CFP IEEE Internet of Things Journal Special Issue on Emerging Trends and Challenges in Fog Computing for IoT

SCOPE: Fog and Edge Computing paradigm is regarded as capable of satisfying the resource requirements for the emerging mobile applications such as virtual and augmented reality, vehicular networks, and the IoT applications. Such implementations will exploit further the capabilities of Mobile Edge Comping (MEC), wireless virtualization, and Software Defined Systems or Networks (SDNs) and Network Function Virtualization (NFV) among others. Due to the non-linearity of the Quality of Experience (QoE) model, the resource manipulation with solution provision within the context of SDN for MEC devices should be solved concurrently so that the associated performance can be assessed and evaluated. The inclusion of MEC, SDN, and NFV and its possible support for 5G systems is emerging as one of the highly active research areas with a large room for improvements. In addition, one important aspect of great importance is the continuously increasing processing, caching and storage capabilities required by the emerging applications such as IoT and virtual reality. The purpose of this special issue is to provide the academic and industrial communities an excellent venue covering all aspects of current work on Fog Computing, Edge Computing and with the long-term architecture that will encompass the different supported middleware(s).

Topics of interest include (but not limited to):

- o Content and service distribution models for fog computing
- o Caching, replication and relaying models for fog computing
- o Energy aware load balancing and scheduling on servers for fog computing
- o Orchestration across computation, storage and communication resources for fog computing
- o Theoretical and experimental evaluation of information-centric networks for fog computing
- o Fog and MEC security and related considerations
- o Real-time communication interfaces and protocols
- o Fog-enabled data services
- o Middleware for Fog/Edge infrastructures
- o Monitoring/metering of Fog/Edge infrastructures (i.e., for storage etc.)
- o Fog computing as an enabler for 5G
- o Intelligence in fog computing for IoT
- o IoT and fog computing convergence mechanisms

Important dates

Submissions Deadline: August 1, 2019 First Reviews Due: October 15, 2019 Revision Due: November 15, 2019

Second Reviews Due/Notification: December 15, 2019

Final Manuscript Due: January 15, 2020

Publication Date: 2020

Submission Guidelines

Authors need to follow the manuscript format and allowable number of pages described at: http://ieee-iotj.org/guidelines-for-authors/. To submit a manuscript for consideration for the special issue, please visit the journal submission website at: https://mc.manuscriptcentral.com/iot.

Guest Editors

- Constandinos Mavromoustakis, University of Nicosia, Cyprus (<u>mavromoustakis.c@unic.ac.cy</u>)
- Mithun Mukherjee, Guangdong University of Petrochemical Technology, China (mithun.mukherjee@outlook.com)
- George Mastorakis, Technological Educational Institute of Crete, Greece (gmastorakis@staff.teicrete.gr)
- Houbing Song, Embry-Riddle Aeronautical University, USA (h.song@ieee.org)
- Maria Gorlatova, Duke University, USA (maria.gorlatova@duke.edu)
- Mohammad Aazam, Carnegie Mellon University, Qatar (aazam@ieee.org)