

# Ming Gao

Ph.D. Candidate, School of Cyber Science and Technology, Zhejiang University

gaomingppm@zju.edu.cn

## RESEARCH TOPICS

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- Internet of Thing
- Mobile Computing and Sensing
- Privacy Protection

## EDUCATION

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Zhejiang University (ZJU)	Aug. 2021 – Now
Ph.D., School of Cyber Science and Technology	
Supervisor: Prof. Jinsong Han and Prof. Feng Lin	
Xi'an Jiaotong University (XJTU)	Aug. 2018 – Jul. 2021
Master, Computer Science; Supervisor: Prof. Jinsong Han	
Xi'an Jiaotong University (XJTU)	Aug. 2014 – Jul. 2018
Bachelor, Electrical Engineering and Automation	

## EXPERIENCE

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Ant Group	Nov. 2021 – Sep.2022
Research Intern, Department of AIoT Technology	
Topic: Trustworthy Speech Forensics using Sound-ultrasound on Smartphones	

## SELECTED AWARDS AND HONORS

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ACM SIGMOBILE Research Highlight	2022
Best Paper Award Nomination (ACM SenSys 2021)	2021
National Scholarship	2015

## PUBLICATION

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### Conference Paper

- [C7] **Ming Gao**, Yike Chen, Yajie Liu, Jie Xiong, Jinsong Han, Kui Ren, “Cancelling Speech Signals for Speech Privacy Protection against Microphone Eavesdropping”, The 29th Annual International Conference on Mobile Computing and Networking (MobiCom), 2023.

- [C6] **Ming Gao**, Fu Xiao, Weiran Liu, Wentao Guo, Yangtao Huang, Yajie Liu, Jinsong Han, “Expelliarmus: Command Cancellation Attacks on Smartphones using Electromagnetic Interference”, IEEE International Conference on Computer Communications (INFOCOM), 2023.
- [C5] **Ming Gao**, Lingfeng Zhang, Xiang Zou, Jinsong Han, Feng Lin, Kui Ren, “KITE: Exploring the Practical Threat from Acoustic Transduction Attacks on Inertial Sensors”, ACM Conference on Embedded Networked Sensor Systems (SenSys), 2022.
- [C4] **Ming Gao**, Yajie Liu, Yike Chen, Yimin Li, Zhongjie Ba, Xian Xu, Jinsong Han, “InertiEAR: Automatic and Device-independent IMU-based Eavesdropping on Smartphones”, IEEE International Conference on Computer Communications (INFOCOM), 2022.
- [C3] Yike Chen, **Ming Gao** (Co-first), Yimin Li, Lingfeng Zhang, Li Lu, Feng Lin, Jinsong Han, Kui Ren, “Big Brother is Listening: An Evaluation Framework on Ultrasonic Microphone Jammers”, IEEE International Conference on Computer Communications (INFOCOM), 2022.
- [C2] Tiantian Liu, **Ming Gao**, Feng Lin, Chao Wang, Zhongjie Ba, Jinsong Han, Wen Yao Xu, Kui Ren, “Wavevoice: A Noise-resistant Multi-modal Speech Recognition System Fusing mmWave and Audio Signals”, The 19th ACM Conference on Embedded Networked Sensor Systems (SenSys), 2021. (**Best Paper Award Candidate, SIGMOBILE Research Highlight**)
- [C1] **Ming Gao**, Feng Lin, Weiye Xu, Muertikepu Nuermaimaiti, Jinsong Han, Wen Yao Xu, Kui Ren, “Deaf-Aid: mobile IoT communication exploiting stealthy speaker-to-gyroscope channel”, The 26th Annual International Conference on Mobile Computing and Networking (MobiCom), 2020.

### Journal Paper

- [J5] **Ming Gao**, Lingfeng Zhang, Leming Shen, Xiang Zou, Jinsong Han, Feng Lin, Kui Ren, “Exploring Practical Acoustic Transduction Attacks on Inertial Sensors in MDOF Systems”, accepted by IEEE Transactions on Mobile Computing (TMC). (CCF A)
- [J4] **Ming Gao**, Yike Chen, Yimin Li, Lingfeng Zhang, Jianwei Liu, Li Lu, Feng Lin, Jinsong Han, Kui Ren, “A Resilience Evaluation Framework on Ultrasonic Microphone Jammers”, accepted by IEEE Transactions on Mobile Computing (TMC). (CCF A)
- [J3] Feng Lin, **Ming Gao** (Co-first), Lingfeng Zhang, Yimin Li, Weiye Xu, Jinsong Han, Xian Xu, Wen Yao Xu, Kui Ren, “Mobile Communication Among COTS IoT Devices via a Resonant Gyroscope with Ultrasound”, accepted by IEEE/ACM Transactions on Network (TON). (CCF A)
- [J2] **Ming Gao**, Yajie Liu, Yike Chen, Yimin Li, Zhongjie Ba, Xian Xu, Jinsong Han, Kui Ren, “Device-independent Smartphone Eavesdropping Jointly using Accelerometer and Gyroscope”, accepted by IEEE Transactions on Dependable and Secure Computing (TDSC). (CCF A)
- [J1] Yike Chen, **Ming Gao**, Yajie Liu, Jianwei Liu, Xian Xu, Le Cheng, Jinsong Han, “Implement of a secure selective ultrasonic microphone jammer”, CCF Transactions on Pervasive Computing and Interaction, vol. 3, pp. 367–377, 2021.

- **TEACHING ASSISTANTS**

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- Fall 2021            Computer Network
- Spring 2019        Foundation of Wireless and Internet of Things Security