YUEZHONG WU

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RESEARCH INTERESTS

I am currently an Assistant Professor at Fuzhou University. I received my Ph.D. from the School of Computer Science and Engineering, the University of New South Wales (UNSW), supervised by Prof. Wen Hu and Prof. Mahbub Hassan.

My research interests includes:

- Cyber-physical systems
- Internet-of-Things (IoT)
- Ubiquitous computing
- Wearable computing, Wearable healthcare
- Pervasive sensing, Vibration-based sensing
- The end-to-end system design, implementation, and evaluation of all the above topics.

EDUCATION

University of New South Wales, Sydney (UNSW) *February 2018 - Apr 2023*
Ph.D. in Computer Science and Engineering
Supervisor: Prof. Wen Hu and Prof. Mahbub Hassan
(Expected Completion Date: April, 2023)

University of Science and Technology of China (USTC) *September 2013 - July 2016*
M.Sc. in Computer Science and Technology
Supervisor: Prof. Thomas Weise

Southwest Jiaotong University (SWJTU) *September 2009 - July 2013*
B.Eng. in Computer Software
Thesis Advisor: Prof. Hong Jing

EXPERIENCE

FZU, College of Computer and Data Science September 2023 - Now
Assistant Professor @ College of Computer and Data Science *Fuzhou, China*

- Research Topic: Integration of low-power communication and sensing for IoT in extreme environments

UNSW, UNSW Institute for Cyber Security February 2018 - April 2023
Ph.D. Candidate, Supervisor: Prof. Wen Hu and Prof. Mahbub Hassan *Sydney, Australia*

- Research Topic: Neural Network Approach to Vibration Signal Analysis for Wearable Computing

Peking University, School of Computer Science March 2021 - July 2021
Visiting Ph.D. Student, Supervisor: A/Prof. Chenren Xu *Beijing, China*

- Research Topic: Light-based key generation for IoT device pairing

USTC, USTC-Birmingham Joint Research Institute September 2013 - July 2016
Research Assistant, Supervisor: A/Prof. Thomas Weise *Hefei, China*

- Research Topic: Local Search Methods and Their Hybrid Algorithms

PUBLICATIONS

* indicates Equal Contribution, and † indicates Corresponding Author.

Conferences

1. **[IMWUT/UbiComp 2026]** Hung Manh Pham, Xiao Ma, Changshuo Hu, Xiaoyu Xu, Thivya Kandappu, **Yuezhong Wu**, Tarek Abdelzaher, Archan Misra, Dong Ma, "PPG-IDR: Leveraging User Identity for Robust Cross-user PPG Sensing via Disentangled Representations", in Proceedings of ACM Interactive, Mobile, Wireless and Ubiquitous Technology, 2026.

2. **[IMWUT/UbiComp 2026]** Changshuo Hu, Hung Manh Pham, Yiming Zhang, Guanru Yan, Xiao Ma, **Yuezhong Wu**, Thivya Kandappu, Archan Misra, Dong Ma, "PPG-Sport: A Dataset for Reliable Heart Rate Monitoring from Wrist PPG Under Dynamic Sports Conditions", accepted in Proceedings of ACM Interactive, Mobile, Wireless and Ubiquitous Technology, 2026.

3. **[INFOCOM 2026] Yuezhong Wu**, Xin Miao, Shuai Chen, Xing Chen, Xiong Wang, and Dong Ma, "DeWater: Towards Efficient Underwater Communication via Fine-tuned Learning-enhanced Demodulation", accepted in IEEE INFOCOM 2026.

4. **[UbiComp 2025] Yuezhong Wu***, Wei Song*, Chun Tung Chou, Jiankun Hu, Wen Hu, "HandID: Towards Unobtrusive Gesture-independent User Authentication on Smartphones using Vibration-based Hand Biometrics: in Proceedings of ACM Interactive, Mobile, Wireless and Ubiquitous Technology, 2025.

5. **[UbiComp 2022] Yuezhong Wu**, Mahbub Hassan and Wen Hu,"SafeGait: Safeguarding Gait-based Key Generation against Vision-based Side Channel Attack using Conditional Generative Adversarial Network", in Proceedings of ACM Interactive, Mobile, Wireless and Ubiquitous Technology, 2022.

