

Zi-Han WANG

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Google Scholar: <https://scholar.google.com/citations?user=rH7NooAAAAJ>

Educations

Tsinghua University, P. R. China

2019/09 - Today

Ph.D. candidate in Data Science and Information technology

Advisor: Dr. Wenbo Ding

Research Topics: Triboelectric Nanogenerators, Soft Electronics, Soft Robots, HMI & HRI

University of California, Berkeley, USA

2023/03 - Today

Visiting Research Student

Advisor: Prof. Liwei Lin

Research Topics: Self-Healing Materials for Sensing and Energy Harvesting

Herriot-Watt University, UK

2015/08 - 2019/06

B.Eng., Telecommunications Engineering

with **First Class Honors**

Advisor: Prof. Mustafa Suphi Erden

Xidian University, P. R. China

2015/08 - 2019/06

B.Eng., Telecommunications Engineering

with **Outstanding Graduates**

Boston University, USA

2018/07 - 2018/08

Visiting Student

Selected Awards & Honors

ICRA 2023 RAS Travel Grant

2023/04

University Scholarship of the First Class (Tsinghua University)

2022/11

National Scholarship for Graduates (The Ministry of Education)

2021/12

Deputy Principal's Award (Herriot-Watt University)

2019/06

Academic Service

Teaching Assistant of TBSI Course Nanogenerator & Self-powered System

2020/09 - Today

Web Chair of ACM Ubicomp 2021 CPD Workshop

2021/05 - 2021/09

Journal Reviewer of *DSP*, *EUSIPCO*, *ICN*, and *Nano Energy*

Invited Talks and Conference Presentations

Smart wearable systems for smart life at X-institute, Shenzhen

2023/01/13

STEV: Stretchable Triboelectric E-skin enabled Proprioceptive Vibration Sensing for Soft

2023/03/04

Robot at University of California, Berkeley

Triboelectric-nanogenerator-enabled mechanical modulation for infrared wireless communications at BINN CAS, Virtual

2022/07/08

Selected Publication

- [1] **Zi-Han Wang***, Kai-Chong Lei*, Huaze Tang, Shoujie Li, Yuan Dai, Wenbo Ding#, Xiao-Ping Zhang. "STEV: Stretchable Triboelectric E-skin enabled Proprioceptive Vibration Sensing for Soft Robot," IEEE International Conference on Robotics and Automation (ICRA), 2023: 588-593.

- [2] Jiarong Li*, Zixuan Xie*, **Zihan Wang***, Zenan Lin, Chengyue Lu, Zihao Zhao, Yuchao Jin, Jihong Yin, Shilong Mu, Chaobo Zhang, Weihua Gui, Xiaojun Liang#, Jiyu Wang#, Wenbo Ding# “A triboelectric gait sensor system for human activity recognition and user identification,” *Nano Energy*, 2023, 112: 108473.
- [3] Han Wu*, **Zihan Wang***, Boyu Zhu, Hanqing Wang, Chengyue Lu, Meicun Kang, Shenglin Kang, Wenbo Ding#, Lijun Yang, Ruijin Liao, Jiyu Wang#, Zhong Lin Wang# “All-in-One Sensing System for Online Vibration Monitoring via IR Wireless Communication as Driven by High-Power TENG,” *Advanced Energy Materials*, 2023, 2300051.
- [4] Jiangfeng Lu*, Zicong Miao*, **Zihan Wang***, Ying Liu, Dekuan Zhu, Jihong Yin, Fei Tang, Xiaohao Wang, Wenbo Ding#, Min Zhang#, “Piezoelectric soft robot driven by mechanical energy,” *Nano Research*, 2022.
- [5] **Zihan Wang***, Yuchao Jin*, Chengyue Lu*, Jiyu Wang#, Ziwu Song, Xu Yang, Yidan Cao, Yunlong Zi, Wenbo Ding#, Zhong Lin Wang#, “Triboelectric Nanogenerator enabled Mechanical Modulation for Infrared Wireless Communications,” *Energy & Environmental Science*, 2022, 15 (7): 2983-2991.
- [6] Ziwu Song*, Jihong Yin*, **Zihan Wang***, Chengyue Lu, Ze Yang, Zihao Zhao, Zenan Lin, Jiyu Wang#, Changsheng Wu, Jia Cheng, Yuan Dai, Yunlong Zi, Shao-Lun Huang, Xinlei Chen, Jian Song, Gang Li, Wenbo Ding#, “A flexible triboelectric tactile sensor for simultaneous material and texture recognition,” *Nano Energy*, 2022, 93: 106798.
- [7] Yang Luo*, **Zihan Wang***, Jiyu Wang, Xiao Xiao, Qian Li, Wenbo Ding#, Hongyan Fu#, “Triboelectric bending sensor based smart glove towards intuitive multi-dimensional human-machine interfaces,” *Nano Energy*, 2021, 89: 106330. **(FRONT COVER)**
- [8] **Zihan Wang**, Jiarong Li, Yuchao Jin, Jiyu Wang, Fang Yang, Gang Li, Xiaoyue Ni, Wenbo Ding#, “Sensing beyond itself: Multi-functional use of ubiquitous signals towards wearable applications,” *Digital Signal Processing*, 2021: 103091.

Skills

- | | |
|---|---|
| <ul style="list-style-type: none"> ✓ English Certificate ✓ Programming language & Tools ✓ Technical Skills | <p>IELTS (Academic) Band 7</p> <p>LabVIEW, MATLAB, Python, LaTeX, MS Office</p> <p>Machine Learning, Signal Processing, Embedded System, Design and Fabrication of Flexible/Stretchable Circuit, Design and Characterization of Triboelectric Nanogenerator, Design and Fabrication of Soft Robotic System.</p> |
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