Qiuye He (She/Her/Hers)

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Research Interests

- **Mobile and IoT Security**

- **Mobile Sensing and Computing**

- **Smart Healthcare**

Work Experience

Assistant Professor in Computer Science   **Aug. 2024 - Present**
University of Missouri - Kansas City, Kansas City, MO, USA

Education

Ph.D. in Computer Science   **Aug. 2019 - May. 2024**
University of Oklahoma, Norman, OK, USA   *Advisor: Dr. Song Fang*

M.E. in Electrical and Computer Engineering   **Sept. 2016 - Jul. 2019**
Xidian University, Xi'an, Shaanxi, China

B.E. in Electrical and Computer Engineering   **Sept. 2012 - Jul. 2016**
Yanshan University, Qinhuangdao, Hebei, China

Publications

1. **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), (pp. 4976-4988), December 2024.

2. **Qiuye He**, Edwin Yang, Song Fang, "*A Survey on Human Profile Information Inference via Wireless Signals*", in IEEE Communications Surveys and Tutorials (IEEE COMST), (pp. 1-34), March 2024.

3. 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)

4. 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), (pp. 1-13), November 2023.

5. **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)

6. **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**]

7. 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**]

8. **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.

9. 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**]

Patent

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

- **Gallogly College of Engineering (GCoE) Dissertation Excellence Award,** University of Oklahoma, 2024.
- **CANSec Student Travel Grant,** NSF, 2023.
- **Best Paper Award,** EAI MobiQuitous, 2022.
- **CS Alumni Graduate Fellowship,** University of Oklahoma, 2022.
- **CANSec Student Travel Grant,** NSF, 2022.
- **ACM CCS Student Travel Grant,** NSF, 2022.
- **GCoE PhD Recruitment Excellence Fellowship,** University of Oklahoma, 2019.

Talks

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

1. CS-5577 Internet of Things, UMKC, Fall 2024 & Spring 2025.

Media Coverage

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 Services

Departmental Services

- Ph.D. Recruitment Committee, UMKC, Fall 2024 & Spring 2025.

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)

- IEEE Internet of Things Journal (IoTJ)

Volunteering

- Volunteer, ACM CCS, 2022