6. **[ICDCS 2022]** Huanqi Yang, Hongbo Liu, **Yuezhong Wu**, Chengwen Luo, Wei Li, Albert Zomaya, Linqi Song and Weitao Xu. "Vehicle-Key: A Secret Key Establishment Scheme for LoRa-enabled IoV Communications",in Proceedings of IEEE International Conference on Distributed Computing Systems, 2022.

7. **[EWSN 2021]** Hong Jia, Jun Liu, **Yuezhong Wu**, Tomasz. Bednarz, Lina Yao and Wen Hu, "Condor: Mobile Swing Tracking via Sensor Fusion using Conditional Generative Adversarial Network", In Proceedings of the 2021 International Conference on Embedded Wireless Systems and Networks, 2021.

8. **[UbiComp 2020] Yuezhong Wu**, Qi Lin, Hong Jia, Wen Hu, and Mahbub Hassan, "Auto-Key: Using Autoencoder to Speed Up Gait-based Key Generation in Body Area Networks", in Proceedings of ACM Interactive, Mobile, Wireless and Ubiquitous Technology, 2020.

9. **[IPSN 2020]** Qi Lin, Shuhua Peng, **Yuezhong Wu**, Jun liu, Wen Hu, Mahbub Hassan, Aurna Seneviratne and Chun H. Wang, "E-Jacket: Posture Detection with Loose-Fitting Garment using a Novel Strain Sensor", In Proceedings of ACM/IEEE conference on Information Processing in Sensor Networks, 2020.

10. **[INFOCOM 2020]** Dong Ma, **Yuezhong Wu**, Ming Ding, Mahbub Hassan, and Wen Hu. "Skin-MIMO: Vibration-based MIMO Communication over Human Skin", In Proceedings of the IEEE International Conference on Computer Communications, 2020.

11. **[GECCO 2017]** Weichen Liu, Thomas Weise, **Yuezhong Wu**, and Qi Qi. "Combining Two Local Searches with Crossover: An Efficient Hybrid Algorithm for the Traveling Salesman Problem", In Proceedings of the Genetic and Evolutionary Computation Conference, July 15-19, 2017, pages 298-305.

12. **[GECCO 2016] Yuezhong Wu**, Thomas Weise, and Weichen Liu. "Hybridizing Different Local Search Algorithms with Each Other and Evolutionary Computation: Better Performance on the Traveling Salesman Problem", In Proceedings of the 18th Genetic and Evolutionary Computation Conference, July 20–24, 2016, pages 57-58.

13. **[ICCI*CC 2015] Yuezhong Wu**, Thomas Weise, and Raymond Chiong. "Local Search for the Traveling Salesman Problem: A Comparative Study", In Proceedings of the 14th IEEE Conference on Cognitive Informatics & Cognitive Computing.

