



**The Chinese University of Hong Kong
Department of Computer Science and Engineering
Department of Information Engineering**

Regular Department Seminar Series

**From Automated Privacy Leak Analysis to Privacy Leak
Prevention for Mobile Apps**

**Dr. Sencun Zhu
Associate Professor
Pennsylvania State University**

Date : July 22, 2019 (Monday)
Time : 11:00a.m. - 12:00noon
Venue : Room 121, 1/F, Ho Sin-hang Engineering Building,
The Chinese University of Hong Kong, Shatin, N.T

ABSTRACT:

With the enormous popularity of smartphones, millions of mobile apps are developed to provide rich functionalities for users by accessing certain personal data, leading to great privacy concerns. To address this problem, many approaches have been proposed to detecting privacy disclosures in mobile apps, but they largely fail to automatically determine whether the privacy disclosures are necessary for the functionality of apps. In this talk, we will introduce LeakDoctor, an analysis system that integrates dynamic response differential analysis with static response taint analysis to automatically diagnose privacy leaks by judging if a privacy disclosure from an app is necessary for some functionality of the app. Furthermore, we will present the design, implementation, and evaluation of a context-aware real-time mediation system that bridges the semantic gap between GUI foreground interaction and background access, to protect mobile apps from leaking users' private information.

BIOGRAPHY:

Dr. Sencun Zhu is an associate professor of Department of Computer Science and Engineering at The Pennsylvania State University (PSU). He received the B.S. degree in precision instruments from Tsinghua University, the M.S. degree in signal processing from the University of Science and Technology of China, Graduate School at Beijing, and the Ph.D. degree in information technology from George Mason University in 1996, 1999, and 2004, respectively. His research interests include wireless and mobile security, software and network security, fraud detection, and user online safety and privacy. His research has been funded by National Science Foundation, National Security Agency, and Army Research Office/Lab. He received NSF Career Award in 2007 and a Google Faculty Research Award in 2013. More details of his research can be found in <http://www.cse.psu.edu/~sxz16/>.

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