

IEEE Internet of Things Journal Special Issue on Artificial Intelligence Powered Edge Computing for Internet of Things

Recent years have witnessed the proliferation of mobile computing and Internet-of-Things (IoT), where billions of mobile and IoT devices are connected to the Internet, generating zillions Bytes of data at the network edge. Driving by this trend, edge computing, an emerging computing paradigm, has received a tremendous amount of interest. By pushing data storage, computing, and controls closer to the network edge, edge computing has been widely recognized as a promising solution to meet the requirements of low latency, high scalability and energy efficiency, as well as mitigate the network traffic burdens. However, with the emergence of diverse IoT applications (e.g., smart home, smart city, industrial automation, connected car), it becomes challenging for edge computing to deal with these heterogeneous IoT environments. Motivated by the success of artificial intelligence (AI) in a wide spectrum of fields, it is envisaged that AI powered edge computing could overcome the emerging challenges by fully unleashing the potential of the edge big data. The resulted new inter-discipline, edge AI or edge intelligence, is beginning to receive a tremendous amount of interest. However, research on edge intelligence is still in its infancy stage, and a dedicated venue for exchanging the recent advances of edge intelligence is highly desired by both the computer system and artificial intelligence communities.

This special issue focuses on the overarching architectures, frameworks, and emerging key technologies for the new inter-discipline of edge intelligence. Topics of interest include, but are not limited to:

- Architectures of Edge AI for IoT
- Big Data Analytics for Edge AI
- Resource Management for Edge AI
- Communication and Networking Protocols for Edge AI
- Software Platforms for Edge Intelligence
- 5G-enabled services for Edge intelligence
- Resource-friendly Edge AI Model Design
- Security and Privacy Issues for Edge Intelligence
- Applications/services for Edge AI
- Incentive and Business Models for Edge Intelligence Services
- AI-enabled computation offloading
- Implementation/Testbed/Deployment of Edge AI

Important Dates:

Submissions Deadline: December 15, 2019

Revision Due: April 15, 2020

Final Manuscript Due: June 1, 2020

First Reviews Due: March 1, 2020

Acceptance Notification: May15, 2020

Publication Date: 2020

Submission Guidelines:

All original manuscripts or revisions to the IEEE IoT Journal must be submitted electronically through IEEE Manuscript Central, <http://mc.manuscriptcentral.com/iot>. Solicited original submissions must not be currently under consideration for publication in other venues. Author guidelines and submission information can be found at <http://ieee-iotj.org/guidelines-for-authors/>.

Guest Editors:

- Lei Yang, University of Nevada Reno, USA (leiy@unr.edu)
- Xu Chen, Sun Yat-sen University, Guangzhou, P. R. China (chenxu35@mail.sysu.edu.cn)
- Samir M. Perlaza, INRIA, France (samir.perlaza@inria.fr)
- Junshan Zhang, Arizona State University, USA (junshan.zhang@asu.edu)