

Di Duan

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Research Interests: Mobile Computing | Human-Computer Interaction | Wearable Sensing | Deep Learning
Special Focus: System-enabled Novel Applications for Tracking, Reconstruction, Interaction, and Healthcare

Positions

- The Chinese University of Hong Kong (CUHK)** Aug. 2024 – Present
Postdoctoral Fellow (Full-Time → Honorary) in Information Engineering
Advisor: [Prof. Guoliang Xing](#).
Hong Kong
- Centre for Perceptual and Interactive Intelligence (CPII)** Nov. 2024 – Present
Postdoctoral Fellow
Mentor: [Prof. Guoliang Xing](#).
Hong Kong

Education

- City University of Hong Kong (CityU)** Aug. 2020 – Jul. 2024
Ph.D. in Computer Science
Supervised by [Dr. Weitao Xu](#), co-supervised by [Prof. Xiaohua Jia](#). I also work closely with [Dr. Tianxing Li](#) at MSU.
Hong Kong
- Hong Kong University of Science and Technology (HKUST)** Aug. 2018 – Nov. 2019
M.Sc. in Electronic Engineering
Hong Kong
- Harbin Engineering University (HEU)** Aug. 2014 – Aug. 2018
B.Eng. in Optoelectronic Information Science and Engineering
Harbin, Heilongjiang, China

Selected Awards

- 🏆 Honorable Mention Award *MobileHCI'24, 2024*
- 🏆 Mark Weiser Best Paper Award *PerCom'23, 2023*
- 🏆 Best Demo Runner-up Award *SenSys'24, 2024*
- 🌟 Elsevier Monetary Award *Elsevier, 2023*
- 🌟 Studentship *CityU, 2020*

Publications

- [arXiv Preprint] Argus: Multi-View Egocentric Human Mesh Reconstruction Based on Stripped-Down Wearable mmWave Add-on
Di Duan, Shengzhe Lyu, Mu Yuan, Hongfei Xue, Tianxing Li, Weitao Xu, Kaishun Wu, Guoliang Xing
2024
- [MobiSys'24] F²Key: Dynamically Converting Your Face into a Private Key Based on COTS Headphones for Reliable Voice Interaction
Di Duan, Zehua Sun, Tao Ni, Shuaicheng Li, Xiaohua Jia, Weitao Xu, Tianxing Li
2024
- [IMWUT/UbiComp'24] EarSE: Bringing Robust Speech Enhancement to COTS Headphones
Di Duan, Yongliang Chen, Weitao Xu, Tianxing Li
2024
- [PerCom'23] EMGSense: A Low-Effort Self-Supervised Domain Adaptation Framework for EMG Sensing
Di Duan, Huanqi Yang, Guohao Lan, Tianxing Li, Xiaohua Jia, Weitao Xu
🏆 Best Paper Award (1/159), 2023
- [MobileHCI'24] Medusa3D: The Watchful Eye Freezing Illegitimate Users in Virtual Reality Interactions
Ao Chen Jiao*, Di Duan* (*co-first authors), Weitao Xu
🏆 Honorable Mention Award (3/141), 2024

[INFOCOM'25] iRadar: Synthesizing Millimeter-Waves from Wearable Inertial Inputs for Human Gesture Sensing

Huanqi Yang, Mingda Han, Xinyue Li, **Di Duan**, Tianxing Li, Weitao Xu

2025

[MobiCom'24] RF-Egg: An RF Solution for Fine-Grained Multi-Target and Multi-Task Egg Incubation Sensing

Zehua Sun, Tao Ni, Yongliang Chen, **Di Duan**, Kai Liu, Weitao Xu

2024

[TMC] Scenario-Adaptive Key Establishment Scheme for LoRa-enabled IoV Communications

Huanqi Yang, **Di Duan**, Hongbo Liu, Chengwen Luo, Yuezhong Wu, Wei Li, Albert Y. Zomaya, Linqi Song, Weitao Xu

2024

[TOSN] mmSign: mmWave-based Few-Shot Online Handwritten Signature Verification

Mingda Han, Huanqi Yang, Tao Ni, **Di Duan**, Mengzhe Ruan, Yongliang Chen, Jia Zhang, Weitao Xu

2023

[CSCAIoTSys] EarDA: Towards Accurate and Data-Efficient Earable Activity Sensing

Shengzhe Lyu, Yongliang Chen, **Di Duan**, Renqi Jia, Weitao Xu

2024

[SenSys'24 Demo] Myotrainer: Muscle-Aware Motion Analysis and Feedback System for In-Home Resistance Training

Yuting He, Xinyan Wang, Mu Yuan, **Di Duan**, Doris S. F. Yu, Guoliang Xing, Hongkai Chen

🏆 Best Demo Runner-up Award, 2024

Professional Services

Organizing Committee: 2024:	Publicity Chair of BodySys Workshop (MobiSys)
Technical Program Committee: 2024:	ICPADS, CHCHI (Chinese CHI)
Artifact Evaluation Committee: 2024:	MobiSys
Conference Review: 2025: 2024: 2023:	MobiCom, CHI, UbiComp IPSN, IOTDI, ICDCS, DCOSS-IoT, SenSys IPSN
Journal Review: 2025: 2024:	IMWUT TMC (IEEE Trans), HEALTH (ACM Trans), Ad Hoc Networks

Reference

Guoliang Xing (Postdoc Advisor) Professor Email: glxing@ie.cuhk.edu.hk	IEEE Fellow, HKIE Fellow The Chinese University of Hong Kong
Xiaohua Jia (Ph.D. Co-advisor) Chair Professor, Former Head of Department of Computer Science Email: csjia@cityu.edu.hk	IEEE Fellow, ACM Distinguished Member City University of Hong Kong
Weitao Xu (Ph.D. Advisor) Assistant Professor Email: weitaoxu@cityu.edu.hk	IEEE Senior Member City University of Hong Kong
Tianxing Li (Close Collaborator) Assistant Professor Email: litianx2@msu.edu	Michigan State University