

Resume

Meng Wu

5th Year Ph.D. Student

Computer Engineering, Virginia Tech

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Education

2014 – Present: Ph.D. in Computer Engineering, Virginia Tech, USA

GPA: **3.9/4.0** Research Interest: Formal Verification, Program Synthesis, Side Channel Attack

2008 – 2012: B.S. in Electric Power Engineering and Automation, Shanghai Jiao Tong University(SJTU), CHINA

Research Experience

2017 – Present: **Department of Computer Science, University of Southern California**

Visiting PhD Student Advised by: Professor Chao Wang

2014 – Present: **Center for Embedded Systems for Critical Applications (CESCA), Virginia Tech**

Research Assistant Advised by: Professor Chao Wang

Program Repair for Eliminating Timing Side-channel Leaks

A compiler framework that automatically translate safety critical application with sensitive variables to cache side channel attack resistant application

Symbolic Execution for Programmable Logic Controller Code

Synthesizing Runtime Enforcer of Safety Specification

2011 – 2012: **Department of Electrical Engineering, SJTU**

Thesis: *Research and Development of a Motor Control Platform for Education*

2011 – 2012: **Department of Electrical Engineering, SJTU**

Research Assistant SJTU-Freescale Joint Laboratory

2011: **Participation in Research Program for Undergraduates, SJTU**

Project Leader SJTU-Schneider Joint Laboratory

Publication

[ISSTA 18'] Meng Wu, Shengjian Guo, Patrick Schaumont, and Chao Wang, "Eliminating timing side-channel leaks using program repair"

[FSE 18'] Shengjian Guo, Meng Wu, and Chao Wang, "Adversarial symbolic execution for detecting concurrency-related cache timing leaks"

[DAC 17'] Meng Wu, Haibo Zeng, Chao Wang, "Auto Safety Guards: Reactive Synthesis for Protecting Safety-Critical Automotive Systems"

[FSE 17'] Shengjian Guo, Meng Wu, and Chao Wang, "Symbolic Execution of Programmable Logic Controller Code"

[NFM 16'] Meng Wu, Haibo Zeng, Chao Wang, "Synthesizing Runtime Enforcer of Safety Specification under Burst Error"

[CAV 16'] Hassan Eldib, Meng Wu, Chao Wang, "Synthesis of Fault-Attack Countermeasures for Cryptographic Circuits"

Teaching Experience

2014: **Department of Electrical and Computer Engineering, Virginia Tech**

Teaching Assistant Open Electronics Lab

2012: **Department of Electrical Engineering, SJTU**

Teaching Assistant Laboratory Experiment of Motor Control

Work Experience

2016/05 – 2016/08: **Microsoft Research Asia, Beijing, CHINA**

Research Intern Software Analytics Group

2012 – 2014: **Envision Energy Limited, Shanghai, CHINA**

Firmware Engineer R&D Department

Specialties

Programing languages (C/C++, Python, C#)

LLVM compiler, SMT solver (Z3, Yices), BDD solver(CUDD)