Xueqiang Wang

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RESEARCH INTERESTS

Privacy Automation, Software Supply Chain Security, Mobile/IoT System Security, Cybercrime

WORK EXPERIENCE

10/2022 – Now: University of Central Florida, Orlando, FL
- Assistant Professor, Computer Science Department and Cyer Security and Privacy Cluster

04/2020 – 10/2022: Amazon Lab126, Sunnyvale, CA
- Security Engineer, Amazon Device Security Automation.

05/2019 – 08/2019: NIO, San Jose, CA
- Security Research Intern, Automotive Security.
- Mentor: Mark Hoy; Manager: Dr. Qiyan Wang

05/2018 – 08/2018: Symantec Research Labs, Mountain View, CA
- Security Research Intern, Generating IoT Device Fingerprints for Vulnerability Discovery.
- Mentor: Dr. Yuqiong Sun; Manager: Dr. Petros Efstathopoulos

EDUCATION

08/2015 – 01/2021: Indiana University Bloomington
- Ph.D. in Computer Science (Minor: Artificial Intelligence)
- Thesis: Towards Intelligent and Scalable Security Analysis of Mobile and IoT Systems
- Advisor: Prof. XiaoFeng Wang

09/2012 – 06/2015: Institute of Information Engineering, CAS
- Master in Computer Science and Technology. Graduated with **Dean's Award**
- Advisors: Dr. Yuewu Wang and Prof. Jiwu Jing

09/2008 – 06/2012: University of Science and Technology of China (USTC)
- Bachelor in Information Security. Awarded *National Scholarship* for Two Consecutive Years

HONORS AND AWARDS

- **Vulnerability Bounty Reward**, $5000, Google, 2019.
- **Best Applied Security Paper Award TOP-10 Finalists**, CSAW 2019.
- **Best Applied Security Paper Award TOP-10 Finalists**, CSAW 2018.
- **Vulnerability Bounty Reward**, $9500, Facebook, 2017.
- **2015 Dean's Award**, Institute of Information Engineering, CAS.
- **2011 Outstanding Student Scholarship**, University of Science and Technology of China.
- **National Scholarship**, Ministry of Education of the P.R. China 2010.
- **National Scholarship**, Ministry of Education of the P.R. China 2009.

PUBLICATIONS

(* means equal contribution)

- Sungbin Park, **Xueqiang Wang**, Kai Chen, and Yeonjoon Lee. "STATION: Gesture-Based Authentication for Voice Interfaces". Under submission.
- Zhaoxin Cai, Yuhong Nan, **Xueqiang Wang**, Mengyi Long, Qihua Ou, Min Yang, and Zibin Zheng. "DARPA: Combating Asymmetric Dark UI Patterns on Android with Run-time View Decorator". To Appear in DSN'23.
- **Xueqiang Wang***, Yifan Zhang*, XiaoFeng Wang, Yan Jia, and Luyi Xing. "Union under Duress: Understanding Hazards of Duplicate Resource Mismediation in Android Software Supply Chain". To Appear in USENIX Security'23.

- **Xueqiang Wang***, Yuqiong Sun*, Susanta Nanda, and XiaoFeng Wang. "Credit Karma: Understanding Security Implications of Exposed Cloud Services through Automated Capability Inference". To Appear in USENIX Security'23.

- Yuhong Nan*, **Xueqiang Wang***, Luyi Xing, Xiaojing Liao, Ruoyu Wu, Jianliang Wu, Yifan Zhang, XiaoFeng Wang, and Dongyan Xu. "Are You Spying on Me? Large-Scale Automatic Analysis on Data Exposure from IoT Devices through Mobile Companion Apps". To Appear in USENIX Security'23.

- Jice Wang*, Yue Xiao*, **Xueqiang Wang**, Yuhong Nan, Luyi Xing, Xiaojing Liao, JinWei Dong, Nicolas Serrano, XiaoFeng Wang, Yuqing Zhang, and Haoran Lu. "Understanding Malicious Cross-library Data Harvesting on Android". In USENIX Security'21.

- Haoran Lu, Luyi Xing, Yue Xiao, Yifan Zhang, Xiaojing Liao, XiaoFeng Wang, and **Xueqiang Wang**. "Demystifying Resource Management Risks in Emerging Mobile App-in-App Ecosystems ". In CCS'20.

- Yeonjoon Lee*, **Xueqiang Wang***, Xiaojing Liao, and XiaoFeng Wang. "Understanding Illicit UI in iOS apps Through Hidden UI Analysis". In TDSC'19.

- **Xueqiang Wang**, Yuqiong Sun, Susanta Nanda, and XiaoFeng Wang. "Looking from the Mirror: Evaluating IoT Device Security through Mobile Companion Apps". In USENIX Security'19.

- Yeonjoon Lee*, **Xueqiang Wang***, Kwangwuk Lee, Xiaojing Liao, XiaoFeng Wang, Tongxin Li, and Xianghang Mi. "Understanding iOS-based Crowdturfing Through Hidden UI Analysis". In USENIX Security'19.

