Call for Papers
Track 5 – 5G and Towards 6G

Track Chairs:

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Scope and Motivation:

The era of the fifth generation (5G) technology has just begun, and its promise to substantially improve the system performance has turned into reality. However, the ever increasing demand for new unmanned and autonomous applications involving both smartphones and heterogeneous wireless devices on the ground, in the sky and even in space is highlighting the limitation of ongoing deployment of 5G cellular systems in enabling Internet of Everything (IoE) applications requiring ultra-low latency, very large spectrum, energy efficiency, support for a massive number of connections and high reliability. To overcome these challenges, the design of the forthcoming sixth generation (6G) wireless system will be driven by both past trends (e.g., densification, higher rates, and massive antennas) and emerging trends including new spectral bands, supporting technologies, devices and services. The purpose of this Special Track is to provide a platform for the discussion of the major research challenges, latest developments and recent advances in 5G and towards 6G networks.

Main Topics of Interest:

Potential topics include, but are not limited to, the following:

- Breakthrough technologies and concepts for 5G and towards 6G
- Key drivers and core requirements for 5G and towards 6G
- Above 6 GHz: millimeter-wave, Terahertz-band, optical wireless communications
- Smart environments enabled by controllable surfaces
- IoE services
- Artificial Intelligence and Machine Learning-based approaches for 5G and towards 6G
- Wireless Brain-Computer Interaction
- Connected Robotics and Autonomous Systems (CRAS)
- End-to-end co-design of communication, control, and computing functionalities
- Smart radio resource management techniques
- Integrated terrestrial, airborne, and satellite networks
- 3D wireless networks
- Techniques to improve energy efficiency
- Energy transfer and harvesting techniques for enabling Self-Sustainable Networks (SSN)
- New security concepts