

Mingjia Huo

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Education

University of Illinois at Urbana-Champaign, Illinois, US August 2020 - now
PhD in Electrical and Computer Engineering
Advisor: Prof. Kirill Levchenko

Peking University, Beijing, China September 2016 – June 2020
Bachelor of Science in Computer Science
Undergrad Research Advisor: Prof. Qun Huang

Research Interests

Computer Security and Privacy

Research Experience

University of Illinois at Urbana-Champaign, Research Assistant

Research Area: Computer Security and Privacy

1. Topic: Third-Party Trackers in Sensitive Websites Aug 2021 – Feb 2022
 - Investigated third-party trackers on hospital websites, and found leakage of Protected Health Information, which is a violation of HIPAA (Health Insurance Portability and Accountability Act).
 - Notified the hospitals and analyzed their responses.
2. Topic: Certification in PacketLab Mar 2022 – June 2022
 - Set the rule of how to report time in PacketLab.
 - Discussed about the security of PacketLab certification using universal composability framework.

Peking University, Research Assistant

Research Area: Network Measurement

1. Topic: Sketch Attacks in Programmable Networks Feb 2021 – June 2021
 - Submitted work: Proposed Stalker attack in programmable network. Run this attack on 8 state-of-art sketches. Give mitigation technique by comparing with true flow distributions.
 - Ongoing work: Proposed sketch hash table attack, and showed its efficiency on the basic count-min sketches.

Tsinghua University, Undergrad Research Assistant

Research Area: Cryptography

1. Topic: Lower Digits Extraction Polynomial for Bootstrapping March 2019 – June 2019
 - Proved the bound of lower digits extraction algorithm in **CH18** is tight.
 - Proposed a simpler construction for lower digits extraction.

Publications

All Eyes On Me: Inside Trackers' Exfiltration of PHI from Healthcare Providers' Online Systems.
(WPES 2022)

– Mingjia Huo, Maxwell Bland, Kirill Levchenko

Stalker: Attacking Sketch-based Network Measurement in Programmable Networks.– Xiang Chen, Hongyan Liu, Junyi Guo, Mingjia Huo, Qun Huang, Dong Zhang, Chunming Wu

A Note on Lower Digits Extraction Polynomial for Bootstrapping.

– Mingjia Huo, Kewen Wu, Qi Ye

Skills

Programming Languages: C(Fluent), C++(Fluent), Python(Fluent), Java, SQL, JavaScript

Tools: Matlab, Selenium, Wireshark, Android Studio

Languages: Chinese (Native); English (Fluent)

Professional Experience

University of Illinois at Urbana-Champaign Jan 2022 – May 2022
– Teaching Assistant for CS 461: Computer Security I