Chenxiong Qian

Address
Room 315A, Chow Yei Ching Building
The University of Hong Kong
Pokfulam, Hong Kong

Contact
Email: cqian@cs.hku.hk
Homepage: `https://i.cs.hku.hk/~cqian/`
Tel: (852) 2241-5421

RESEARCH INTEREST
Program Analysis, Software Debloating, Dynamic/Hybrid Testing, and Binary Code Analysis.

EDUCATION
PhD, Computer Science
Georgia Institute of Technology, Atlanta, GA   May 2021
Advisors: Wenke Lee and Bill Harris
Thesis - Reducing Software's Attack Surface With Code Debloating
BSc, Software Engineering
    Nanjing University, Nanjing, China   June 2013

RESEARCH EXPERIENCE
Assistant Professor   Aug 2021 – Now
    The University of Hong Kong
Research Assistant   Jan 2015 – May 2021
    Georgia Institute of Technology
Research Assistant   Sep 2013 – Dec 2014
    The Hong Kong Polytechnic University
Project Technical Assistant   Nov 2012 – Apr 2013
    The Hong Kong Polytechnic University

SERVICE
2024 PC Member – USENIX Security 2024
2023 PC Member – ACSAC 2023
2023 PC Member – EAI SecureComm 2023
2023 Reviewer – TDSC
2023 Reviewer – Computers & Security
2022 Reviewer – TDSC

GRANTS
PI, "Software Debloating via Dynamic Code Managing", NSFC, RMB 300K, (2023 $\sim$ 2025)
PI, "Narrowing the Gap Between Ethereum's Specifications and Implementations via Model Checking", HKU FinTech Academy, HKD 350K (2022 $\sim$2024)

PUBLICATIONS
1. Hao Zhou, Shuohan Wu, Chenxiong Qian, Xiapu Luo, Haipeng Cai, and Chao Zhang (2024). **Beyond the Surface: Uncovering the Unprotected Components of Android Against Overlay Attack.** (NDSS 2024).
2. Pengfei Jing, Zhiqiang Cai, Yingjie Cao, Le Yu, Yuefeng Du, Wenkai Zhang, Chenxiong Qian, Xiapu Luo, Sen Nie, and Shi Wu (2024). **Revisiting Automotive Attack Surfaces: a Practitioners' Perspective.** (SP 2024).
3. Shuohan Wu, Jianfeng Li, Hao Zhou, Yongsheng Fang, Kaifa Zhao, Haoyu Wang, **Chenxiong Qian**, and Xiapu Luo (2023). **CydiOS: a model-based testing framework for iOS**

apps. ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA 2023).

4. ChangSeok Oh, Sangho Lee, **Chenxiong Qian**, Hyungjoon Koo and Wenke Lee (2022). **DeView: Confining Progressive Web Applications by Debloating Web APIs.** Annual Computer Se- curity Applications Conference (ACSAC).

5. **Chenxiong Qian**, Hyungjoon Koo, ChangSeok Oh, Taesoo Kim, Wenke Lee (2020). **Slimium: Debloating the Chromium Browser with Feature Subsetting.** Proceedings of the 2020 ACM SIGSAC Conference on Computer and Communications Security.

6. **Chenxiong Qian**, Hong Hu, Mansour Alharthi, Pak Ho Chung, Taesoo Kim, Wenke Lee (2019). **RAZOR: A Framework for Post-deployment Software Debloating.** 28th USENIX Security Symposium (USENIX Security 19).

7. Lei Xue, **Chenxiong Qian**, Hao Zhou, Xiapu Luo, Yajin Zhou, Yuru Shao, Alvin T.S. Chan (2019). **NDroid: Toward Tracking Information Flows Across Multiple Android Contexts.** IEEE Transactions on Information Forensics and Security.

8. Wei Meng, **Chenxiong Qian**, Shuang Hao, Kevin Borgolte, Giovanni Vigna, Christopher Kruegel, Wenke Lee (2018). **Rampart: Protecting Web Applications from CPU-Exhaustion Denial-of-Service Attacks.** 27th USENIX Security Symposium (USENIX Security 18).

9. Meng Xu, **Chenxiong Qian**, Kangjie Lu, Michael Backes, Taesoo Kim (2018). **Precise and Scalable Detection of Double-Fetch Bugs in OS Kernels.** 2018 IEEE Symposium on Security and Privacy (SP).

10. Le Yu, Xiapu Luo, **Chenxiong Qian**, Shuai Wang, Hareton K. N. Leung (2018). **Enhancing the Description-to-Behavior Fidelity in Android Apps with Privacy Policy.** IEEE Transactions on Software Engineering.

11. Hong Hu, **Chenxiong Qian**, Carter Yagemann, Simon Pak Ho Chung, William R. Harris, Taesoo Kim, Wenke Lee (2018). **Enforcing Unique Code Target Property for Control-Flow Integrity.** Proceedings of the 2018 ACM SIGSAC Conference on Computer and Communications Security.

12. Ren Ding, **Chenxiong Qian**, Chengyu Song, Bill Harris, Taesoo Kim, Wenke Lee (2017). **Efficient Protection of Path-Sensitive Control Security.** 26th USENIX Security Symposium (USENIX Security 17).

13. Yanick Fratantonio, **Chenxiong Qian**, Simon P. Chung, Wenke Lee (2017). **Cloak and Dagger: From Two Permissions to Complete Control of the UI Feedback Loop.** 2017 IEEE Symposium on Security and Privacy (SP).

14. Meng Xu, Chengyu Song, Yang Ji, Ming-Wei Shih, Kangjie Lu, Cong Zheng, Ruian Duan, Yeongjin Jang, Byoungyoung Lee, **Chenxiong Qian**, Sangho Lee, Taesoo Kim (2016). **Toward Engineering a Secure Android Ecosystem: A Survey of Existing Techniques.** ACM Comput. Surv..

15. Le Yu, Xiapu Luo, **Chenxiong Qian**, Shuai Wang (2016). **Revisiting the Description-to-Behavior Fidelity in Android Applications.** 2016 IEEE 23rd International Conference on Software Analysis, Evolution, and Reengineering (SANER).

16. **Chenxiong Qian**, Xiapu Luo, Yu Le, Guofei Gu (2015). **VulHunter: Toward Discovering Vulnerabilities in Android Applications.** IEEE Micro.

17. Lei Xue, **Chenxiong Qian**, Xiapu Luo (2015). **AndroidPerf: A cross-layer profiling system for Android applications.** 2015 IEEE 23rd International Symposium on Quality of Service (IWQoS).

18. Yuru Shao, Xiapu Luo, **Chenxiong Qian**, Pengfei Zhu, Lei Zhang (2014). **Towards a Scalable Resource-Driven Approach for Detecting Repackaged Android Applications.** Proceedings of the 30th Annual Computer Security Applications Conference.

19. Yuru Shao, Xiapu Luo, **Chenxiong Qian** (2014). **RootGuard: Protecting Rooted Android Phones.** Computer.

20. **Chenxiong Qian**, Xiapu Luo, Yuru Shao, Alvin T.S. Chan (2014). **On Tracking Information Flows through JNI in Android Applications.** 2014 44th Annual IEEE/IFIP International Conference on Dependable Systems and Networks.

21. Xiapu Luo, Lei Xue, Cong Shi, Yuru Shao, **Chenxiong Qian**, Edmond W.W. Chan (2014). **On Measuring One-Way Path Metrics from a Web Server.** 2014 IEEE 22nd International Conference on Network Protocols.