



COLLOQUIUM

School of Computing and Software Engineering (CSE)

Subjects: Information Security & Assurance: Is this a good field to study?

Speaker: Dr. Edward Jung
Murray Visiting Professor in the Department of Computer Science
Rutgers University, New Brunswick, NJ

Date: Thursday, March 19th, 2009

Time: 10:10 AM – 11:10 AM

Place: J-131

Abstract:

Historically, the need for security goes back to almost 4000 years ago, B.C. 2000. However, it was during World War II when many modern security solutions were developed. The target application was primarily the war-related events. More recently, in the late '70s, the application of the modern security solution into the commercial realm became a reality with the advent of a security concept and technology known as "public-key cryptography". For instance, the e-commerce application such as Internet banking was built based on this model. As we enter society in the 21st century, new reliable services are and will be in demand (in both public and private sectors); it will be worthwhile to review and discuss the current status and future prospects on the work of information security and assurance.

In this talk, we will start with reviewing historical perspectives on information security and assurance. Two fundamental human activities, i.e., various types of attacks and their counter-measures, will be described. Then, we will discuss research issues in computer security and will present some lightweight approaches suitable for mobile computing. Some of the topics include mobile anti-virus protection. Finally, a list of potential research topics on emerging computer and network security will be briefly introduced. One of the goals is to provide undergraduate students with minimum technical background on this area with the opportunity to learn ('feel') this interesting field of study. The other goal is to present my previous and current research interests.

Biographical Sketch

Edward Jung is a Murray Visiting Professor in the Dept. of Computer Science at Rutgers University. His current research interest is in secure and reliable computing and networking with an emphasis on enhancing trustworthiness of mobile computing and wireless networks. From 1997 until 2003, he was a member of Technical Staff at Bell Labs, where he conducted research work in the areas of wireless data networks and network security. From 2003 until 2007, he worked on information security and assurance at Samsung Research, where he was director of the research group. He has co-authored about 30 technical publications and holds 60 US/international patents on these topics. He received an undergraduate degree (B.S. with Distinction) and a Ph.D. in Computer Science from University of Minnesota, Minneapolis.

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Contacts: Dr. Venu Dasigi, vdasigi@spsu.edu and/or Susan Bentzen-Gordet, sbentzen@spsu.edu