

Mengning Li

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Education

North Carolina State University	2022 – 2026
• Ph.D., Department of Electrical and Computer Engineering • Advisor: Prof. Wenye Wang	
Shanghai Jiao Tong University	2018 – 2022
• Bachelor of Science, Department of Computer Science • Advisor: Prof. Luoyi Fu	

Research Interests

I build wireless sensing systems that combine multiple signals, such as Wi-Fi, sound, and mmWave, to understand people and their surroundings. I now focus on physiological sensing with everyday devices.

Experience

Semantic Signals Lab, Carnegie Mellon University	Sept. 2026 – Present
• Postdoctoral Researcher, working with Prof. Justin Chan on physiological sensing.	
NetWis Lab, North Carolina State University	Sept. 2022 – Aug. 2026
• Ph.D. Student, working with Prof. Wenye Wang on multimodal wireless sensing and communication.	
Networking Research Group, Microsoft Research Asia	Aug. 2021 – Mar. 2022
• Research Intern, working on MSCCL, a collective communication library built on NCCL.	
John Hopcroft Center, Shanghai Jiao Tong University	Sept. 2020 – June 2022
• Undergraduate Researcher, working with Prof. Luoyi Fu on RFID-based sensing.	

Publications

9. PATHS: Plug-and-Play Tracking from Heterogeneous Streams	2026
Mengning Li, Wenye Wang <i>ACM International Conference on Mobile Computing and Networking (MobiCom)</i> , Austin, TX, USA.	
8. UNI-FI: Integrated Multi-Task Wi-Fi Sensing	2026
Mengning Li, Wenye Wang <i>IEEE International Conference on Computer Communications (INFOCOM)</i> , Best Paper Award .	
7. DuTrack: Long-Term Indoor Human Tracking with Dual-Channel Sensing and Inference	2026
Mengning Li, Wenye Wang <i>IEEE International Conference on Computer Communications (INFOCOM)</i> .	
6. Synergizing Acoustic and Wi-Fi Signals for Device-Free Gesture Recognition	2025
Mengning Li, Wenye Wang <i>IEEE Transactions on Mobile Computing</i> .	
5. mSAC: Enhancing Localization with mmWave Sensing and Orthogonal Signals	2025
Mengning Li, Haocheng Zhu, Wenye Wang, Eylem Ekici <i>IEEE International Conference on Computer Communications (INFOCOM)</i> .	
4. Hybrid Zone: Bridging Acoustic and Wi-Fi for Enhanced Gesture Recognition	2024
Mengning Li, Wenye Wang <i>IEEE International Conference on Computer Communications (INFOCOM)</i> , Best Paper Award .	

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| 3. Enable Batteryless Flex-sensors via RFID Tags | 2023 |
| Mengning Li | |
| <i>IEEE International Conference on Computer Communications (INFOCOM).</i> | |
| 2. RC6D: An RFID and CV Fusion System for Real-time 6D Object Pose Estimation | 2022 |
| Bojun Zhang*, Mengning Li* (co-primary authors), Xin Xie, Luoyi Fu, Xinyu Tong, Xiulong Liu | |
| <i>IEEE International Conference on Computer Communications (INFOCOM).</i> | |
| 1. A Cross-domain Augmentation-based Framework for In-Network Gesture Recognition | 2021 |
| Mengning Li, Luoyi Fu, Xinbing Wang | |
| <i>IEEE Network.</i> | |

Selected Honors and Awards

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| • IEEE INFOCOM Best Paper Award | 2026 |
| • NC State Graduate Student Award (4 of 528) | 2024 |
| • IEEE INFOCOM Best Paper Award | 2024 |
| • NC State Graduate Merit Award | 2022–2024 |
| • Excellent Bachelor Thesis, Shanghai Jiao Tong University (Top 1%) | 2022 |
| • Shanghai Excellent Graduate (Top 0.2%) | 2022 |
| • John Hopcroft Center DiDi Scholarship (2 of 437) | 2020 |
| • Silver Medal, National Olympiad in Informatics (NOI), China | 2017 |

Teaching Experience

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| • Teaching Assistant, CSC575: Introduction to Wireless Networking | Spring 2024, 2026 |
| • Teaching Assistant, ECE570: Computer Networks | Fall 2023, 2024 |
| • Teaching Assistant, ECE592: Internet of Things Analytics | Spring 2024 |
| • Teaching Assistant, ECE407: Introduction to Computer Networking | Spring 2023 |
| • Teaching Assistant, CSC309: Data Structure | Fall 2022, 2024, 2025 |

Academic Service

- Conference reviewer: GLOBECOM
- Journal reviewer: IEEE ToN, IEEE TMC

Skills

Programming Languages: C++ / Python / Java / JavaScript.

Languages: Mandarin (native) and English (fluent).