CMPT 479 - D200 Spec.Topics/Computing Systems

**Instructor(s):** Steven Ko

**SFU Burnaby**

**Calendar Objective/Description:**
Spec.Topics/Computing Systems

**Instructor's Objectives:**
This is a project-based, research-oriented course at the intersection of mobile systems and software engineering. If you take this course, you will work in a group with other students to carry out a semester-long project. Your semester-long project will first pick a platform-level service on Android (e.g., the Bluetooth stack), re-design and re-implement it using the Rust programming language, and verify/test your implementation using symbolic execution and other automated verification/testing techniques. The emphasis is on exploring how the unique features of Rust can make the design of mobile systems more amenable to automated verification/testing techniques such as symbolic execution. After taking this course, you will gain an understanding about the Android platform, the Rust language, and how to design and implement robust and secure mobile systems. Initially, the course will have lectures to equip you with the necessary background to carry out your project. After the initial phase, the course will have weekly meetings to discuss each group's project. The course will also require paper readings, presentations, and in-class discussions. Each of these course activities will be graded.

**Prerequisites:**
see go.sfu.ca

**Grading:**
Grading details will be discussed in the first class.

**Academic Honesty Statement:**
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).