

# Qiuye He (She/Her/Hers)

Ph.D. Candidate of Computer Science, The University of Oklahoma

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## Education

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**Ph.D. Candidate in Computer Science**

*The University of Oklahoma, Norman, OK, USA*

**Aug. 2019 - Jul. 2024 (Expected)**

*Advisor: Dr. Song Fang*

**M.E. in Electrical and Computer Engineering**

*Xidian University, Xi'an, Shaanxi, China*

**Sept. 2016 - Jul. 2019**

**B.E. in Electrical and Computer Engineering**

*Yanshan University, Qinhuangdao, Hebei, China*

**Sept. 2012 - Jul. 2016**

## Research Interests

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- **Mobile and IoT Security:** Wireless Security & Privacy (e.g., attacks & defenses in wireless sensing systems), IoT Security & Privacy (e.g., voice assistants, wireless cameras), etc.
- **Mobile Sensing and Computing:** Wireless Sensing (e.g., gesture recognition, intrusion detection, keystroke inference), Multi-Modal Sensing (e.g., visual sensors, auditory sensors), etc.
- **Smart Healthcare:** Vital Signs Monitoring (e.g., breathing rate tracking, heartbeat estimation), Fall Detection and Mobility Monitoring, etc.

## Publications

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Published a total of 7 research papers in peer-reviewed conferences and journals, including top-tier conferences such as the **ACM CCS 2023**, **ACM CCS 2022**, **MobiSys 2021**, and tier-2 conference **RAID 2023**.

- 1 Yan He\*, **Qiuye He\***, Song Fang, Yao Liu “*When Free Tier Becomes Free to Enter: A Non-Intrusive Way to Identify Security Cameras with no Cloud Subscription*”, in Proceedings of the 30th ACM Conference on Computer and Communications Security (ACM CCS 2023), Copenhagen, Denmark, November 2023.  
\* The first two authors contributed equally to this paper. (Acceptance Rate: 19.9% = 158/795)
- 2 Yan He, **Qiuye He**, Song Fang, Yao Liu, “*Precise Wireless Camera Localization Leveraging Traffic-aided Spatial Analysis*”, in IEEE Transactions on Mobile Computing (IEEE TMC), November 2023.
- 3 **Qiuye He**, Song Fang “*Phantom-CSI Attacks against Wireless Liveness Detection*”, in Proceedings of the 26th International Symposium on Research in Attacks, Intrusions and Defenses (RAID 2023), Hong Kong, Hong Kong, October 2023. (Acceptance Rate: 23.5% = 50/213)
- 4 **Qiuye He**, Edwin Yang, Song Fang, Shangqing Zhao “*HoneyBreath: An Ambush Tactic Against Wireless Breath Monitoring*”, in Proceedings of the 19th EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (EAI MobiQuitous 2022), (pp. 203-226), Pittsburgh, United States, November 2022. [**Best Paper Award**]
- 5 Edwin Yang, **Qiuye He**, Song Fang, “*WINK: Wireless Inference of Numerical Keystrokes via Zero-Training Spatiotemporal Analysis*”, in Proceedings of the 29th ACM Conference on Computer and

Communications Security (ACM CCS 2022), (pp. 3033-3047), Los Angeles, United States, November 2022. (Acceptance Rate: 17.9% = 58/324) [**Artifacts Badge**]

- 6 **Qiuye He**, Song Fang, Tao Wang, Yao Liu, Shangqing Zhao, Zhuo Lu, “*Proactive Anti-Eavesdropping With Trap Deployment in Wireless Networks*”, in IEEE Transactions on Dependable and Secure Computing (IEEE TDSC), (pp. 637-649), January 2022.
- 7 Yan He, **Qiuye He**, Song Fang, Yao Liu, “*MotionCompass: Pinpointing Wireless Camera Via Motion-activated Traffic*”, in Proceedings of the 19th Annual International Conference on Mobile Systems, Applications, and Services (ACM MobiSys 2021), (pp. 215-227), Virtual, WI, USA, June 2021. (Acceptance Rate: 21.7% = 36/166) [**Artifacts Badge**]

## Manuscripts Under Review

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- 1 **Qiuye He**, Edwin Yang, Song Fang, “*A Survey on Human Profile Information Inference via Wireless Signals*”, in IEEE Communications Surveys and Tutorials (IEEE COMST).
- 2 **Qiuye He**, Edwin Yang, Song Fang, Shangqing Zhao, “*Revisiting Wireless Breath and Crowd Inference Attacks with Defensive Deception*”, in IEEE/ACM Transactions on Networking (IEEE/ACM ToN).

