

# Zi-Han WANG

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

## Educations

<b>Tsinghua University</b> , P. R. China	2019/09 - Today
<i>Ph.D. candidate in Data Science and Information technology</i>	
Advisor: Dr. Wenbo Ding	
Research Topics: Triboelectric Nanogenerators, Soft Electronics, Soft Robots, HMI & HRI	
<b>University of California, Berkeley</b> , USA	2023/03 - Today
<i>Visiting Research Student</i>	
Advisor: Prof. Liwei Lin	
Research Topics: Self-Healing Materials for Sensing and Energy Harvesting	
<b>Herriot-Watt University</b> , UK	2015/08 - 2019/06
<i>B.Eng., Telecommunications Engineering</i>	
with <b>First Class Honors</b>	
Advisor: Prof. Mustafa Suphi Erden	
<b>Xidian University</b> , P. R. China	2015/08 - 2019/06
<i>B.Eng., Telecommunications Engineering</i>	
with <b>Outstanding Graduates</b>	
<b>Boston University</b> , USA	2018/07 - 2018/08
<i>Visiting Student</i>	

## 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 <i>DSP</i> , <i>EUSIPCO</i> , <i>ICN</i> , and <i>Nano Energy</i>	

## Invited Talks and Conference Presentations

<i>Smart wearable systems for smart life</i> at X-institute, Shenzhen	2023/01/13
<i>STEV: Stretchable Triboelectric E-skin enabled Proprioceptive Vibration Sensing for Soft Robot</i> at University of California, Berkeley	2023/03/04
Triboelectric-nanogenerator-enabled mechanical modulation for infrared wireless communications at BINN CAS, Virtual	2022/07/08

## Selected Publication

- [1] ZiHan 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.

- [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**

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