

# Di Duan

[✉ duandiacademic@gmail.com](mailto:duandiacademic@gmail.com) | [🌐 Personal Homepage](#) | [🔍 Google Scholar](#) | [🌐 LinkedIn](#)

**Research Interests:** Wearable Sensing | Computational Health | Affective Computing  
Mobile System × Human-Computer Interaction

**Special Focus:** System-enabled Novel Applications for Tracking, Reconstruction, Interaction, and Healthcare

👁️ **Research Vision:** Advancing the next generation of human-machine-environment interaction through ubiquitous mobile systems—making it more innovative, accessible, and affordable.

## Positions

**The Chinese University of Hong Kong (CUHK)**

Postdoctoral Fellow (Full-Time) in the Department of 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 – Apr. 2025

Hong Kong

## Education

**City University of Hong Kong (CityU)**

Ph.D. in Computer Science

Supervised by [Prof. 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

🏆 Best Paper Honorable Mention Award

SenSys'25, 2025

🏆 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

[SenSys'25] 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

🏆 Best Paper Honorable Mention Award (5/235), 2025

[MobiSys'24] F<sup>2</sup>Key: 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*, <b>Di Duan</b> * (*co-first authors), Weitao Xu	
	 <b>Honorable Mention Award (3/141), 2024</b>
[SIGCOMM'25] SCX: Stateless KV-Cache Encoding for Cloud-Scale Confidential Transformer Serving	
Mu Yuan, Lan Zhang, Liekang Zeng, Siyang Jiang, Bufang Yang, <b>Di Duan</b> , Guoliang Xing	
	2025
[INFOCOM'25] iRadar: Synthesizing Millimeter-Waves from Wearable Inertial Inputs for Human Gesture Sensing	
Huanqi Yang, Mingda Han, Xinyue Li, <b>Di Duan</b> , 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, <b>Di Duan</b> , Kai Liu, Weitao Xu	
	2024
[TMC] Scenario-Adaptive Key Establishment Scheme for LoRa-enabled IoV Communications	
Huanqi Yang, <b>Di Duan</b> , 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, <b>Di Duan</b> , Mengzhe Ruan, Yongliang Chen, Jia Zhang, Weitao Xu	
	2023
[CSCAIoTSys] EarDA: Towards Accurate and Data-Efficient Earable Activity Sensing	
Shengzhe Lyu, Yongliang Chen, <b>Di Duan</b> , 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, <b>Di Duan</b> , Doris S. F. Yu, Guoliang Xing, Hongkai Chen	
	 <b>Best Demo Runner-up Award, 2024</b>

Professional Services

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

Reference

<b>Guoliang Xing</b> (Postdoc Advisor)	
<b>Professor</b>	ACM Fellow, IEEE Fellow, HKIE Fellow
Email: glxing@ie.cuhk.edu.hk	<i>The Chinese University of Hong Kong</i>
<b>Xiaohua Jia</b> (Ph.D. Co-advisor)	
<b>Chair Professor, Former Head of Department of Computer Science</b>	IEEE Fellow, ACM Distinguished Member
	<i>City University of Hong Kong</i>

Email: csjia@cityu.edu.hk

**Weitao Xu** (Ph.D. Advisor)

**Associate Professor**

Email: weitaoxu@cityu.edu.hk

**Tianxing Li** (Close Collaborator)

**Assistant Professor**

Email: litianx2@msu.edu

IEEE Senior Member

*City University of Hong Kong*

*Michigan State University*