

# SE&T Colloquium Series-Fall 2013

Speakers	Dr. Khandaker A. Rahman Department of Computer Science and Information Systems
Title	<i>Snoop-forge-replay Attack on Continuous Verification with Keystrokes</i>
Abstract	<p>In this work I present a new attack called the snoop-forge-replay attack on keystroke based continuous verification systems. The snoop-forge-replay is a sample-level forgery attack and is not specific to any particular keystroke based continuous verification method or system. It can be launched with easily available keyloggers and APIs for keystroke synthesis. Results from 2640 experiments show that: (1) the snoop-forge-replay attacks achieve alarmingly high error rates compared to zero-effort impostor attacks, which have been the de-facto standard for evaluating keystroke based continuous verification systems; (2) four state-of-the-art verification methods, three types of keystroke latencies, and eleven matching-pair settings (–a key parameter in continuous verification with keystrokes) that we examined in this paper were susceptible to the attack; (3) the attack is effective even when as low as 20 to 100 keystrokes were snooped to create forgeries. In light of the results, I question the security offered by current keystroke based continuous verification systems. Additionally, in the experiments, virtualization technology has been harnessed to generate thousands of keystroke forgeries within a short time span. It is pointed out that virtualization setup such as the one used in these experiments can also be exploited by an attacker to scale and speedup the attack.</p>
Date	Tuesday, November 19
Time	4:10-5:00pm
Place	Pioneer 240
	Refreshments will be served at 4:00pm.