DONG LI

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RESEARCH INTERESTS

Mobile Computing; Wireless/Wearable Sensing; Multi-model Sensing; Human-Computer Interaction; Smart Health

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 detection and motion detection; data fusion from mmWave radar, UWB radar, and ultrasound sensors

PUBLICATIONS

[1] 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.

[2] **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.

[3] **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.

[4] **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.

[5] 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.

[6] 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.

[7] **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.

[8] **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*

[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] 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.

[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] 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.

[15] 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.

[16] Yang Xu, Xuemei Hu, Yan Li, **Dong Li**, and Mengjun Yang, "Using Complex Network Effects for Communication Decisions in Large Multi-robot Teams", *Proceedings of the 2014 international conference on Autonomous agents and multi-agent systems*, 2014.

*Equal Contribution

PROFESSIONAL SERVICES

Technical Program Committee, *IEEE MSN*	2024
Technical Program Committee, *MIMSVAI Workshop (in conjunction with UbiComp/ISWC)*	2024
Technical Program Committee, *IEEE BSN*	2023, 2024
Reviewer, *ACM IMWUT*	2022, 2023, 2024
Artifact Evaluation Committee, *ACM MobiCom*	2023
Reviewer, *ACM TOSN*	2023
Web Chair, *ACM SenSys*	2022
Shadow Program Committee, *ACM SenSys*	2022

TEACHING

Teaching Assistance, COMPSCI 565, Advanced Digital Forensics, UMass Amherst	Spring 2024
Teaching Assistance, 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