

Call for Papers

Track 1 – Edge/Cloud Computing and Networking

Track Chairs:

Kyunghan Lee, Seoul National University, South Korea (email: kyunghanlee@snu.ac.kr)

Berk Canberk, Istanbul Technology University, Turkey (email: canberk@itu.edu.tr)

Scope and Motivation:

The rapid evolution in computing and communication technologies in recent years has revolutionized the accessibility and location of applications, data storage, and processing resources. For efficient computing resource utilization and ubiquitous connections from any network end devices with limited computing capability, the cloud computing paradigm which focuses on reliable and cost-efficient computing, software, storage, and virtualization of the hardware resources has been prevalent and widely adopted. However, as some online or real-time interactive applications require a quick and timely response from the computing center, some small computing centers need to be set up closer to the end devices to guarantee a lower latency and a limited jitter. These small computing centers close to the end devices form the edge computing paradigm. A hierarchical architecture or hybrid design of cloud and edge computing may be the solution to fit the various applications and use cases. However, the realization of these computing paradigms or their hybrid design is challenging, including the modeling, analysis, implementation, design, and evaluation of the architecture, protocols, algorithms, computing, communication, control, energy consumption, delay, and other techniques.

Main Topics of Interest:

- Edge/Cloud Computing and Networking for prevailing consumer applications such as AI, AIoT, and AR/VR/MR/XR.
- Edge/Cloud Computing and Networking for Industry IoT (IIoT)
- Edge/Cloud Computing and Networking for medical applications and epidemic prevention
- Computing and networking convergence
- Performance guarantee, QoS, and QoE in Edge/Cloud systems
- Machine Learning approaches for Edge/Cloud computing and networking
- Cloud network operating systems
- Datacenter(DC)/micro-DC network management
- Intra-cloud and inter-cloud management
- Communications and networking protocols for the hybrid cloud and edge computing architectures
- Energy-efficient algorithms, protocols, and designs
- Access control strategies
- Security, privacy, trust for Edge/Cloud computing and networking
- Edge/Cloud forensics
- Mission-critical edge computing and networking
- Mobile Edge/Cloud networking in next-generation wireless mobile networks
- Mobile Edge/Cloud computing
- Optimal resource arrangement/allocation/migration in Edge/Cloud computing centers
- Hierarchical architecture or hybrid design amid Edge/Cloud computing centers
- The hybrid design of Edge/Cloud computing for various AI and IoT applications
- Software Defined Networking approaches for Edge and cloud computing
- Edge Computing for Digital Twins
- Edge Computing approaches for Industrial IoT