INTERACTIVE STATIC ANALYSIS / LEVERAGING COMMUNITY FOR SECURITY AND PRIVACY

presented by

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Abstract:
My research falls at the intersection of Human Computer Interaction and Information Security and Privacy, where I investigate how to help people make better security and privacy decisions. I have two distinct lines of research that I will highlight in this talk. First, I will discuss my work on helping software developers write code that is resistant to attacks. We are developing tools to allow programmers to detect, understand, and resolve potential security vulnerabilities, through a technique we call interactive static analysis. Our technique has similar detection rates of other automated tools, while at the same time providing better awareness and understanding of security vulnerabilities to developers. In the second half of this talk, I will focus on my work for end users, who regularly make a variety of security and privacy decisions regarding their information and interaction with a wide range of applications. I am investigating how to utilize decisions and oversight from other users to improve the interactions users have with security and privacy settings.

Bio:
Dr. Heather Richter Lipford is an Associate Professor in the Department of Software and Information Systems at the University of North Carolina at Charlotte. Her research interests are in Human Computer Interaction, with a focus in usable privacy and security, secure programming, and social computing. She has published dozens of research articles in these areas at premiere HCI and usable security venues. At UNC Charlotte, Lipford co-directs the HCI Lab and is a member of the UNCC Cyber Defense and Network Assurability Center, the Charlotte Visualization Center, and the UNCC Cognitive Science Academy. She regularly teaches and mentors students in the areas of HCI and usable privacy and security. She is also heavily involved in efforts to broaden participation in computing, and increase the recruitment and retention of under-represented groups in computing degree programs. Dr. Lipford received a Bachelor of Science degree from Michigan State University in 1995, and a Ph.D. from the College of Computing at the Georgia Institute of Technology in 2005.