

# Michelle Wong

Toronto, Canada  
wong.michelle.y@gmail.com | <https://miwong.me>

## Education

**PhD:** Electrical and Computer Engineering. University of Toronto. May 2015 - Present.

**Master of Applied Science:** Electrical and Computer Engineering. University of Toronto. Jan 2015.

**Honours Bachelor of Applied Science in Engineering Science:** Major in Electrical and Computer Engineering. University of Toronto. June 2012.

## Skills

- Programming languages: Java, C++, C, Python, SQL, JavaScript.
- Advanced knowledge of computer security, program analysis, operating systems, and compilers.

## Work

May 2017 - Aug. 2017      Google      Mountain View, CA

### Software Engineering Intern, PhD

- Designed and implemented static detection of command-and-control (C&C) malware on Android for the mobile malware team, and detected new cases of malware.

June 2013 - Aug. 2013      Apple      Cupertino, CA

### Apple Intern (Mac OS X Software Development)

- Implemented hand gesture detection framework on OS X, using camera input to control the UI.

May 2012 - Aug. 2012      BlackBerry / Research in Motion      Mississauga, Canada

### Junior Software Developer, Intern

- Implemented APIs for the BlackBerry WebWorks SDK platform (push notifications, file transfer)

## Publications

M. Y. Wong and D. Lie. **Tacking runtime-based obfuscation in Android with TIRO**. In *27th USENIX Security Symposium (USENIX Security)*, 2018.

- Identifies a new family of runtime-based obfuscation techniques on Android that subverts the code loading and execution processes in the runtime.
- Proposes TIRO, a hybrid iterative Android deobfuscator (<https://github.com/miwong/tiro>).

M. Y. Wong and D. Lie. **IntelliDroid: A targeted input generator for the dynamic analysis of Android malware**. In *23rd Network and Distributed System Security Symposium (NDSS)*, 2016.

- Employs a novel hybrid of static analysis, constraint solving, and dynamic analysis to extract call paths to malicious behavior and reliably execute them during run-time.
- Open-sourced at: <https://github.com/miwong/IntelliDroid>.

## Awards

- Natural Sciences and Engineering Research Council of Canada (NSERC) CGS-M and CGS-D Graduate Scholarships (2012, 2016-2019).
- General Electric (GE) Foundation Scholar-Leaders Award in Canada (2008-2012).
- Research in Motion (BlackBerry) Internship Award (2011).

## Activities

- External reviewer for security conferences: Usenix Security, NDSS, ACM CCS, and IEEE S&P.
- Women for Science and Engineering (WISE) at the University of Toronto.