Special Issue

Challenges and Opportunities Presented by Federated Learning in Mobile Computing

Message from the Guest Editors

Due to the increasing need for decentralized and privacy-preserving computation, federated learning (FL) has become a pivotal technique in the realm of mobile computing. Nevertheless, there remain challenges in the deployment of FL in mobile computing, such as issues related to scalability, privacy and security, energy efficiency, and communication efficiency and ensuring model robustness under heterogeneous settings. With this Special Issue, we seek high-quality submissions that highlight recent advances in the field of federated learning in mobile computing. Research areas of interest include (but are not limited to) the following:

- Federated learning algorithms for mobile devices;
- Communication-efficient federated learning;
- Energy-efficient federated learning;
- Challenges in non-IID data distributions in FL;
- Challenges in heterogeneous data and devices in FL;
- Scalability and resource management in federated learning;
- Machine learning and AI for wireless communications;
- B5G networks and federated learning;
- Security and privacy issues in mobile computing.

We look forward to receiving your contributions.

Guest Editors

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Deadline for manuscript submissions

closed (15 May 2025)

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

Editor-in-Chief

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