## Patent

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- 1 Song Fang, Yan He, **Qiuye He**, “*Method and Apparatus for Determining Locations of Wireless Cameras*”, US Patent (provisional application), serial No.: 63/356,211. (Non-provisional application #: 18/341,567, filed in 2023)

## Selected Honors & Awards

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- **CANSec Student Travel Grant**, NSF, 2023.
- **Best Paper Award**, EAI MobiQuitous, 2022.
- **CS Alumni Graduate Fellowship**, The University of Oklahoma, 2022.
- **CANSec Student Travel Grant**, NSF, 2022.
- **ACM CCS Student Travel Grant**, NSF, 2022.
- **GCoE PhD Recruitment Excellence Fellowship**, The University of Oklahoma, 2019.
- **Academic Excellent Scholarships (Top 10%)**, Xidian University, 2018.
- **Academic Excellent Scholarships (Top 5%)**, Xidian University, 2016.
- **Recommended to the Graduate School with Entrance Exam Waiver (Top 10%)**, Yanshan University, 2016.
- **Academic Excellent Scholarships (Top 10%)**, Yanshan University, 2014.

## Talks

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- 1 *Phantom-CSI Attacks against Wireless Liveness Detection*, in the 16th The Central Area Networking and Security Workshop (**CANSec**), University of Kansas, Lawrence, KS, October, 2023.

- 2 *HoneyBreath: An Ambush Tactic Against Wireless Breath Monitoring*, in 19th EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (**EAI MobiQuitous**), Virtual, November, 2022.
- 3 *HoneyBreath: An Ambush Tactic Against Wireless Breath Monitoring*, in the 15th The Central Area Networking and Security Workshop (**CANSec**), Wichita State University, Wichita, KS, October, 2022.

## Teaching

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- **Teaching Assistant**, CS-4/5173 Computer Security, OU, Fall 2023.
- **Teaching Assistant**, CS-5593 Data Mining, OU, Fall 2021.
- **Teaching Assistant**, CS/DSA-4413 Algorithm Analysis, OU, Fall 2019/2020, Spring 2021/2022.

## Media Coverage

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**Nov. 2022 Study Aims to Improve Privacy From Digitally Enabled Hidden Devices.** OU News.

Link: <https://ou.edu/research-norman/news-events/2022/university-of-oklahoma-study-aims-to-improve-privacy-from-digitally-enabled-hidden-devices>

**Nov. 2022 OU studying privacy of listening smart devices.** FOX News.

Link: <https://www.fox23.com/news/ou-studying-privacy-listening-smart-devices/EIKZ4W5CSRBI3IRUEXGZVXDHMI/>

**Nov. 2022 Researcher at OU developing app to detect hidden cameras.** KOCO 5 News.

Link: <https://www.koco.com/article/oklahoma-research-app-detect-hidden-cameras/41959062>

## Professional Service

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### Reviewer for Conferences

- IEEE International Conference on Computer Communications (INFOCOM) 2023
- IEEE Conference on Communications and Network Security (CNS) 2022
- IEEE International Conference on Computer Communications and Networks (ICCCN) 2023
- IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS) 2022

### Reviewer for Journals

- IEEE Transactions on Dependable and Secure Computing (TDSC)
- IEEE Transactions on Mobile Computing (TMC)
- IEEE Transactions on Information Forensics & Security (TIFS)
- IEEE/ACM Transactions on Networking (ToN)
- IEEE Transactions on Wireless Communications (TWC)
- Information Systems Journal (ISJ)

### Volunteering

- Volunteer, ACM CCS, 2022