

## Call for Papers

### Track 10 – AI/ML FOR COMMUNICATIONS AND NETWORKING

#### Track Chairs:

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#### Scope and Motivation:

Communications and Networks are becoming increasingly complex to the level where traditional parameter tuning approaches and human operator-based decision mechanisms are proving to be insufficient. On the other hand, the abundance of data from networks, new hardware with huge processing capabilities, and advanced machine learning algorithms are creating new opportunities for data-driven decisions. In addition, novel and more sophisticated applications that exploit the value of data and the knowledge extraction ability of AI/ML are emerging in this space, fostering research at the intersection of communications, data science, and learning theory. More importantly, AI/ML-based data-driven approaches provide decent performance even if some parameters required to solve the formulated problem with model-based optimization are unknown, making it easy to apply to practical environments with many constraints. The flexibility and versatility of AI/ML-based communication/networking technologies is truly an innovation for next-generation mobile communication systems in which service types are expected to be more diversified. In this context, this track invites original contributions in the area of AI/ML for Communications and Networking.

#### Main Topics of Interest:

Topics of interest include but are not limited to the following:

- AI/ML for radio resource management;
- AI-enabled RAN optimization;
- AI/ML for telecom infrastructure optimization;
- AI-enabled for Multi-Access Edge Computing (MEC);
- Advances in AI for signal processing;
- AI/ML for channel estimation and channel prediction;
- AI/ML for multiple access;
- Network slicing using AI/ML;
- AI/ML for sensor data mining;
- AI/ML for wireless localization;
- AI/ML for routing and management of wireless and sensor networks;
- AI/ML for anomaly detection in wireless and sensor networks;
- Distributed and federated learning in wireless and sensor networks;
- Transfer learning and meta learning in wireless and sensor networks;
- IoT in-network computation using AI/ML;
- AI/ML driven crowdsensing;
- AI/ML for airborne wireless communications;
- AI/ML for end-to-end wireless communications;
- Privacy-preserving or safe AI/ML for communications and networking;
- Novel wireless applications enabled by deep learning.