- Wei You, **Xueqiang Wang**, Shiqing Ma, Jianjun Huang, Xiangyu Zhang, XiaoFeng Wang, and Bin Liang. "ProFuzzer: On-the-fly Input Type Probing for Better Zero-day Vulnerability Discovery". In Oakland'19.

- Xiaokuan Zhang, **Xueqiang Wang**, Xiaolong Bai, Yinqian Zhang, and XiaoFeng Wang. "OS-level Side Channels without Procfs: Exploring Cross-App Information Leakage on iOS", In NDSS'18.

- Yue Duan, Mu Zhang, Abhishek Vasist Bhaskar, Heng Yin, Xiaorui Pan, Tongxin Li, **Xueqiang Wang**, and XiaoFeng Wang. "Things You May Not Know About Android (Un)Packers: A Systematic Study based on Whole-System Emulation". In NDSS'18.

- Jun Tang, Aleksandra Korolova, Xiaolong Bai, **Xueqiang Wang**, and XiaoFeng Wang. "Privacy Loss in Apple's Implementation of Differential Privacy on MacOS 10.12". In TPDP'17.

- Tongxin Li, **Xueqiang Wang**, Mingming Zha, Kai Chen, XiaoFeng Wang, Luyi Xing, Xiaolong Bai, Nan Zhang, and Xinhui Han. "Unleashing the Walking Dead: Understanding Cross-App Remote Infections on Mobile WebViews". In CCS'17.

- Xiaorui Pan, **Xueqiang Wang**, Yue Duan, XiaoFeng Wang, and Heng Yin. "Dark Hazard: Learning-based, Large-scale Discovery of Hidden Sensitive Operations in Android Apps". In NDSS'17.

- Kai Chen, **Xueqiang Wang**, Yi Chen, Peng Wang, Yeonjoon Lee, XiaoFeng Wang, Bin Ma, Aohui Wang, Yingjun Zhang, and Wei Zou. "Following devil's footprints: Cross-platform analysis of potentially harmful libraries on android and iOS". In Oakland'16.

- **Xueqiang Wang**, Lingguang Lei, and Yuewu Wang. "A Behavior Monitoring Scheme of Android Applications for Flexible Deployment". In Journal of University of Chinese Academy of Sciences, 2015(05). (Chinese)

- **Xueqiang Wang**, Kun Sun, Yuewu Wang, and Jiwu Jing. "DeepDroid: Dynamically Enforcing Enterprise Policy on Android Devices". In NDSS'15.

- **Xueqiang Wang**, Yuewu Wang, Limin Liu, Lingguang Lei, and Jiwu Jing. "WrapDroid: Flexible and Fine-Grained Scheme Towards Regulating Behaviors of Android Apps". In ICISC'14.

- **Xueqiang Wang**, Yuewu Wang, and Lingguang Lei. "A Review of Security Threats of Mobile Internet". In Netinfo Security, 2014(09), pp 30-33. (Chinese)

TALKS

- 2023 SMST Seminar Series, UCF, "Combating Mobile-Based Cybercrime with Semantic Analysis"
- 2022 CECS Virtual Seminar, UCF, "Improving Security and Privacy Transparency of Mobile and IoT Systems, and their Supply Chains"
- 2022 Invited Talk. Business Information Technology Department at Virginia Tech, "Software Supply Chain Security: An Overview and Case Studies"
- 2019 Invited Talk, NIO USA, San Jose, CA
- 2019 USENIX Security, Santa Clara, CA
- 2019 Invited Talk. Symantec Research Labs, Sunnyvale, CA
- 2015 Network and Distributed System Security Symposium (NDSS), San Diego, CA
- 2014 International Conference on Information Security and Cryptology, Seoul, Korea

TEACHING AND MENTORING

- **Lecturer**: CDA 3103 (Computer Logic and Organization), Spring 2023
- **Guest Lecturer**: CSCI P438 (Computer Networks), Fall 2016

MENTEES

- Sungbin Park, Hanyang University
- Yifan Zhang, Indiana University
- Edelma Saenz, UCF (CAHSI Local REU Program, 2023)
- Autumn Li, UC Berkeley (Software Engineering Intern at Amazon Lab126, 2021)
- Jourdan Beverly (IU REU/SROC, 2016)

PROFESSIONAL SERVICES

- **PC Member/Reviewer**: ACNS (2023), ACM Transactions on Privacy and Security (TOPS, formerly known as TISSEC, 2021), IEEE Security & Privacy, Journal of Computer Science and Technology (JCST, 2021).
- **Search Committee Member**: Cyber Security and Privacy Areas (2023)
- **Sub-reviewer**: USENIX Security (2016, 2017), CCS (2017), S&P (2018, 2019), NDSS (2018), IoT S&P (2017).
- **Volunteer**: Technical Support for CCS 2018, 2019.

PATENTS

- Yuqiong Sun, **Xueqing Wang**, Susanta Nanda, and Petros Efstathopouloss. "System and Methods for Evaluating Security Posture of Smart Home Devices". US11132447B1.
- Yuqiong Sun, **Xueqing Wang**, Susanta Nanda, Yun Shen, Pierre-Antoine Vervier, and Petros Efstathopoulos. "Generate Accurate IoT Device Fingerprints Without IoT Device". US11122040B1.