

# JIAN QU

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## 🎓 EDUCATION

- Xi'an Jiaotong University, Xian, China** 2021 – Present  
*Ph.D.*, School of Computer Science and Technology, Anticipated Graduation Date: 2025
- Xi'an Jiaotong University, Xian, China** 2019 – 2021  
*M.S.*, School of Cyber Science and Engineering
- Xi'an Jiaotong University, Xian, China** 2013 – 2019  
*B.S.*, School of Computer Science and Technology (The Honors Youth Program)

## 🏢 PUBLICATIONS

- [1] **Qu, J.**, Ma, X., Li, J., Luo, X., ... & Guan, X. (2023) An Input-Agnostic Hierarchical Deep Learning Framework for Traffic Fingerprinting. In USENIX Security'23 (CCF A)
- [2] Ma, X., **Qu, J.**, Shi, M., ... & Guan, X. (2023) Website Fingerprinting over Encrypted Proxies: A Context-aware Approach and Countermeasures. In IEEE Transactions on Networking. (CCF A, student first author, accept)
- [3] **Qu, J.**, Ma, X., Liu, W., ... & Guan, X. (2023) On Smartly Scanning of The Internet of Things. In IEEE Transactions on Networking. (CCF A)
- [4] **Qu, J.**, Ma, X., Liu, W., Sang, H., Li, J., Xue, L., ... & Guan, X. (2022) Landing Reinforcement Learning onto Smart Scanning of The Internet of Things. In IEEE INFOCOM 2022-IEEE Conference on Computer Communications. (CCF A)
- [5] Ma, X., **Qu, J.**, Li, J., Lui, J. C., Li, Z., Liu, X., & Guan, X. (2021) Inferring Hidden IoT Devices and User Interactions via Spatial-temporal Traffic Fingerprinting. In IEEE/ACM Transactions on Networking, vol. 30, no. 1, pp. 394-408. (CCF A, student first author)
- [6] Ma, X., **Qu, J.**, Li, J., Lui, J. C., Li, Z., & Guan, X. (2020). Pinpointing Hidden IoT Devices via Spatial-temporal Traffic Fingerprinting. In IEEE INFOCOM 2020-IEEE Conference on Computer Communications. (CCF A, student first author)
- [7] Ma, X., **Qu, J.**, Chen, F., Liu, W., Li, J., Tao, J., ... & Zhang, Z. L. (2021). One Host with So Many IPs! On The Security Implications of Dynamic Virtual Private Servers. IEEE Communications Magazine, vol. 59, no. 2, pp. 64-69. (JCR Q1, student first author, IF = 9.619)
- [8] **Qu, J.**, Ma, X., Liu, W. (2021). Querent-centric Domain Name System Modeling and Its Application in Passive Software Discovery. In 2021 8th International Conference on Dependable Systems and Their Applications (DSA). (EI)
- [9] Wang, X., Ma, X., & **Qu, J.** (2021). A Link Flooding Attack Detection Method based on Non-Cooperative Active Measurement. In 2021 8th International Conference on Dependable Systems and Their Applications (DSA). (EI, student second author)
- [10] **Qu, J.**, Ma, X., Liu, W. (2022). Who Is DNS Serving For? A Human-Software Perspective of Modeling DNS Services. Knowledge-Based Systems. (JCR Q1, IF = 8.139)
- [11] Li, J., Lin, Z., Ma, X., Li, J., **Qu, J.**, ... (2023) DNSScope: Fine-Grained DNS Cache Probing for Remote Network Activity Characterization. In IEEE INFOCOM 2024. (CCF A, accept)

## 📄 CHINESE PATENTS

- Granted: A fingerprinting method of IoT devices based on spontaneous traffic. ZL201911404458.2
- Granted: A sequence feature extraction method for fingerprinting IoT devices. ZL201911385226.7
- Granted: Method, system and computer-readable storage medium for multi sequence matching. ZL202110437311.4
- Granted: Method, system and computer-readable storage medium for detecting reverse proxy. ZL202110483528.9
- Granted: Method, system and computer-readable storage medium for encrypted network traffic classification. ZL202110438554.X
- Granted: Method, system, device, and readable storage medium for detecting DNS reflector usable in DDoS attacks. ZL202110605421.7

## ♥ AWARDS AND ACHIEVEMENTS

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- National Scholarship 2023
- Tencent Special Scholarship 2023
- *The Second Prize*, the 6th Qiangwang Cup Network Security Challenge 2023
- *The Second Prize*, People's Daily Online Artificial Intelligence Algorithm Challenge 2023
- *The Second Prize*, the 18th China Post-Graduate Mathematical Contest in Modeling 2021
- *Provincial first prize*, China Undergraduate Mathematical Contest in Modeling 2017
- Special Prize Scholarship, Outstanding Graduate 2020
- The Second Prize Scholarship of Xi'an Jiaotong University 2019
- The Third Prize Scholarship of Xi'an Jiaotong University 2018
- SiYuan Scholarship of Xi'an Jiaotong University 2017

## 👥 PROJECTS & EXPERIENCE

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**Security Detection and Diagnosis of Large-scale Complex Network Systems** 01/2024 – Present  
*Major Participant* National Natural Science Foundation

**Design and Construction of a Distributed Storage System** 01/2023 – 04/2023  
*Major Participant* Horizontal Science and Technology Project

**Scheduling of active IOT devices scanning in IPv4 space.** 01/2021 – 12/2022  
*Principal Investigator* Fundamental Research Funds for the Central Universities

**The technology and system for fingerprinting IoT devices.** 01/2020 – 07/2022  
*Major Participant* National Key R&D Program of China