Yasha S. Iravantchi

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EDUCATION

University of Michigan, Ann Arbor, MI — Sep 2019 - Present
Ph.D., Computer Science and Engineering
Advisor: Alanson Sample

University of Michigan, Ann Arbor, MI — Aug 2020
M.S.E., Computer Science and Engineering

Harvard College, Cambridge, MA — May 2014
S.B., Engineering Sciences:
Electrical Engineering & Biomedical Engineering

WORK EXPERIENCE

PhD Research Intern - Nimble XR — Sep 2021 - Jan 2022
Meta Reality Labs, Redmond, WA
Advisor: Eve (Yi) Zhao

Design Specialist in Electrical Engineering — Jun 2014 - Jun 2017
Active Learning Labs, Harvard University, Cambridge, MA

Product Design and Engineering Intern — Summers 2009-2013
Design Catapult, Inc., Fountain Valley, CA

PUBLICATIONS

9. Dongyao Chen, Mingke Wang, Chenxi He, Qing Luo, **Yasha Iravanchi**, Alanson Sample, Kang G. Shin, Xinbing Wang. MagX: Wearable, Untethered Hands Tracking with Passive Magnets. *To Appear In The 27th Annual International Conference on Mobile Computing and Networking (MobiCom'21), 2021*

8. **Yasha Iravantchi**, Karan Ahuja, Mayank Goel, Chris Harrison, Alanson Sample. PrivacyMic: Utilizing Inaudible Frequencies for Privacy Preserving Daily Activity Recognition. *In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21), 2021* **[Link]**
Best Paper Honorable Mention Award

7. **Yasha Iravantchi**, Mayank Goel, Chris Harrison. Digital Ventriloquism: Giving Voice to Everyday Objects. *In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20), 2020* **[Link]**

6. Yang Zhang, **Yasha Iravantchi**, Haojian Jin, Swarun Kumar, and Chris Harrison. 2019. Sozu: Self-Powered Radio Tags for Building-Scale Activity Sensing. *In Proceedings 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]**

AWARDS

Best Paper Honorable Mention Award CHI 2021
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
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*. JupyterDays 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

Student Volunteer
ACM CHI Conference on Human Factors in Computing, April 2018
ACM CHI Conference Building Devices Committee, Oct 2021

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