

# 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 in Information Engineering

Work with Prof. Guoliang Xing.

Aug. 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

## Publications

**[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\*, Di Duan\* (\*co-first authors), Weitao Xu

*Honorable Mention Award (3/141), 2024*

**[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, Yuezong 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

## Awards

**Honorable Mention Award**

*MobileHCI'24, 2024*

**Elsevier Monetary Award**

*Elsevier, 2023*

**Mark Weiser Best Paper Award**

*PerCom'23, 2023*

**Postgraduate Studentship**

*CityU, 2020*

## Skills

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<b>Languages:</b>	Python, Matlab, Java
<b>Technologies:</b>	Signal Processing (audio, EMG, IMU, gaze, mmWave), Deep Learning, Transfer Learning
<b>Platform &amp; Framework:</b>	Pytorch, Tensorflow, Arduino, Android
<b>Tools:</b>	LaTeX, Draw.io, Powerpoint

## Professional Services

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

## Reference

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