



# SCHOOL OF COMPUTER SCIENCE

## Faculty Candidate Talk

# Mayank Goel

University of Washington

## Teaching Old Sensors New Tricks

A fundamental issue with any new sensing technology is the deployment burden. The new technology often comes with a rigid and perhaps expensive list of pre-requisites; and it affects the overall cost-effectiveness, deployability, and accessibility of the solution. For example, a user might find it hard to buy and carry a medical device with them every day. The primary theme of my Ph.D. research has been to reduce the adoption and deployment barriers of new sensing technologies by using the sensors that are already around us. In this talk, I will present my research on extending the capabilities of the on-board sensors on consumer devices for various applications. First, I will discuss how we can leverage the on-device sensors to enable novel human-computer interactions and make the mobile devices more usable. Next, I will discuss my work on using the on-device sensors for building health technologies that work as well as their clinically-approved counterparts and they continue to evolve through deployments in various parts of the world. Finally, I will discuss how my recent work in extending the on-device sensors is shaping my future interests and how I plan to continue to lower the adoption barriers for new sensing technologies.

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Mayank Goel is a Ph.D. candidate in Computer Science and Engineering in the Ubiquitous Computing (UbiComp) Lab at the University of Washington, advised by Shwetak Patel and Gaetano Borriello. His research focuses on building sensing systems to solve hard problems in diverse application areas, ranging from health sensing, technologies for the developing world to novel user interaction; with an eye toward reducing deployment barriers. His research in the area of health technologies is currently used by hundreds of patients every week, around the world. He was awarded the Microsoft Research Ph.D. Fellowship in 2014, a University of Washington CSE Fellowship, and 7 Best Paper Nominations. He received an M.S. in Computer Science from Georgia Institute of Technology in 2009, where he was advised by Gregory Abowd and specialized in mobile and ubiquitous computing.

**Friday, April 1**  
**10:00 a.m. GHC 6115**

Host: Yuvraj Agarwal