A Knight's Welcome To: Max Schuchard

DATE: Wednesday November 7, 2018

TIME: 10:30AM-11:30AM
(Q&A to follow until 12:00pm)

LOCATION: R1-307 (Research Building)

HOSTED BY: Aziz Mohaisen

Bio: Dr. Max Schuchard is a professor of Computer Science at the University of Tennessee and director of the VolSec computer security group. Professor Schuchard received his PhD from the University of Minnesota in 2016. His research areas focus on routing security, Distributed Denial of Service attacks, and censorship circumvention.

"Defending DDos Attacks and Adverse Network Conditions"

The security community has yet to develop a viable and deployable defense against large scale Distributed Denial of Service (DDoS) attacks, despite their increasing prevalence and impact. In this talk, we will explore the viability of effectively mitigating modern DDoS attacks through routing rather than traditional means. I will focus on Nyx, the first system to both effectively mitigate modern DDoS attacks regardless of the amount of traffic under adversarial control and function without outside cooperation or an Internet redesign. Nyx approaches the problem of DDoS mitigation as a path selection problem rather than a filtering problem. This conceptual shift allows Nyx to avoid many of the common shortcomings of existing academic and commercial DDoS mitigation systems. I will discuss a variety of experiments, both in simulation and on the live Internet, which demonstrate the promise of such an approach, and touch on some of the unanswered research questions in this area.