Zimo Liao

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Positions

Hong Kong Polytechnic University   **Hong Kong, China**
Postdoctoral Fellow in the Department of Computing   *2025–Present*
Advisor: Prof. Lei Yang [Homepage]

Education

Shanghai Jiao Tong University   **Shanghai, China**
Ph.D. in Computer Science   *2019–2024*
Advisor: Prof. Fan Wu [Homepage]
Thesis: Research on Optical Signal-Based Sensing Technology for Mobile Devices

Northeastern University   **Shenyang, Liaoning, China**
B.Eng. in Computer Science and Technology   *2015–2019*
Thesis: Design and Implementation of a Visible Light Positioning System

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

MobiCom 2025, Artifact Evaluation Committee
INFOCOM 2025, Reviewer
IEEE/ACM Transactions on Mobile Computing, Reviewer
Concurrency and Computation: Practice and Experience, Reviewer
CCF Student Brunch in Shanghai Jiao Tong University 2019-2022, Executive Committee