Journals

1. **[TMC 20246** Chunyu Tu, Zhiyong Yu, Leye Wang, Xiangping Zheng, Fangwan Huang, **Yuezhong Wu**, Runhe Huang, "Asynchronous Multi-Agent Reinforcement Learning for Collaborative UAV Sensing in Sparse Mobile Crowdsensing", in IEEE Transactions on Mobile Computing, 2026.
2. **[IEEE TNSM 2026]** Hanlin Chen, Fukang Deng, Tengcong Jiang, Weitao Xu, **Yuezhong Wu**†, Xing Chen†, Jie Li, "Enhancing Throughput in Sharded Blockchain via Joint Convex Optimization of System Parameters and Resource Allocation", in IEEE Transactions on Network and Service Management, 2026.
3. **[Ad Hoc Networks 2025]** Chunyu Tu, Yanghui Chen, Zhiyong Yu, Fangwan Huang, **Yuezhong Wu**, Xianwei Guo, Chao Yang, Runhe Huang, "Decentralized opportunistic crowdsensing task allocation with global and local communication", in Ad Hoc Networks, 2025
4. **[IoTJ 2025]** Chunyu Tu, Zhiyong Yu, Jie Huang, Fangwan Huang, **Yuezhong Wu**, Lei Han, Leye Wang, Runhe Huang, "Adaptive Role Learning with Evolutionary Multi-agent Reinforcement Learning for UAV-Vehicle Collaboration in Sparse Mobile Crowdsensing", in IEEE Internet of Things Journal, 2025.
5. **[Ad Hoc Networks 2025]** Ming Li, Furong Xu, Yuqin Wu, Jianshan Zhang, Weitao Xu, **Yuezhong Wu**, "Real-time task dispatching and scheduling in serverless edge computing", in Ad Hoc Networks, 2025.
6. **[Food Chemistry 2025]** Chencheng Wei, Jiheng Zhang, Gaozheng Li, Yi Zhong, Zhaoting Ye, Handong Wang, Kezhi Li, Yuanzi Wu, **Yuezhong Wu**, Heng Luo, Qi Sun, Zuquan Weng, "Rapid and non-destructive detection of formaldehyde adulteration in shrimp based on deep learning-assisted portable Raman spectroscopy", in Food Chemistry, 2025.
7. **[IEEE OJ-ITS 2024]** Minyu Shen, Chaojing Li, **Yuezhong Wu**, Xiaowen Bi, Feng Xiao, "An Extensible Python Open-Source Simulation Platform for Developing and Benchmarking Bus Holding Strategies", in IEEE Open Journal of Intelligent Transportation Systems, 2024.
8. **[TMC 2024]** Huanqi Yang, Di Duan, Hongbo Liu, Chengwen Luo, **Yuezhong Wu**, Wei Li, Albert Y Zomaya, Linqi Song, Weitao Xu. "Scenario-Adaptive Key Establishment Scheme for LoRa-enabled IoV Communications", IEEE Transactions on Mobile Computing, 2024.
9. **[IoTJ 2024] Yuezhong Wu**, Wei Song, Yanxiang Wang, Dong Ma, Weitao Xu, Mahbub Hassan, and Wen Hu, "VibMilk: Non-intrusive Milk Spoilage Detection via Smartphone Vibration", IEEE Internet of Things Journal, 2024.
10. **[Food Control 2024]** Chencheng Wei, Handong Wang, Gaozheng Li, Jianhua Li, Fang Zhang, **Yuezhong Wu**†, Zuquan Weng†, "Multiplex detection methods for mycotoxins in agricultural products: A systematic review", Food Control, 2024.
11. **[TOSN 2023]** Qi Lin, Shuhua Peng, **Yuezhong Wu**, Jun Liu, Hong Jia, Wen Hu, Mahbub Hassan, Aruna Seneviratne, Chun H Wang "Subject-Adaptive Loose-Fitting Smart Garment Platform for Human Activity Recognition", ACM Transactions on Sensor Networks.
12. **[IoTJ 2022]** Wei Song, Hong Jia, Min Wang, **Yuezhong Wu**, Wanli Xue, Chun Tung Chou, Jiankun Hu, Wen Hu. "Pistis: Replay Attack and Liveness Detection for Gait-based User Authentication System on Wearable Devices Using Vibration", IEEE Internet of Things Journal (IoTJ). 2022.
13. **[JETAI 2019]** Thomas Weise, **Yuezhong Wu**, Weichen Liu, and Raymond Chiong. "Implementation Issues in Optimization Algorithms: Do they matter?", Journal of Experimental & Theoretical Artificial Intelligence 31(4):533–554, 2019.
14. **[JGO 2016]** Thomas Weise, **Yuezhong Wu**, Raymond Chiong, Ke Tang, and Jörg Lässig. "Global versus Local Search: The Impact of Population Sizes on Evolutionary Algorithm Performance", Journal of Global Optimization. 2016.

Posters and Demos

1. **[MobiCom 2022]** Wei Song, Min Wang, **Yuezhong Wu**, Chun Tung Chou, Jiankun Hu, Wen Hu. "Poster Abstract: Towards Behavior-Independent in-hand User Authentication on Smartphone Using Vibration", In Proceedings of Annual International Conference On Mobile Computing And Networking, 2022.
2. **[IPSN 2020] Yuezhong Wu**, Carlos Ruiz, Shijia Pan, Hae Young Noh, Mahbub Hassan, Pei Zhang, Wen Hu. "Poster Abstract: Using Deep Learning to Classify The Acceleration Measurement Devices", In the Proceedings of the 19th ACM/IEEE Conference on Information Processing in Sensor Networks, 2020.
3. **[IPSN 2020]** Qi Lin, **Yuezhong Wu**, Jun Liu, Wen Hu and Mahbub Hassan. "Demo Abstract: Human Activity Detection with Loose-Fitting Smart Jacket", In the Proceedings of the 19th ACM/IEEE Conference on Information Processing in Sensor Networks, 2020.
4. **[Sensys 2019]** Hong Jia, **Yuezhong Wu**, Jun Liu, Lina Yao and Wen Hu. "Poster Abstract: Mobile Golf Swing Tracking Using Deep Learning with Data Fusion", In the Proceedings of the 17th Conference on Embedded Networked Sensor Systems, 2019.
5. **[Sensys 2018] Yuezhong Wu**, Wen Hu, and Mahbub Hassan. "Poster Abstract: Learning for Device Pairing in Body Area Networks", In the Proceedings of the 16th ACM Conference on Embedded Networked Sensor Systems, 2018.

