

FARID MOLAZEM

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EDUCATION

Ph.D. in Computer Engineering, University of British Columbia, Sept. 2011 - present
M.Sc. in Computer Science, Simon Fraser University, Canada, January 2009 - May 2011
B.Sc. in Computer Engineering, Amirkabir University of Technology, Iran, 2001 - 2005

JOB EXPERIENCE

Software Engineer Intern Google June 2016-Sept. 2016

- I used llvm/Clang to build a series of static analyzers for an OS kernel. I integrated my analyzers with the build system and they have found several bugs in the code base without producing any false positives.

Software Developer Fortinet Co., Canada May 2013-Aug. 2014

- Built services for FortiOS, an Operating System for network security. For instance, designed and implemented a fault-tolerant update service for updating virus-signature files over the network (C/C++).

Research Assistant University of British Columbia, Canada Sep. 2011-Present

- Built tools for automatically generating an intrusion detection system (IDS) for an open-source smart meter. My IDS takes less than 10 MB of RAM, monitors system calls, and detects attacks (such as buffer overflow) that change the execution path of the system. My IDS detected three vulnerabilities in an open-source smart meter (C/C++).

Research Assistant Network Systems Lab, SFU, Canada Jan. 2010 - May 2011

- Implemented a real time video streaming software for mobile networks which improved energy saving of the mobile receivers for 90%, through sending video data in bursts and allowing the mobile device turn off its receiver in-between bursts (C/C++/Python).

HONORS

- **3rd rank**, international RoboCup Rescue Simulation competitions, Italy, 2003 (among 20 teams which passed the qualifications round)
- **7th rank**, 4th Asia regional ACM programming contest, 2002 (67 teams participated)
- **Bronze medal**, 10th National Computer Olympiad, Young Scholars' Club, Iran (among the top students of the country who were selected after passing two nation-wide rounds of exams)

SELECTED PUBLICATIONS

- F. Molazem, K. Pattabiraman "Formal Security Analysis of Smart Embedded Systems", 32nd Annual Computer Security Applications Conference (ACSAC), 2016. (acceptance rate 23%)
- F. Molazem, K. Pattabiraman "Flexible Intrusion Detection Systems for Memory-Constrained Embedded Systems", 11th European Dependable Computing Conference, 2015. (Distinguished paper award)
- F. Molazem, J. Peters, and M. Hefeeda, "Adaptive Transmission of Variable Bit Rate Video Streams to Mobile Devices", IFIP Networking 2011, Valencia, Spain. (acceptance rate 22%)