

# 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)** Aug. 2024 – Present  
Postdoctoral Fellow in Information Engineering Hong Kong  
Work with [Prof. Guoliang Xing](#).

## Education

**City University of Hong Kong (CityU)** Aug. 2020 – Jul. 2024  
Ph.D. in Computer Science Hong Kong

Supervised by [Dr. Weitao Xu](#), co-supervised by [Prof. Xiaohua Jia](#). I also work closely with [Dr. Tianxing Li](#) at MSU.

**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

## 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, 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

## 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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### 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

**2024:** IPSN, IOTDI, ICDCS, DCOSS-IoT, SenSys

**2023:** IPSN

### Journal Review:

**2024:** TMC (IEEE Trans), HEALTH (ACM Trans), TOSN (ACM Trans), Ad Hoc Networks

## Reference

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**Guoliang Xing** (Postdoc Advisor)

IEEE Fellow, HKIE Fellow

**Professor**

*The Chinese University of Hong Kong*

Email: glxing@ie.cuhk.edu.hk

**Xiaohua Jia** (Ph.D. Co-advisor)

IEEE Fellow, ACM Distinguished Member

**Chair Professor, Head of Department of Computer Science**

*City University of Hong Kong*

Email: csjia@cityu.edu.hk

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

IEEE Senior Member

**Assistant Professor**

*City University of Hong Kong*

Email: weitaoxu@cityu.edu.hk

**Tianxing Li** (Close Collaborator)

*Michigan State University*

**Assistant Professor**

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