

Zixin (Eric) Wang

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Research interests: edge intelligence, learning for resource allocation, sensing-communication-computing-control.

EDUCATION

University of Oulu, Center of Wireless Communication

Visiting doctoral researcher, work with Prof. Mehdi Bennis.

Oulu, Finland

Nov. 2022 – Oct. 2023

University of Chinese Academy of Sciences (ShanghaiTech University)

Ph.D. candidate in Information and Communication Engineering.

Shanghai, China

Sept. 2018 – Dec. 2023 (Expected)

Wuhan University of Technology

B.Sc. in Mathematics, Information and Computer Science.

Wuhan, China

Sept. 2014 – Jun. 2018

RESEARCH

Journals

1. **Z. Wang**, H. Zhu, M. He, Y. Zhou, X. Luo, and N. Zhang. “GAN and Multi-Agent DRL based Decentralized Traffic Light Signal Control”. accepted for publication in *IEEE Trans. Veh. Technol.*, 2021.
2. **Z. Wang**, J. Zong, Y. Zhou, Y. Shi, and V. W.S. Wong. “Decentralized Multi-Agent Power Control in Wireless Networks with Frequency Reuse” accepted for publication in *IEEE Trans. Commun.*, 2021.
3. **Z. Wang**, Y. Zou, Q. An, Y. Zhou, Y. Shi, and M. Bennis. “A Graph Neural Network Learning Approach to Optimize RIS-Assisted Federated Learning”, accepted for publication in *IEEE Trans. Wireless Commun.*, 2023.
4. H. Zhu, **Z. Wang**, F. Yang, Y. Zhou, and X. Luo. “Intelligent Traffic Network Control in the Era of Internet of Vehicles”. accepted for publication in *IEEE Trans. Veh. Technol.*, 2021.
5. Y. Zou, **Z. Wang**, X. Chen, H. Zhou and Y. Zhou, “Knowledge-Guided Learning for Transceiver Design in Over-the-Air Federated Learning,” accepted for publication in *IEEE Trans. Wireless Commun.*, 2022.
6. Z. Yang, Y. Shi, Y. Zhou, **Z. Wang**, and K. Yang. “Trustworthy Federated Learning via Blockchain”. accepted for publication in *IEEE Int. Things J.*, 2022.
7. Y. Shi, L. Lian, Y. Shi, **Z. Wang**, Y. Zhou, L. Fu, L. Bai, J. Zhang, W. Zhang. “Machine Learning for Large-Scale Optimization in 6G Wireless Networks”. accepted for publication in *IEEE Commun. Surveys Tuts.*, 2023.
8. **Z. Wang**, M. Bennis, and Y. Zhou. “Graph Attention-based MADRL for Access Control and Resource Allocation in Wireless Networked Control Systems”, submitted to *IEEE Trans. Wireless Commun.*, 2023.
9. **Z. Wang**, Y. Zhou, and Y. Shi. “Over-the-air Federated Graph Learning”, submitted to *IEEE Trans. Wireless Commun.*, 2023.

Conferences

1. **Z. Wang**, H. Zhu, Y. Zhou, and X. Luo. “Joint Traffic Signal and Connected Vehicle Control in IoV via Deep Reinforcement Learning”. in *Proc. IEEE WCNC*, Nanjing, China, Mar., 2021.
2. M. He, X. Luo, **Z. Wang**, F. Yang, H. Qian, and C. Hua. “Global Traffic State Recovery via Local Observations with Generative Adversarial Networks”. in *Proc. IEEE Int. Conf. Acoust. Speech Signal Process. (ICASSP)*, Barcelona, Spain, May, 2020.
3. Y. Zhao, **Z. Wang**, Z. Wang, X. Chen and Y. Zhou. “Learning to Beamform for Dual-Functional MIMO Radar-Communication Systems”. in *Proc. IEEE Int. Conf. Commun. (ICC)*, Roma, Italy, May, 2023.
4. Z. Li, Z. Wang, **Z. Wang**, and Y. Zhou. “Energy-Efficient Federated Learning Over Hierarchical Aerial Wireless Networks”, accepted for publication in *Annu. Int. Symp. PIMRC*, Toronto, Canada, Sept., 2023.

Patents

1. Y. Zhou, **Z. Wang**. “An end-to-end learning design method for reconfigurable intelligent surface assisted over-the-air computation”, CN patent, 202111169704.8.

TEACHING & SERVICES

▶ *Teaching Assistant*

- Signal Detection and Estimation, 2019.
- Convex Optimization, 2020.

▶ *Academic Management Assistant*

- Assisting in hosting regular seminars of SIST, ShanghaiTech University (more than 60 times).

▶ *Community Services*

- Participate in the reviews of ICC, GLOBECOM, TWC, TCOM.

▶ *Awards*

- CSC scholarship 2022.

SKILLS

▶ *Computer Skills*

- Python, C++, MatLAB, Pytorch.