Wenzhi (Tom) Fang

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Education

University of Chinese Academy of Sciences | Shanghaitech University — **Shanghai, China**
M.S. Candidate in Communication and Information Systems — Sept. 2020– Jul. 2023
Overall GPA: 3.75/4.00; Major GPA: 3.88/4.00
Supervisor: Prof. Yong Zhou and Prof. Yuanming Shi

Shanghai University — **Shanghai, China**
B.S. in Communication Engineering — Sept. 2016– Jul. 2020

Research interests

My past studies focus on the optimization of the physical layer of wireless communication. Now, I am interested in optimization theory and its application in federated learning.

Publication / Under Review

- **W. Fang**, Y. Jiang, Y. Shi, Y. Zhou, W. Chen, and K. Letaief, "Over-the-Air Computation via Reconfigurable Intelligent Surface," IEEE Trans. Commun., vol. 69, no. 12, pp. 8612-8626, Dec. 2021.
- **W. Fang**, Y. Zou, H. Zhu, Y. Shi, and Y. Zhou, "Optimal Receive Beamforming for Over-the-Air Computation," in Proc. IEEE SPAWC, Virtual Conferences, Sept. 2021.
- **W. Fang**, M. Fu, K. Wang, Y. Shi, and Y. Zhou, "Stochastic Beamforming for Reconfigurable Intelligent Surface Aided Over-the-Air Computation," in Proc. IEEE Globecom, Virtual Conference, Dec. 2020.
- **W. Fang**, M. Fu, Y. Shi, and Y. Zhou, "Outage Minimization for Intelligent Reflecting Surface Aided MISO Communication Systems via Stochastic Beamforming," in Proc. IEEE SAM, Virtual Conference, Jun. 2020.
- **W. Fang**, Ziyi Yu, Yuning Jiang, Yuanming Shi, Colin N. Jones, and Yong Zhou, "Communication-Efficient Stochastic Zeroth-Order Optimization for Federated Learning," under 2nd round review in IEEE Trans. Signal Process.

Other Research Experience

Conducting a summer internship on Distributed Optimization in KAUST under supervise of Prof. Peter Richtárik from 2022, 6 to 2022, 12

Teaching Assistant at ShanghaiTech University

Course Assistant: EE241: Wireless Communication, Fall, 2021.
Course Assistant: SI263: Distributed Optimization and Intelligence, Spring, 2022.

Awards

China National Scholarship (Top 0.2% Nationalwide), Ministry of Education in China, 2021.

Contests

First prize of China National Undergraduate Electronic Design Competition, 2019.
First prize of Chinese Mathematics Competitions, Shanghai, 2017.

Skills

Matlab, Python, CVX, PyTorch, Latex