

Di Duan

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Research Interests: Mobile Computing | Human-Computer Interaction | Deep Learning | Wearable Computing

Positions

The Chinese University of Hong Kong (CUHK)

Postdoctoral Fellow (Full-Time → Honorary) in Information Engineering

Advisor: [Prof. Guoliang Xing](#).

Aug. 2024 – Present

Hong Kong

Centre for Perceptual and Interactive Intelligence (CPII)

Postdoctoral Fellow

Mentor: [Prof. Guoliang Xing](#).

Nov. 2024 – Present

Hong Kong

Education

City University of Hong Kong (CityU)

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.

Aug. 2020 – Jul. 2024

Hong Kong

Hong Kong University of Science and Technology (HKUST)

M.Sc. in Electronic Engineering

Aug. 2018 – Nov. 2019

Hong Kong

Harbin Engineering University (HEU)

B.Eng. in Optoelectronic Information Science and Engineering

Aug. 2014 – Aug. 2018

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**

Aochen 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:	MobiCom, CHI, UbiComp
2024:	IPSN, IOTDI, ICDCS, DCOSS-IoT, SenSys
2023:	IPSN
Journal Review: 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 <i>The Chinese University of Hong Kong</i>
Xiaohua Jia (Ph.D. Co-advisor) Chair Professor, Head of Department of Computer Science Email: csjia@cityu.edu.hk	IEEE Fellow, ACM Distinguished Member <i>City University of Hong Kong</i>
Weitao Xu (Ph.D. Advisor) Assistant Professor Email: weitaoxu@cityu.edu.hk	IEEE Senior Member <i>City University of Hong Kong</i>
Tianxing Li (Close Collaborator) Assistant Professor Email: litianx2@msu.edu	<i>Michigan State University</i>