SERVICES

Committee Services

- 2026: Video Chair @ UbiComp'2026, Session Chair @ UbiComp'2026
- 2025: Session Chair @ UbiComp'2025
- 2025: Publication Chair and Track Chair @ AIoTSys'2025
- 2019: Companion Programme Committee @ GECCO'2019 & IEEE CEC'2019

Editorial Services

- 2026: Distinguished Reviewer @ ACM TOSN
- 2025: Distinguished Reviewer @ ACM TIOT

Review Services

- 2026: IMWUT/UbiComp, Pattern Recognition, Ad Hoc Networks, Expert Systems With Applications, ICASSP, TOSN, TIOT, GPC, Future Generation Computer Systems, International Journal of Intelligent Robotics and Applications, CMC-Computers Materials & Continua
- 2025: IMWUT/UbiComp, TOSN, Ad hoc Networks, Expert Systems With Applications, IEEE Pervasive Computing
- 2024: IMWUT/UbiComp, TOSN, Ad Hoc Networks
- 2023: ACM MobiSys, IEEE IoTJ
- 2022: ACM Sensys, IEEE Network Magazine, Applied Soft Computing
- 2021: ACM MobiSys, ACM Sensys, Applied Soft Computing
- 2020: IEEE TIFS
- 2019: ACM/IEEE IPSN, ACM Sensys, ACM BuildSys, GECCO, IEEE CEC, Applied Soft Computing

TALKS AND PRESENTATIONS

- **[INFOCOM]** (May.2026) DeWater: Towards Efficient Underwater Communication via Fine-tuned Learning-enhanced Demodulation (Tokyo, Japan)
- **[UbiComp]** (Oct.2025) HandID: Towards Unobtrusive Gesture-independent User Authentication on Smartphones using Vibration-based Hand Biometrics. (Espoo, Finland)
- **[UbiComp]** (Sep.2022) SafeGait: Safeguarding Gait-based Key Generation against Vision-based Side Channel Attack using Conditional Generative Adversarial Network. (Virtual)

- **[UbiComp]** (Sep.2020) Auto-Key: Using Autoencoder to Speed Up Gait-based Key Generation in Body Area Networks. (Virtual)
- **[IPSN]** (Apr.2020) E-Jacket: Posture Detection with Loose-Fitting Garment using a Novel Strain Sensor. (Virtual)
- **[IPSN]** (Apr.2020) Poster Abstract: Using Deep Learning to Classify The Acceleration Measurement Devices. (Virtual)
- **[SenSys]** (Nov.2018) Poster Abstract: Learning for Device Pairing in Body Area Networks. 16th ACM Conference on Embedded Networked Sensor Systems. (Shenzhen, China)

HONORS AND AWARDS

Scientia Scholarship, UNSW	2018
Data61 Top-Up Scholarship, CSIRO data61	2018
Ranked first in my major and recommended to study for a master's degree at USTC without examination.	2013
Outstanding Graduate, SWJTU	2013
Pacemaker to Merit Student, SWJTU	2013
The Special Prize Scholarship (thrice), SWJTU	2011 - 2012
National Scholarship of China	2011

TEACHING

Fuzhou University

- 2026-2027 Semester 1: Lecture, Software Project Management (graduate course)
- 2026-2027 Semester 1: Lecture, Software Engineering (undergraduate course)
- 2025-2026 Semester 1: Lecture, Software Project Management (graduate course)
- 2025-2026 Semester 1: Lecture, Software Engineering (undergraduate course)
- 2024-2025 Semester 2: Lecture, Software Project Management (undergraduate course)
- 2024-2025 Semester 1: Lecture, Software Project Management (graduate course)
- 2024-2025 Semester 1: Lecture, Software Engineering (undergraduate course)
- 2023-2024 Semester 2: Lecture, Software Project Management (undergraduate course)

University of Science and Technology of China

- 2014-2015 Semester 1: Teaching Assistant, Practical Optimization Algorithm Design (in English) (graduate course)