

## Yasha S. Iravantchi

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Human-Computer Interaction Institute  
5000 Forbes Ave.  
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[ysi@cs.cmu.edu](mailto:ysi@cs.cmu.edu)

### Research Interests

Human-Computer Interaction (HCI), On-Body Sensing, Interaction Techniques, Wearable Devices

### Education

**Carnegie Mellon University**, Pittsburgh, PA *Aug 2017 to Present*  
Ph.D. Student, Human-Computer Interaction  
Advisors: Chris Harrison, Mayank Goel

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

### Professional Experience

**Design Specialist in Electrical Engineering** *Jun 2014 to Jun 2017*  
Active Learning Labs, Harvard University SEAS  
Cambridge, MA

**Product Design and Engineering Intern** *Summers 2009-2012*  
Design Catapult, Inc.  
Fountain Valley, CA

### Publications

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

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

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

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.

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

### 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:**

ES 155 Biological Signal Processing (Spring 2016, Fall 2016)  
ES 50 Introduction to Electrical Engineering (Spring 2013, Spring 2014)  
BE 110 Physiological Systems Analysis (Fall 2013)

**Course Assistant:**

ES 52 The Joy of Electronics - Part I (AY 14, 15, 16)  
ES 96 Engineering Problem Solving and Design Project (AY 14, 15, 16)  
ES 100 Engineering Design Projects (AY 14, 15, 16)  
ES 151 Applied Electromagnetism (Spring 2016)

**References**

Chris Harrison  
Assistant Professor  
Future Interfaces Group  
CMU Human-Computer Interaction Institute  
e: [chris.harrison@cs.cmu.edu](mailto:chris.harrison@cs.cmu.edu)

Mayank Goel  
Assistant Professor  
SmaSH Lab  
CMU Human-Computer Interaction Institute  
e: [mayankgoel@cmu.edu](mailto:mayankgoel@cmu.edu)

Krzysztof Z. Gajos  
Professor  
Intelligent Interactive Systems Group  
Harvard University SEAS  
e: [kgajos@seas.harvard.edu](mailto:kgajos@seas.harvard.edu)

**Community  
Service**

Student Volunteer:  
ACM CHI Conference on Human Factors in Computing, April 2018

**Languages**

Computer Languages:  
C, MatLab, LaTeX, HTML, PHP, Java, JavaScript, Python  
Human Languages:  
English (Native), Persian (Native), Spanish (Previously Fluent)