

Dr. Wei Guo

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Academic Positions

Hong Kong University of Science and Technology Postdoctoral Fellow. Advisors: Prof. Khaled B. Letaief and Prof. Jun Zhang	Sept. 2023 – Present Hong Kong SAR, China
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Education

The Chinese University of Hong Kong, Shenzhen (CUHK-Shenzhen) Ph.D., Computer and Information Engineering. Advisor: Prof. Chuan Huang	Jan. 2020 – Jul. 2023 Shenzhen, China
University of Electronic Science and Technology of China (UESTC) B.Eng., Electrical Engineering	Sept. 2013 – Jun. 2017 Chengdu, China

Academic Visits

Purple Mountain Laboratories Visiting student for National Key Research and Development Program of China	Sept. 2021 – Nov.2021 Nanjing, China
The Future Network of Intelligence Institute (FNii), CUHK-Shenzhen Visiting student. Advisors: Prof. Chuan Huang and Prof. Shuguang Cui	Jun. 2019 – Dec.2019 Shenzhen, China
Shenzhen Reserach Institute of Big Data (SRIBD) Visiting student. Advisors: Prof. Wenye Li and Prof. Shuguang Cui	Feb. 2017 – Jun. 2017 Shenzhen, China

Current Research Interests

Wireless Communications, Over-the-Air Computing, Federated Learning, Wireless AI

Publications

Preprints:

- **Wei Guo**, Meng He, Chuan Huang, Hengtao He, Shenghui Song, Jun Zhang, and Khaled B. Letaief, “Model-Driven Deep Learning for Distributed Dectection with Binary Quantization,” ([arXiv: 2404.00309](#)) , 2024.

Journals:

- **Wei Guo**, Chuan Huang, Xiaoqi Qin, Lian Yang, and Wei Zhang, “[Dynamic Clustering and Power Control for Two-Tier Wireless Federated Learning](#),” *IEEE Trans. Wireless Commun.* (TWC), vol. 23, no. 2, pp. 1356-1371, Feb. 2024.
- **Wei Guo**, Ran Li, Chuan Huang, Xiaoqi Qin, Kaiming Shen, and Wei Zhang, “[Joint Device Selection and Power Control for Wireless Federated Learning](#),” *IEEE J. Sel. Areas Commun.* (JSAC), vol. 40, no. 8, pp. 2395-2410, Aug. 2022.
- **Wei Guo**, Han Zhang, and Chuan Huang, “[Energy Efficiency of Two-Way Communications under Various Duplex Modes](#),” *IEEE Internet Things J.* (IoT-J), vol. 8, no. 3, pp. 1921-1933, Feb. 2021.

Conference Proceedings:

- **Wei Guo**, Ran Li, Chuan Huang, Xiaoqi Qin, Kaiming Shen, and Wei Zhang, “[Optimized Device Selection and Power Control for Wireless Federated Learning](#),” in *Proc. IEEE Glob. Commun. Conf. (Globecom)*, Dec. 2022.
- **Wei Guo**, Chuan Huang, Xiaoqi Qin, Lian Yang, and Wei Zhang, “[Dynamic Clustering and Power Control for Two-Tier Over-the-Air Federated Learning](#),” in *Proc. IEEE/CIC Int. Conf. Commun. China (ICCC)*, Aug. 2022.
- **Wei Guo** and Chuan Huang, “[Energy Efficiency of Full-Duplex Two-Way Channels](#),” in *Proc. Glob. Conf. Signal Inf. Process. (GlobalSIP)*, Nov. 2019.

Patents:

- CN patent: “一种面向无线联邦学习的用户协同传输方法”, 黄川, 崔曙光, 郭玮. 专利申请号: 202211032064.0, 2022.

Teachings

Teaching assistant at CUHK-Shenzhen:

EIE4006 Performances Evaluation of Communication Networks	Sum’ 2020-21
CIE6126 Performances Analysis of Computer and Communication Networks	Sum’ 2020-21
EIE3001 Signals and Systems	Spr’ 2021

Awards

Exemplary Reviewer of IEEE Wireless Communications Letters	2020
Outstanding Bachelor’s Degree Thesis in UESTC	2017

Academic Services

TPC Member:

- IEEE Global Communications Conference (Globecom): 2019-2023
- IEEE/CIC International Conference on Communications in China (ICCC): 2019-2023

Journal Referee:

- IEEE Transactions on Wireless Communications
- IEEE Wireless Communications Letters
- IEEE Systems Journal
- IEEE Transactions on Machine Learning in Communications and Networking
- IEEE Internet of Things Magazine
- IEEE Journal on Selected Areas in Information Theory
- China Communications
- Journal of Communications and Information Networks
- ...

Presentations

2022 IEEE Globecom, Rio de Janeiro, Brazil, virtual presentation

2022 IEEE/CIC ICC, Foshan, China, Oral presentation

2019 IEEE GlobalSIP, Ottawa, Canada, Oral presentation