

## **IEEE Internet of Things Journal Special Issue on Smart IoT System: Opportunities by Linking Cloud, Edge, and AI**

Recently, the Internet of Things (IoT) technologies have made their entrances into many fields such as smart city, healthcare, intelligent transportation, forest protection, and environmental monitoring.

However, current IoT system is facing great difficulty to efficiently handle the huge data generated from IoT devices. It has become challenging to ensure low latency, energy efficiency, and so on. To cope with the huge data and reply promptly and accurately, a recent trend is to deploy well trained artificial intelligence (AI) model on edge servers, whose capacities are somewhat bigger than those of IoT devices. However, since the training of AI demands huge computation and memory resources, the training process is preferred to be done in cloud. This link among cloud, edge, and AI, poses many challenges that call for novel approaches and rethinking of the entire architecture, communication, and processing to meet requirements in latency, reliability, and so on. This special issue is focused on exploiting the building of a smart IoT system by involving cloud, edge, and AI.

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

- Architecture Design between Cloud and Edge for IoT
- Distributed Computing Architectures/Algorithms/Models for IoT
- High-performance Computing Architectures between Cloud and Edge
- Parallel and Distributed Computing Architectures for AI
- Dataflow Models and Computing Architectures for IoT
- AI Based Data Analysis and Decision
- Automation in IoT
- AI for Quality-of-Service (QoS) Management in IoT
- Communication-aware Design between Cloud and Edge
- Energy-efficient Processing between Edge and IoT Devices
- QoS-aware Computing Offloading between Edge and Cloud in IoT
- Hardware/Software Design for Efficient Offloading in IoT

### **Submission:**

All original manuscripts or revisions to the IEEE IoT Journal must be submitted electronically through IEEE Manuscript Central, <http://mc.manuscriptcentral.com/iot>. Author guidelines and submission information can be found at <http://ieee-iotj.org/>.

### **Important dates:**

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