UCF Faculty Cluster Initiative and Dept. of Computer Science

Fall 2017 Seminar Series

Cross-Layer Attacks in Emerging Networks

October 16th 2017

Time 9:15am-10:15am – HEC 113

The last decade has seen the rise of several new networking technologies, from mobile and wireless to overlay anonymous communication networks such as Tor. In this talk, I will argue that such networks are vulnerable to a variety of cross-layer attacks on their intrinsic features. For instance, an adversary can infer users location using malicious apps without requiring permissions, or by exploiting the physical layer characteristics. I will also provide evidence that the Tor anonymity network is also subject to active attacks, and present a framework that identifies malicious relays. I will then discuss some of our research results on mitigating these attacks.

Dr. Guevara Noubir

Director of Cybersecurity and Information Assurance Graduate Programs. College of Computer and Information Science at Northeastern University

Guevara Noubir holds a PhD in Computer Science from the Swiss Federal Institute of Technology in Lausanne. His research covers both theoretical and practical aspects of privacy, security, and robustness in networked systems. His research led to a wide range of mechanisms and algorithms for scalable, secure, private and robust wireless and mobile communications. He led the winning team of the 2013 DARPA Spectrum Cooperative Challenge. He is a recipient of the National Science Foundation CAREER Award (2005), Google Faculty Research Award (2016), the ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec) best paper award in 2011 and runner-up best paper in 2013, IEEE Conference on Communications and Network Security best paper award 2016. Dr. Noubir is currently the Director of Cybersecurity and Information Assurance Graduate Program. He held visiting research positions at Eurecom, MIT, and UNL. Prior to joining Northeastern University, he was a senior researcher at CSEM SA (1997-2000) where he led the design and development of the data protocol-stack of the third generation Universal Mobile Telecommunication System (UMTS) and its worlds first 3G Prototype

Dr. Noubir served as program co-chair of several conferences in his areas of expertise such as the ACM Conference on Security and Privacy in Wireless and Mobile Networks, IEEE Conference on Communications and Network Security, and IEEE WoWMoM. He serves on the editorial board of the ACM Transaction on Privacy and Security, and IEEE Transaction on Mobile Computing.

*Hosted by: **Dr. Gary Leavens***

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