SE&T Colloquium Series-Fall 2014

Speaker	Mr. Dustyn Tubbs CSIS Major Advisor: Dr. Khandaker A. Rahman
Title	***Exploring Movement-Pattern Based Authentication for Mobile Platforms***
Abstract	In this research we show a novel method of user authentication for mobile platforms, such as smartphones or tablets. We propose movement-pattern based authentication as an alternate to current methods that relies on a pin or drawn-pattern. While the current methods are vulnerable against common attacks (e.g., smudge attacks, shoulder surfing), our method, in contrast, is more resilient to these kind of attacks because it utilizes sensory data given off by the device during a preset movement for authentication. In our experiment, we recorded the values given off by four physical observational sensors: (1) accelerometer, (2) linear accelerometer, (3) gyroscope and (4) tilt sensor, which each had three axes, over a set of movements. We experimented with 10 arbitrary movement patterns and gathered 10 samples of each (net 100 samples) to test with. We developed our system, through which we made 29,450 authentication attempts and found a 20.22% Equal Error Rate.
Date	Tuesday, October 21
Time	4:10-5:00pm
Place	Pioneer 242
	Refreshments will be served at 4:00pm.