyao Chen. Automatic calibration of magnetic tracking. <i>In The 27th Annual International Conference on Mobile Computing and Networking (MobiCom'22)</i>, 2022 [Link]</p> <p>9. Dongyao Chen, Mingke Wang, Chenxi He, Qing Luo, Yasha Iravantchi, Alanson Sample, Kang G. Shin, Xinbing Wang. MagX: Wearable, Untethered Hands Tracking with Passive Magnets. <i>In The 27th Annual International Conference on Mobile Computing and Networking (MobiCom'21)</i>, 2021 [Link]</p> <p>8. Yasha Iravantchi, Karan Ahuja, Mayank Goel, Chris Harrison, Alanson Sample. PrivacyMic: Utilizing Inaudible Frequencies for Privacy Preserving Daily Activity Recognition. <i>In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21)</i>, 2021 [Link] Best Paper Honorable Mention Award</p> <p>7. Yasha Iravantchi, Mayank Goel, Chris Harrison. Digital Ventriloquism: Giving Voice to Everyday Objects. <i>In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20)</i>, 2020 [Link]</p> <p>6. Yang Zhang, Yasha Iravantchi, Haojian Jin, Swarun Kumar, and Chris Harrison. 2019. Sozu: Self-Powered Radio Tags for Building-Scale Activity Sensing. <i>In Pro-</i></p>	

ceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology (UIST '19), 2019 [Link]

5. **Yasha Iravantchi**, Yang Zhang, Evi Bernitsas, Mayank Goel, Chris Harrison. Interferi: Gesture Sensing using On-Body Acoustic Interferometry. *In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), 2019 [Link] **Best Paper Honorable Mention Award***

4. **Yasha Iravantchi**, Mayank Goel, Chris Harrison. BeamBand: Hand Gesture Sensing with Ultrasonic Beamforming. *In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), 2019 [Link]*

3. Sunyoung Kim, **Yasha Iravantchi**, Krzysztof Z. Gajos. SwellFit: Developing a Wearable Sensor for Monitoring Peripheral Edema. *In Proceedings of the 52nd Hawaii International Conference on System Sciences (HICSS-52), 2019 [Link]*

2. Sunyoung Kim, **Yasha Iravantchi**, Krzysztof Z. Gajos, Barbara Grosz. SwellFit: a Wearable Sensor for Patients with Congestive Heart Failure. *In Proceedings of the Workshop on Interactive Systems in Healthcare (WISH) 2016, 2016. [LINK]*

1. Sunyoung Kim, **Yasha Iravantchi**, Krzysztof Z. Gajos, Barbara Grosz. Exploring Opportunities for Social Infrastructure in Congestive Heart Failure Management. *In Proceedings of the CSCW 2015 workshop on Moving Beyond e-Health and the Quantified Self, 2015 [LINK]*

FELLOWSHIPS & AWARDS

Best Paper Award CHI 2023 - SAWSense

The ACM CHI Best Paper Awards honor exceptional papers published at the CHI conference. During the review process, up to 5% of submissions will be chosen by the associate chairs and subcommittee chairs to receive an award.

Meta PhD Research Fellowship 2022-2024

The Meta Research PhD Fellowship is a program designed to encourage and support promising doctoral students who are engaged in innovative and relevant research in areas related to computer science and engineering.

Best Paper Honorable Mention Award CHI 2021 - PrivacyMic

The ACM CHI Best Paper Awards honor exceptional papers published at the CHI conference. During the review process, up to 5% of submissions will be chosen by the associate chairs and subcommittee chairs to receive an award.

2020 CSE Graduate Student Honors Competition

The competition recognizes the research done by PhD students at CSE and the final competition is the culmination of a process that narrows a field of entrants to a handful of finalists, each of whom gives a summary presentation on an area of their research.

Best Paper Honorable Mention Award CHI 2019 - Interferi

The ACM CHI Best Paper Awards honor exceptional papers published at the CHI conference. During the review process, up to 5% of submissions will be chosen by the associate chairs and subcommittee chairs to receive an award.

INVITED TALKS

2. *"Labs in the Wild": Teaching Signal Processing Using Wearables and Jupiter Notebooks in the Cloud.* SciPy Conference 2016, Austin, TX

1. *Wearable Signal Processing Using Docker Notebook Containers on AWS.* Jupyter-Days Boston 2016, Cambridge, MA

TEACHING EXPERIENCE

Teaching Fellow:

[Harvard] ES 155 Biological Signal Processing (Spring 2016, Fall 2016)

[Harvard] ES 50 Introduction to Electrical Engineering (Spring 2013, Spring 2014)

[Harvard] BE 110 Physiological Systems Analysis (Fall 2013)

Course Assistant:

[Harvard] ES 52 The Joy of Electronics - Part I (AY 14, 15, 16)

[Harvard] ES 96 Engineering Problem Solving and Design Project (AY 14, 15, 16)

[Harvard] ES 100 Engineering Design Projects (AY 14, 15, 16)

[Harvard] ES 151 Applied Electromagnetism (Spring 2016)

REFERENCES

Alanson Sample

Associate Professor in Electrical Engineering and Computer Science

Interactive, Sensing, and Computing Lab

University of Michigan

e: apsample@umich.edu

Nikola Banovic

Assistant Professor in Electrical Engineering and Computer Science

Computational Modeling in Human-Computer Interaction Lab

University of Michigan

e: nbanovic@umich.edu

Eve (Yi) Zhao

Research Scientist, Nimble XR Team

Meta Reality Labs

e: yi.zhao@fb.com

Anna Kratz

Associate Professor, Physical Medicine & Rehabilitation

University of Michigan

e: alkratz@med.umich.edu

**SCHOLARLY
SERVICE**

Paper Reviewer:

CHI 2019, 2020, 2021 *UIST* 2019, 2020

IMWUT Feb 2020, May 2020, Aug 2020, Nov 2020, Feb 2021

DIS 2020 *MobileHCI* 2021, *ISS* 2022

Student Volunteer

ACM CHI Conference on Human Factors in Computing, April 2018

ACM CHI Conference Building Devices Committee, Oct 2021 & Oct 2022

**LANGUAGES
AND
TOOLS**

Computer Languages:

Python, C/C++, MatLab, \LaTeX , Java, HTML, PHP, JavaScript

Human Languages:

English (Native), Persian (Native), Spanish (Formerly Fluent)

Tools:

SolidWorks, Altium, Numpy, Scipy, SciKit-Learn, TensorFlow, OpenCV