

Scott Xianghang Mi

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<https://xianghang.me>

Research Interests

Network Security, IoT Security, and Abuse Detection and Understanding.

Education

08/2015 – Now: Indiana University, Bloomington IN

Ph.D. Candidate, Department of Computer Science

Advisors: Professor Feng Qian and Professor XiaoFeng Wang

Research Areas: Network Security, IoT security, Abuse Detection and Understanding.

Expected to defend the dissertation at Feb 2020.

09/2009 – 06/2013: Beijing Institute of Technology, Beijing, China

B.S. Degree, Department of Software Engineering

GPA: 85 / 100 (3.5 / 4.5)

Undergraduate Thesis: An FTP server and client on Android platform.

Work Experience

06/2019 – Now: Facebook, Inc

Research Scientist in Security Infrastructure

Distributed and continuous fuzzing platform, abuse detection.

05/2018 – 08/2018: Facebook, Inc

Software engineer intern in Community Integrity

Network entity reputation: understanding, prediction and application.

05/2017 – 07/2017: AT&T Research Lab

Research intern

Automatic onboarding of virtual network functions in cloud platforms

Deploy OpenStack, onboard VNFs and measure bottlenecks during VNF onboarding.

05/2014 – 05/2015: Baidu, Inc

Researcher & Software developer.

Developed the mobile website for Nuomi (Baidu's business-to-team group-buying service).

Engineered user account modules, improved the performance and robustness of the system.

HONORS AND AWARDS

2019 3rd Place (3 out of 80) in CSAW Applied Research Competition

2019 NDSS Distinguished Paper Award

Student Travel Grant: ACM CoNEXT 2016, CSAW'19.

2013 Excellent Undergraduate Thesis Award at Beijing Institute of Technology.

2010 National Motivational Scholarship at Beijing Institute of Technology.

PROFESSIONAL SERVICES

Reviewer: IEEE Transaction on Mobile Computing 2018.

External Reviewer: IEEE Security & Privacy 2020, ACM CHI 2020, ACM CCS 2019, IEEE INFOCOM 2019, NDSS 2019/2018, IEEE ICDCS 2017, ACM AsiaCCS 2016, BIGCOM 2016.

TEACHING

Guest Lectures: CSCI P438 (Computer Networks, IU, Fall 2016), CSCI P538 (Advanced Computer Networks, IU, Fall 2016/Fall 2017).

Papers under Submission

A Work on Malicious Mobile SDKs

First-authored work.

Selected Publications

Security'19, Understanding iOS-based Crowdturfing through Hidden UI Analysis

Yeonjoon Lee, Xueqiang Wang, Kwangwuk Lee, Xiaojing Liao, XiaoFeng Wang, Tongxin Li, **Xianghang Mi**

USENIX Security Symposium (Security), 2019.

Acceptance Rate: 16% = 113/697.

Oakland'19, Resident Evil: Understanding Residential IP Proxy as a Dark Service

Xianghang Mi, Xuan Feng, Xiaojing Liao, Baojun Liu, Xiaofeng Wang, Feng Qian, Zhou Li, Sumayah Alrwais, Limin Sun, Ying Liu

IEEE Symposium on Security and Privacy 2019.

Acceptance Rate: 12% = 84/679.

Oakland'19, Dangerous Skills: Understanding and Mitigating Security Risks of Voice-Controlled Third-Party Functions on Virtual Personal Assistant Systems, **3rd Place (3 out of 80) of CSAW'19 Applied Research Competition**

Nan Zhang, **Xianghang Mi**, Xuan Feng, XiaoFeng Wang, Yuan Tian, Feng Qian.

IEEE Symposium on Security and Privacy 2019.

Acceptance Rate: 12% = 84/679.

NDSS'19, Cracking the Wall of Confinement: Understanding and Analyzing Malicious Domain Take-downs, **Distinguished Paper Award**

Eihal Alowaisheq, Peng Wang, Sumayah A Alrwais, Xiaojing Liao, XiaoFeng Wang, Tasneem Alowaisheq, **Xianghang Mi**, Siyuan Tang, Baojun Liu

Network and Distributed System Security Symposium 2019, San Diego, CA.

Acceptance Rate: 17% = 89/521.

NDSS'18, Game of Missuggestions: Semantic Analysis of Search-Autocomplete Manipulations

Peng Wang, **Xianghang Mi**, Xiaojing Liao, XiaoFeng Wang, Kan Yuan, Feng Qian, and Raheem Beyah

Network and Distributed System Security Symposium 2018, San Diego, CA.

Acceptance Rate: 21.5% = 71/331.

IMC'17, An Empirical Characterization of IFTTT: Ecosystem, Usage, and Performance

Xianghang Mi, Feng Qian, Ying Zhang, and Xiaofeng Wang

ACM Internet Measurement Conference 2017, London, UK.

Acceptance Rate: 23.4% = 42/179.

Security'17, Picking Up My Tab: Understanding and Mitigating Synchronized Token Lifting and Spending in Mobile Payment

Xiaolong Bai, Zhe Zhou, XiaoFeng Wang, Zhou Li, **Xianghang Mi**, Nan Zhang, Tongxin Li, S. Hu, Kehuan, Zhang

USENIX Security Symposium 2017, VANCOUVER, BC, CANADA.

Acceptance Rate: 16.3% = 85/522.

Oakland'17, Under the Shadow of Sunshine: Understanding and Detecting BulletProof Hosting on Legitimate Service Provider Networks

Sumayah Alrwais, Xiaojing Liao, **Xianghang Mi**, Peng Wang, XiaoFeng Wang, Feng Qian, Raheem Beyah, Damon McCoy

IEEE Symposium on Security and Privacy 2017, San Jose, CA.

Acceptance Rate: 13% = 60/457.

arXiv'17, **Understanding IoT Security Through the Data Crystal Ball: Where We Are Now and Where We Are Going to Be**

Nan Zhang, Soteris Demetriou, **Xianghang Mi**, Wenrui Diao, Kan Yuan, Peiyuan Zong, Feng Qian, XiaoFeng Wang, Kai Chen, Yuan Tian, Carl A Gunter, Kehuan Zhang, Patrick Tague, Yue-Hsun Lin

arXiv preprint, 2017.

CoNEXT'16, **SMig: Stream Migration Extension For HTTP/2**

Xianghang Mi, Feng Qian, and XiaoFeng Wang.

International Conference on emerging Networking EXperiments and Technologies 2016, Irvine, CA.

Acceptance Rate: 17.6% = 35/199.