

Zimo Liao

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Positions

Hong Kong Polytechnic University

Postdoctoral Fellow in the Department of Computing

Advisor: Prof. Lei Yang [[Homepage](#)]

Hong Kong, China

2025–Present

Education

Shanghai Jiao Tong University

Ph.D. in Computer Science

Advisor: Prof. Fan Wu [[Homepage](#)]

Thesis: Research on Optical Signal-Based Sensing Technology for Mobile Devices

Shanghai, China

2019–2024

Northeastern University

B.Eng. in Computer Science and Technology

Thesis: Design and Implementation of a Visible Light Positioning System

Shenyang, Liaoning, China

2015–2019

Research Interests

My research interest lies in **Ubiquitous sensing and wireless communication**. Specifically, it includes:

- 1) Ubiquitous sensing. I'm interested in sensing techniques on mobile devices. I'm also interested in universalizing specialized sensing devices through minimization and cost reduction.
- 2) Wireless communication: I'm interested in wireless communication technologies, including light-based communication and other signal-based wireless communication methods.

Publications

- [1] **Z. Liao**, J. Meng, S. An, C. Niu, F. Wu, T. Deng, G. Chen, "Waving Hand as Infrared Source for Ubiquitous Gas Sensing" The Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 2024.
- [2] **Z. Liao**, Z. Luo, Q. Huang, L. Zhang, F. Wu, Q. Zhang, G. Chen, "Gesture Recognition Using Visible Light on Mobile Devices" IEEE/ACM Transactions on Networking (TON) 2024.
- [3] **Z. Liao**, Z. Luo, Q. Huang, L. Zhang, F. Wu, Q. Zhang, Y. Wang, "SMART: Screen-based Gesture Recognition on Commodity Mobile Devices," ACM Conference on Mobile Computing and Networking (MobiCom) 2021. [[1-min video](#)]
- [4] **Z. Liao**, Z. Luo, Q. Huang, L. Zhang, F. Wu, Q. Zhang, Y. Wang, G. Chen, "Demo: SMART: Screen-based Gesture Recognition on Commodity Mobile Devices," ACM Conference on Mobile Computing and Networking (MobiCom) 2021.

Honors and Awards

- **Second-Place winner**, Student Research Competition at MOBICOM 2021 *2022*
- **Outstanding graduates**, Northeastern University *2019*

- **Academic Scholarship**, Northeastern University

2015–2018

Skills

Programming I'm familiar with Arduino, Python, C and C++ programming.

Signal & Hardware I have experience in processing light signals. I 'm familiar with the usage of light sensors and pyroelectric sensors.

Theoretical Knowledge I have mastered the theories of optical propagation and thermal radiation.

Service

Reviewer

IEEE/ACM Transactions on Mobile Computing (TMC)

Executive Committee

China Computer Federation Student Branch in Shanghai Jiao Tong University

2019-2022