

**Tuesday, October 9, 2012**  
**12:00 - 12:50 p.m., Room T-747**

**Shwetak N. Patel, PhD**

Assistant Professor

Department of Computer Science & Engineering

Department of Electrical Engineering

University of Washington, Seattle

**“Bringing Sensing to the Masses: Implications for Healthcare”**

Shwetak Patel will describe work and the motivation on a new generation of electricity, water, and natural gas measurement systems that are low-cost, easy-to-install, and, most importantly, capable of providing disaggregated data on consumption down to the individual appliance or device from a single sensing point. Although the vision is to provide highly granularity energy use information back to consumers, these sensors also provide a significant amount of information about the activity of individuals in their home that is relevant for the medical community. In addition, he will also talk about his recent work on leveraging existing sensors on smart phones for health monitoring applications. In one example, he will describe how microphones found on mobile phones can be used for spirometry. All of the work described follows the theme of finding usable signals in unusual places in order to enable scale.

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Shwetak N. Patel is an Assistant Professor in the departments of Computer Science & Engineering and Electrical Engineering at the University of Washington where he directs the UbiComp Research Lab. His research interests are in the areas of Human-Computer Interaction, Ubiquitous Computing, Sensor-enabled Embedded Systems, and User Interface Technology. His particular focus is on developing easy-to-deploy sensing technologies and approaches for activity recognition and energy monitoring applications. He is also exploring novel interaction techniques, mobile sensing systems for health, and wireless sensor platforms. Dr. Patel was also a founder of Zensi, Inc., a residential energy sensing and feedback company, which was acquired by Belkin, Inc in 2010. He received his Ph.D. in Computer Science from the Georgia Institute of Technology in 2008 and B.S. in Computer Science in 2003. Dr. Patel was named a MacArthur Foundation Fellow in 2011. He also received the TR-35 award in 2009, was named top innovator of the year by Seattle Business Magazine in 2010, was named Newsmaker of the year by Seattle Business Journal in 2010, was named most influential person by Seattle Magazine in 2011, received the Microsoft Research Faculty Fellowship in 2011, and was named a Sloan Foundation Fellow in 2012. His past work was also honored by the New York Times as a top technology of the year in 2005.