

DONG LI

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RESEARCH INTERESTS

Mobile Computing; Wireless/Wearable Sensing; Multi-modal Sensing; HCI; Smart Health; AI for IoT

APPOINTMENT

University of Maryland, Baltimore County, Baltimore, MD 2024–present
Assistant Professor in Department of Computer Science and Electrical Engineering

EDUCATION

University of Massachusetts Amherst, Amherst, MA 2018–2024
Ph.D. Candidate in Computer Science

Advisor: Prof. Jie Xiong

Shanghai Jiaotong University, Shanghai, China 2015–2018
M.Eng in Software Engineering

Advisor: Prof. Dong Wang

University of Electronic Science and Technology of China, Chengdu, China 2011–2015
B.S. in Computer Science and Technology

INDUSTRY EXPERIENCE

Apple Inc., Cupertino, CA June 2023–Sep 2023
Software Engineering Intern, Wireless Technologies & Ecosystems

Project: Develop a sensor fusion system that combines acoustic sensing with LiDAR sensing

Samsung Research America, Plano, TX May 2022–Dec 2022
Research Intern, Standard and Mobility Innovation Lab

Project: WiFi-based human presence/motion detection; multi-modal sensing

PUBLICATIONS

- [1] Xiaoxuan Liang*, Zhaolong Wei*, **Dong Li**, Jie Xiong, and Jeremy Gummesson, “SONDAR: Size and Shape Measurements Using Acoustic Imaging” in *International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc)*, 2024.
- [2] Shirui Cao*, **Dong Li***, Sunghoon Ivan Lee, and Jie Xiong, “PowerPhone: Unleashing the Acoustic Sensing Capability of Smartphones” in *Proceedings of the 29th Annual International Conference on Mobile Computing And Networking (MobiCom)*, 2023.
- [3] **Dong Li***, Shirui Cao*, Sunghoon Ivan Lee, and Jie Xiong, “Experience: practical problems for acoustic sensing” in *Proceedings of the 28th Annual International Conference on Mobile Computing And Networking (MobiCom)*, 2022.
- [4] **Dong Li**, Jialin Liu, Sunghoon Ivan Lee, and Jie Xiong, “Room-scale Hand Gesture Recognition Using Smart Speakers” in *Proceedings of the 20th Conference on Embedded Networked Sensor Systems (SenSys)*, 2022.
- [5] **Dong Li**, Jialin Liu, Sunghoon Ivan Lee, and Jie Xiong, “LASense: Pushing the Limits of Fine-grained Activity Sensing Using Acoustic Signals” in *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT/UbiComp)*, 2022.
- [6] Jialin Liu*, **Dong Li***, Lei Wang, Fusang Zhang, and Jie Xiong, “Enabling Contact-free Acoustic Sensing under Device Motion” in *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT/UbiComp)*, 2022.

- [7] Xiangru Chen*, **Dong Li***, Yiran Chen, and Jie Xiong, “Enabling Contact-free Acoustic Sensing under Device Motion” in *Proceedings of the 21st ACM Workshop on Hot Topics in Networks (HotNets)*, 2022.
- [8] Zhihui Gao, Ang Li, **Dong Li**, Jialin Liu, Jie Xiong, Yu Wang, Bing Li, and Yiran Chen, “MOM: Microphone based 3D Orientation Measurement” in *Proceedings of the 20th International Conference on Information Processing in Sensor Networks (IPSN)*, 2022.
- [9] Jialin Liu, **Dong Li**, Lei Wang, and Jie Xiong, “BlinkListener: “Listen” to Your Eye Blink Using Your Smartphone” in *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT/UbiComp)*, 2021.
- [10] **Dong Li**, Jialin Liu, Sunghoon Ivan Lee, and Jie Xiong, “FM-track: Pushing the Limits of Contactless Multi-target Tracking using Acoustic Signals” in *Proceedings of the 18th Conference on Embedded Networked Sensor Systems (SenSys)*, 2020.
- [11] Qian Zhang, Run Zhao, **Dong Li**, and Dong Wang, “Unobtrusive and Robust Human Identification using COTS RFID”, *Computer Networks*, vol. 166, pp. 106818, 2020.
- [12] Bo Chen, Qian Zhang, Run Zhao, **Dong Li**, and Dong Wang, “SGRS: A Sequential Gesture Recognition System using COTS RFID”, *IEEE Wireless Communications and Networking Conference*, 2018.
- [13] Qian Zhang, **Dong Li**, Run Zhao, Dong Wang, Y. Deng, and B. Chen, “RFree-ID: An Unobtrusive Human Identification System Irrespective of Walking Cofactors using COTS RFID”, *IEEE International Conference on Pervasive Computing and Communications*, 2018.
- [14] **Dong Li**, Feng Ding, Qian Zhang, Run Zhao, Jinshi Zhang, and Dong Wang, “TagController: A Universal Wireless and Battery-free Remote Controller using Passive RFID Tags”, *Proceedings of the 14th EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (MobiQuitous)*, 2017. *Best paper runner-up*
- [15] Jinshi Zhang, Qian Zhang, **Dong Li**, Run Zhao, and Dong Wang, “RFlow-ID: Unobtrusive Workflow Recognition with COTS RFID”, *Proceedings of the 14th EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services*, 2017.
- [16] Run Zhao, Qian Zhang, **Dong Li**, H. Chen, and Dong Wang, “A Novel Accurate Synthetic Aperture RFID Localization Method with High Radial Accuracy”, *IEEE 18th International Symposium on A World of Wireless, Mobile and Multimedia Networks*, 2017.

*Equal Contribution

PROFESSIONAL SERVICES

Technical Program Committee, <i>IEEE PerCom</i>	2025
Technical Program Committee, <i>IEEE ICPADS</i>	2024
Technical Program Committee, <i>IEEE MSN</i>	2024
Technical Program Committee, <i>MIMSVAI Workshop (in conjunction with UbiComp/ISWC)</i>	2024
Technical Program Committee, <i>IEEE BSN</i>	2023, 2024
Reviewer, <i>ACM IMWUT</i>	2022, 2023, 2024
Reviewer, <i>ToN</i>	2024
Artifact Evaluation Committee, <i>ACM MobiCom</i>	2023
Reviewer, <i>ACM TOSN</i>	2023
Web Chair, <i>ACM SenSys</i>	2022
Shadow Program Committee, <i>ACM SenSys</i>	2022

TEACHING

Instructor, CMSC 491/691, Special Topics on Mobile and Wireless Sensing, UMBC	Fall 2024
Teaching Assistant, COMPSCI 565, Advanced Digital Forensics, UMass Amherst	Spring 2024
Teaching Assistant, COMPSCI 240, Reasoning Under Uncertainty, UMass Amherst	Spring 2019, Fall 2022

HONORS & AWARDS

Student Travel Grant, MobiCom 2022, Sydney, Austrilia	2022
Student Travel Grant, HotNets 2022, Austin, TX	2022
Dr. Phil Bernstein Graduate Scholarship, UMass Amherst, MA	2022
Bosch Scholarship, Shanghai Jiao Tong University, China	2017
Google Excellence Scholarship, Google, China	2014