Hui Zhao — Curriculum Vitae

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I am pursuing the Ph.D. degree with the School of Computer Science and Engineering, University of Electronic Science and Technology of China. My research is supervised by Prof. *Zheng Chang*. Now I am a visiting Ph.D. student at University College Dublin, supervised by Prof. *Madhusanka Liyanage*. I am a student member IEEE. I served as the TPC member of IEEE WCNC2024-WS11 and reviewer of IEEE journals. My research is primarily centered around the utilization of **AI in UAV wireless networks**. The key objectives are to address "how the UVA wireless networks can provide better wireless access service and intelligent edge computing service as aerial BSs" with the help of **DL/ML**.

EDUCATION

University College Dublin — **Majoring in Computer Science**
Visiting Ph.D. IN School of Computer Science — *November 2024 - Present*

– Supervised by Prof. Madhusanka Liyanage

University of Electronic Science and Technology of China — **Majoring in Computer Science**
Ph.D. IN School of Computer Science and Engineering — *September 2022 - Present*

– Supervised by Prof. Zheng Chang

Beijing University of Technology — **Majoring in Computer Science**
M.S. IN Faculty of Information Technology — *September 2019 - June 2022*

– Supervised by Assoc. Prof. Xiaobin Xu

Henan Polytechnic University — **Majoring in Engineering**
B.E. IN School of Engineering — *September 2014 - June 2018*

RESEARCH INTERESTS

UAV wireless networks, Mobile Edge Computing, Internet of Things, Deep reinforcement learning

PUBLICATIONS

Journal

[1] Y. Bai, **H. Zhao**, X. Zhang, Z. Chang, R. Jäntti and K. Yang, "Toward Autonomous Multi-UAV Wireless Network: A Survey of Reinforcement Learning-Based Approaches," ***IEEE Communications Surveys & Tutorials***, vol. 25, no. 4, pp. 3038-3067, Fourthquarter 2023. (**IF: 35.6, Rank: Q1**)

[2] **H. Zhao**, G. Lu, Y. Liu, Z. Chang, L. Wang and T. Hämäläinen, "Safe DQN-Based AoI-Minimal Task Offloading for UAV-Aided Edge Computing System," **IEEE Internet of Things Journal**, doi: 10.1109/JIOT.2024.3422670. (**IF: 10.6, Rank: Q1**)

[3] X. Zhang, W. Chen, **H. Zhao**, Z. Chang, Z. Han, "Joint Accuracy and Latency Optimization for Quantized Federated Learning in Vehicular Networks." **IEEE Internet of Things Journal**, doi: 10.1109/JIOT.2024.3406531. (**IF: 10.6, Rank: Q1**)

[4] X. Xu, Q. Wang, S. Li, H. Xu, **H. Zhao** and Z. Han, "An Adaptive Dual-mode Task-oriented Resource Management Strategy for GEO Relay Systems," ***EEE Transactions on Mobile Computing***, vol. 23, no. 5, pp. 4303-4317, May 2024. (**IF: 7.9, Rank: Q1**)

[5] X. Xu, **H. Zhao**, H. Yao and S. Wang, "A Blockchain-Enabled Energy-Efficient Data Collection System for UAV-Assisted IoT," ***IEEE Internet of Things Journal***, vol. 8, no. 4, pp. 2431-2443, 15 Feb.15, 2021. (**IF: 10.6, Rank: Q1**)

[6] X. Xu, **H. Zhao**, C. Liu, et al. Resource management of GEO relays for real-time remote sensing. ***Peer-to-Peer Netw. Appl.*** 14, 3333–3348 (2021). (**IF: 4.2, Rank: Q2**)

Conferences

[1] **H. Zhao**, X. Zhang, W. Chen, X. Xu, L. Wang and Z. Chang, "Multi-dimensional Resource Allocation in HAP-assisted UAV Wireless Networks for IoRT Data Collection," ***in IEEE Global Communications Conference***, Cape Town, South Africa, 2024, pp. 217-222.

[2] **H. Zhao** and Z. Chang, "Energy Efficient Trajectory Optimization and Resource Allocation for HAP-assisted UAV Wireless Networks," ***in IEEE Global Communications Conference***, Kuala Lumpur, Malaysia, 2023, pp. 3765-3770.

[3] X. Xu, **H. Zhao**, C. Liu, C. Fan, Z. Liang and S. Wang, "On the Aggregated Resource Management for Satellite Edge Computing," ***in IEEE International Conference on Communications***, Montreal, QC, Canada, 2021, pp. 1-6.

Patents

[1] **H. Zhao**, X. Xu, X. Li, J. Li, X. Xue, W. Zhang, J. Wu, "An Adaptive Data Transmission Method Based on MPTCP and Network Encoding," Beijing: CN113055285A,2021-06-29.

Ongoing Works

[1] **H. Zhao**, M. Luan, M. Liyanage, Z. Chang, "Joint Optimization of Sensing, Communication, Computing for Collaborative Multi-UAV Edge Computing System." (**submitted to IEEE Transactions on Wireless Communications (major revision)**)

[1] **H. Zhao**, P. Ranaweera, M. Liyanage, Z. Chang, "Collaborative Sensing, Communication and Computing for UAV-assisted Space-Air Networks." (**submitted to IEEE Globecom 2025**)

Paper Reviewer

- **IEEE Global Communications Conference 2025**
- **IEEE Communications Magazine**
- **IEEE Transactions on Machine Learning in Communications and Networking**
- **IEEE Conference on Vehicular Technology (VTC) 2025-spring**
- **IEEE Wireless Communications and Networking Conference 2024**
- **IEEE Global Communications Conference 2023**
- **IEEE International Conference on Computer Communications 2022**
- **IEEE Network Magazine**
- **IEEE Internet of Things Journal**
- **IEEE Transactions on Cognitive Communications and Networking**

- **China Communications**

AWARDS & HONORS

• Ph.D. Student Scholarship from UESTC	School level	2023 & 2024
• National Scholarship for Postgraduate Students	**National level**	2022
• Outstanding Graduate Students	School level	2022
• The First Price Scholarship (3 times)	School level	2019-2021
• Special Scholarship for Technological Innovation	School level	2020