Hanqing Guo

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RESEARCH INTEREST

AI Security and Privacy, Cyber-Security, Mobile Networks/Systems

EDUCATION

2019 - present	PhD at **Michigan State University**	Advised by Li Xiao and Qiben Yan
2017 - 2019	Master at **Ball State University**	RA supported and Advised by Shaoen Wu
2011 - 2015	BSc at **Chongqing University of Posts and Telecommunications**	

SELECTED PUBLICATIONS

1. Junfeng Guo, Yiming Li, Xun Chen, **Hanqing Guo**, Lichao Sun, Cong Liu. "SCALE-UP: An Efficient Blackbox Input-level Backdoor Detection via Analyzing Scaled Prediction Consistency", ICLR 2023. Project Code

2. Guangjing Wang, **Hanqing Guo**, Anran Li, Xiaorui Liu, Qiben Yan. "Federated IoT Interaction Vulnerability Analysis", ICDE 2023.

3. **Hanqing Guo**, Yuanda Wang, Nikolay Ivanov, Li Xiao, Qiben Yan. "SpecPatch: Human-In-The-Loop Adversarial Audio Spectrogram Patch Attack on Speech Recognition", ACM CCS 2022. *Best Paper Honorable Mention.* Project Demo

4. Xiao Zhang, **Hanqing Guo**, James M Mariani, Li Xiao. "U-star: An underwater navigation system based on passive 3d optical identification tags", ACM Mobicom 2022, Acceptance Rate: 16/91=17.5%.

5. **Hanqing Guo***, Chenning Li*, Lingkun Li, Zhichao Cao, Qiben Yan, Li Xiao. "NEC: Speaker Selective Cancellation via Neural Enhanced Ultrasound Shadowing", IEEE DSN 2022, Acceptance Rate: 49/262=18.7%. Project Demo [1]

6. **Hanqing Guo**, Qiben Yan, Nikolay Ivanov, Ying Zhu, Li Xiao, Eric J. Hunter. "SuperVoice: Text-Independent Speaker Verification Using Ultrasound Energy in Human Speech", ACM AisaCCS 2022, Acceptance Rate: 54/294=18.3% Project Demo

7. Yuanda Wang, **Hanqing Guo**, Qiben Yan. "GhostTalk: Interactive Attack on Smartphone Voice System Through Power Line", NDSS 2022. Project Demo

8. Chenning Li, **Hanqing Guo**, Shuai Tong, Xiao Zeng, Zhichao Cao, Mi Zhang, Qiben Yan, Li Xiao, Jiliang Wang, Yunhao Liu. "NELoRa: Towards Ultra-low SNR LoRa Communication with Neural-enhanced Demodulation", ACM SenSys 2021. *Best Paper* Project Code

9. Qiben Yan, Kehai Liu, Qin Zhou, **Hanqing Guo**, Ning Zhang. "Surfingattack: Interactive hidden attack on voice assistants using ultrasonic guided waves", NDSS 2020. Project Demo

10. **Hanqing Guo**, Nan Zhang, Shaoen Wu, Qing Yang. "Deep Learning Driven Wireless Real-time Human Activity Recognition", IEEE ICC 2020.

11. **Hanqing Guo**, Nan Zhang, Wenjun Shi, S. AlQarni, Shaoen Wu. "HICFR: Real Time 3D Indoor Human Image Capturing Based on FMCW Radar", IEEE ICME 2019.

12. **Hanqing Guo**, Shaoen Wu, Honggang Wang, Mahmoud Daneshmand. "DSIC: Deep learning based self-interference cancellation for in-band full duplex wireless", IEEE GLOBECOM 2019. *Best Paper*

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[1] * denotes authors contributed equally

Industrial Experience

1. **Samsung Research America**: Research Intern - Knox AI/Mobile/Privacy Group.   May-Dec 2022
2. **FiberHome Corporation**: Network Engineer - Oversea Group.   Aug.2015-Jan.2017

Awards

1. **Best Paper Honorable Mention**: ACM CCS 2022   Nov. 2022
2. **Student Travel Grant**: ACM CCS 2022   Oct. 2022
3. **Student Travel Grant**: IEEE DSN 2022   Jun. 2022
4. **Best Paper Award**: ACM SenSys 2021   Sep. 2021
5. **Best Paper Award**: IEEE Globecom 2019   Dec. 2019
6. **Graudate Merit Scholarships**   Mar. 2018

Teaching Experience

1. **CSE 260**: Discrete Structures in Computer Science.   Spring 2022
2. **CSE 410**: Operating System.   Fall 2021
3. **CSE 232**: Introduction to Programming II.   Fall 2019

Professional Service

1. **IEEE INFOCOM 2019,2020,2021,2022**   Student Reviewer
2. **IEEE ICC 2022**   Student Reviewer
3. **TOSN 2021,2022**   Student Reviewer

Skills

1. **Programming Language:**   Python, C++, Java, JavaScript
2. **Machine Learning Framework:**   PyTorch, TensorFlow, LingVo
3. **Wireless:**   SDR, USRP, LPWAN, matlab
4. **Mobile System:**   Arduino, Wifi, Android