

Hui Zhao — Curriculum Vitae

🏛 Universe of Electronic Science & Technology of China

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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](#). I am a student member IEEE. I now serve as the TPC member of IEEE WCNC2024-WS11. 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 edge computing service as aerial BSs" AND "how to realize effective data collection strategy in UAV-assisted networks" with the help of DL/ML.

EDUCATION

University of Electronic Science and Technology of China

Ph.D. IN School of Computer Science and Engineering

Majoring in Computer Science

September 2022 - Present

– Supervised by Prof. Zheng Chang

Beijing University of Technology

M.S. IN Faculty of Information Technology

Majoring in Computer Science

September 2019 - June 2022

– Supervised by Assoc. Prof. Xiaobin Xu

Henan Polytechnic University

B.E. IN School of Engineering

Majoring in Engineering

September 2014 - June 2018

RESEARCH INTERESTS

UAV networks, O-RAN, 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** 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.
- [2] 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**, Z. Chang, "Multi-UAV-assisted Collaborative Aerial Access in Integrated Sensing-Communication-Computing System." (submitted to *IEEE Transactions on Wireless Communications*)
- [2] **H. Zhao**, X. Zhang, W. Long, X. Xu and Z. Chang, " Multi-dimensional Resource Allocation in HAP-assisted UAV Wireless Networks for IoRT Data Collection." (accepted by *IEEE Global Communications Conference 2024*)

Paper Reviewer

- 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

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|--|----------------|-----------|
| • Ph.D. Student Scholarship from UESTC | School level | 2023 |
| • 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 |