

# Dr. Wei Guo

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## Academic Positions

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<b>Hong Kong University of Science and Technology</b> Postdoctoral Fellow. Advisors: <a href="#">Prof. Khaled B. Letaief</a> and <a href="#">Prof. Jun Zhang</a>	Sept. 2023 – Present Hong Kong SAR, China
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## Education

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<b>The Chinese University of Hong Kong, Shenzhen (CUHK-Shenzhen)</b> Ph.D., Computer and Information Engineering. Advisor: <a href="#">Prof. Chuan Huang</a>	Jul. 2023 Shenzhen, China
<b>University of Electronic Science and Technology of China (UESTC)</b> B.Eng., Electrical Engineering	Jun. 2017 Chengdu, China

## Academic Visits

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

## Current Research Interests

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Wireless Communications, AI4Wireless, Wireless4AI

## Publications

### Preprints:

- Jingwen Tong, Jiawei Shao, Qiong Wu, **Wei Guo**, Zijian Li, Zehong Lin, and Jun Zhang, "WirelessAgent: Large Language Model Agents for Intelligent Wireless Networks," ([arXiv: 2409.07964](#)), 2024.

### Journals:

- Jiawei Shao, Jingwen Tong, Qiong Wu, **Wei Guo**, Zijian Li, Zehong Lin, and Jun Zhang, "WirelessLLM: Empowering Large Language Models Towards Wireless Intelligence," *J. Commun. Inf. Netw. (JCIN)*, vol. 9, pp. 99-112, Jun. 2024.
- 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**, Meng He, Chuan Huang, Hengtao He, Shenghui Song, Jun Zhang, and Khaled B. Letaief, “[Model-Driven Deep Learning for Distributed Detection with Binary Quantization](#),” in *Proc. IEEE Mediterranean Conf. Commun. Netw. (MeditCom)*, Jul. 2024.
- **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

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#### 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

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

### Academic Services

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#### Conference Reviewers:

- IEEE Global Communications Conference (Globecom): 2019-2024
- IEEE/CIC International Conference on Communications in China (ICCC): 2019-2024
- IEEE Wireless Communications and Networking Conference (WCNC), 2024.
- IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2024.

#### Journal Reviewers:

- IEEE Transactions on Wireless Communications
- IEEE Transactions on Communications
- IEEE Journal on Selected Areas in Information Theory
- IEEE Wireless Communications Letters
- IEEE Systems Journal
- IEEE Transactions on Machine Learning in Communications and Networking

- IEEE Internet of Things Magazine
- China Communications
- Journal of Communications and Information Networks
- ...

#### Presentations

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2024 IEEE MeditCom, Madrid, Spain, Oral presentation  
2022 IEEE Globecom, Rio de Janeiro, Brazil, virtual presentation  
2022 IEEE/CIC ICC, Foshan, China, Oral presentation  
2019 IEEE GlobalSIP, Ottawa, Canada, Oral presentation