YULONG CAO

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EDUCATION

University of Michigan, Ann Arbor *Expected in May 2017*
B.S. in Computer Science & Engineering
Major GPA: 3.87/4.0

Shanghai Jiao Tong University *Expected in August 2017*
B.S. in Electrical and Computer Engineering
Major GPA: 3.44/4.0

PUBLICATION

1. Qi Alfred Chen, Eric Osterweil, Matthew Thomas, **Yulong Cao**, Jie Jimmy You, and Z. Morley Mao, MitM Exfils, Cred Theft, Code Injection, and More Found at the Scene of a Name Collision, Submitted to 38th IEEE Symposium on Security and Privacy (*S&P* 17), San Jose, CA, May 2017.

INTERESTS

Network and System Security, Adversary Machine Learning

RESEARCH EXPERIENCE

Name Collision Attacks in the New gTLD Era July 2016 - Present
Advised by Professor Morley Mao (University of Michigan) *Ann Arbor, MI*

· Identified new attack vectors exposed by name collision in new gTLD era;
· Used the threat model to study the vulnerability status in the wild;
· Proposed a set of remediation strategies at root, AS and end user level based on our results.

Server-Aided Dependency Resolution for a Faster Mobile Web July 2016 - Present
Advised by Professor Harsha V. Madhyastha (University of Michigan) *Ann Arbor, MI*

· Found that solutions to improve web page loading time (PLT) are hard to deploy and we need a light weight solution to improve PLT in real world;
· Built a server proxy that provides dependency hints to client in order to make the best use of client CPU and network resource;
· Evaluated the solution with a replay framework called *Mahimahi* and top 100 sites.

Crowd Source System Supported Active Learning April - July 2016
Advised by Professor Barzan Mozafari (University of Michigan) *Ann Arbor, MI*

· Identified the problem that Amazon MTurk's website is tedious for users to use;
· Built a web interface for Amazon MTurk users to manage their projects, workers and received answers;
· Used active learning system to automatically process workers and clients to attain best training model.

PROJECT EXPERIENCE

Context Based Access Control on Emerging Appified IoT Platforms Sept 2016 - present
EECS583 Advanced Compiler (Course Project) *Ann Arbor, MI*

· Identified the control flow patterns of IoT apps to automatically track down sinks;
· Used both program and app context to verify the matching and so forth control the access;

· Proposed a standard for patching program and enhancing access control.

Practice on Implementing Interpreter and Compiler Sept 2016 - present
EECS490 Programming Language (Course Project) *Ann Arbor, MI*

· Designed and implemented a interpreter for scheme (except call/cc);
· Designed and implemented a compiler for a simplified C (**uC**).

Practice on Implementing Component of Operating System Jan - Mar 2016
EECS482 Operating system (Course Project) *Ann Arbor, MI*

· Implemented a thread library including thread control, mutex and cv;
· Implemented a pager with clocking and copy on write;
· Implemented a network file server with access control.

HONORS

- University of Michigan Dean's List (All semesters).
- 2014 Mathematical Contest in Modeling (MCM), Honorable mention (top 25% worldwide).
- 2014 Shanghai Jiaotong University Scholarship (top 10%) Award.
- 2013 Shanghai Jiaotong University Scholarship (top 10%) Award.
- UM-SJTU Joint Institute Dean's List (All semesters).

TEACHING

Teaching Assistant Sep - Dec 2014
VV286 HONORS MATHEMATICS III (Shanghai Jiao Tong University) *Shanghai*

· Led weekly discussion, prepared exercises and slides, graded homework and exams.

Teaching Assistant Sep - Dec 2014
VC210 Introduction to Chemistry (Shanghai Jiao Tong University) *Shanghai*

· Led weekly discussion, prepared exercises and slides, graded homework and exams.