Computer Science Seminar

## *Contact-less Human Sensing using Ubiquitous Modalities*
Muhammad Shahzad
North Carolina State University

Friday, February 22, 2:00-3:00
Petty 150

Abstract

Contact-less human sensing systems are receiving significant attention from the research community. The general idea behind such human sensing systems is that whenever a user performs any activity, he/she causes variations to several ubiquitous modalities, such as radio frequency signals, ambient light, and sound. The patterns of these variations are unique across different human movements. By learning these patterns *a priori* using an appropriate number of training instances, the contact-less human sensing systems can recognize various human movements. In this talk, I will present some of my recent and ongoing work on contact-less human sensing using WiFi signals and ambient light. The talk will also include some thoughts on the challenges that must be addressed before such systems can be adopted in the real world, and potential approaches to addressing some of those challenges.
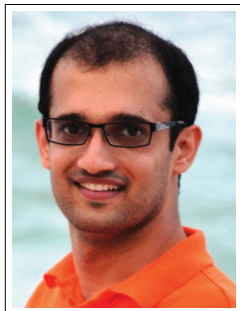
Speaker Information

Dr. Muhammad Shahzad is currently an Assistant Professor at the Department of Computer Science, North Carolina State University, USA. He received his Ph.D. in computer science and engineering from Michigan State University in 2015. His research interests include design, analysis, measurement, and modeling of human sensing, networking, and security systems. Dr. Shahzad's team won Virginia Tech's 2016 Spectrum Sharing Radio Challenge. He was also the recipient of the 2015 Fitch Beach Award, 2015 Outstanding Graduate Student Award at Michigan State University, 2012 Outstanding Student Leader Award at Michigan State University, and 2009 Human-Competitive Award at the Genetic and Evolutionary Computation Conference.

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