



IETE Journal of Research Special Issue on

Federated Learning for Blockchain Systems and Industrial Internet of Things

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In recent years, mobile technology and the internet of objects have been used in mobile networks to meet new technical demands. The advancement of the technology focuses on data communication, the reduction of transmission and network load. The emerging needs have centered on data storage, computation and low latency management in potentially smart city, transport, smart grids and a wide number of sustainable environments. Federated Learning's contributions include an effective framework to improve network security in heterogeneous Industrial Internet of Things (IIoT) environments. Federated Learning (FL) is a bottleneck technology that improves wireless paradigm privacy and security problems. Federated Learning is a platform which promotes the connectivity of intelligent systems with increased network capacity, service quality, accessibility of the network and user experience. Blockchain is a technology which is exposed and can contribute to stability in IIoT. Blockchain appears to be a mechanism to preserve IIoT and retain confidentiality of user / data, and the capacity to provide unauthorized reproductive and information services.

The main focus of this Special Section is on the most recent applications of Federated Learning using blockchain and IIoT to optimize data for next-generation networks. This Special issue provides an insight to the readers in way of inculcating the theme that shapes the next generation secure communication.

Topics include, but are not limited to, the following:

- Federated based traffic offloading prediction and optimization
- Spectrum Sensing, Spectrum Management
- Blockchain and IoT applications
- Artificial intelligence approaches for unmanned aerial vehicles (UAVs)
- Edge/IoT based wireless communication
- Deep learning for edge computing networks
- Training scheme of Federated Learning model
- Segmentation of Federated Learning models for collaborative intelligence between cloud and the edge

Important Dates:

Deadline for submissions: 31-January, 2022

Final Decision: 15-May, 2022

Tentative Publication Date: Q4, 2022

Submission information:

All manuscripts should follow the author instructions of *IETE Journal of Research* at <https://www.tandfonline.com/toc/tijr20/current> and be submitted online at ScholarOneManuscripts™ submission site: <https://mc.manuscriptcentral.com/tijr>. During the submission,

please indicate that your manuscript is for the special Open Access issue entitled, **Federated Learning for Blockchain Systems and Industrial Internet of Things**. The authors would be asked for this information in step one of the submission form. As this issue is to be published Open Access, there will be an Article Publishing Charge (APC) for each accepted special issue article. The APC will be 1,500 US dollars.

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