

# CALL FOR PAPERS

## IEEE Internet of Things Journal Special Issue on Real-time Data Processing for Internet of Things (RTDPIoT)

With the development of Internet of Things (IoT), various large-scale real-time data processing applications for handling real-time sensor data are becoming one of the important applications in Cloud Computing. The academia, the industry and even the government institutions have already begun to pay close attention to how to efficiently process large amounts of sensor data in real-time using Cloud Computing technology. Although Cloud Computing technology has attracted much attention with high-performance, there are strong needs for improving data processing efficiency of large-scale real-time data for IoT. In addition to this, currently the IoT paradigm is facing increasing difficulty to handle the data generated from IoT applications. As a result of this, it is challenging to ensure low latency and network bandwidth consumption, optimal utilization of computational resources, scalability and energy efficiency of IoT devices while moving all data to the cloud. Therefore, this centralized computing model is starting to shift to a decentralized model termed as edge computing, that allows data to be handled from Cloud to the local devices such as smartphones, smart gateways or routers, local PCs or sensor nodes on a smaller scale in real-time.

The objective of RTDPIoT is to bring together the state-of-the-art research contributions that address key aspects of real-time data processing for IoT as well as the challenges in the design and implementation of novel real-time data processing algorithms, architectures and systems for edge computing. Potential topics include, but are not limited to:

- Real-time data processing algorithms, architectures and systems for IoT
- Using Field Programmable Gate Arrays (FPGAs), Graphical Processor Unit (GPU), Application Specific Integrated Circuit (ASIC) and heterogeneous System on Chip (SoC) technologies for high performance data analytics in the IoT paradigm
- Edge computing architectures and implementations for IoT
- Design and implementation of IoT related applications for real-time data processing
- Big data analytics in the IoT paradigm
- Compressive sensing for IoT applications

### Important Date:

Submissions Deadline: <b>December 1, 2017</b> First Reviews Due: <b>February 15, 2018</b> Revision Due: <b>March 15, 2018</b>	Second Reviews Due/Notification: <b>April 15, 2018</b> Final Manuscript Due: <b>May 15, 2018</b> Publication Date: 2018
---	---

### Submission:

All original manuscripts or revisions to the IEEE IoT Journal must be submitted online through the IEEE Manuscript Central, <https://mc.manuscriptcentral.com/iot>. All manuscripts will be peer reviewed and must follow the standard guidelines for manuscript preparation and submission available at: <http://iot-journal.weebly.com/guidelines-for-authors.html>. Select the 'Real-time Data Processing for Internet of Things' special issue, rather than 'Regular Issue', when uploading your manuscript.

### Guest Editors:

Faycal Bensaali  
Qatar University, Qatar  
Email: [f.bensaali@qu.edu.qa](mailto:f.bensaali@qu.edu.qa)

Abbes Amira  
Qatar University, Qatar  
Email: [abbes.amira@qu.edu.qa](mailto:abbes.amira@qu.edu.qa)

Xiaojun Zhai  
University of Derby, UK  
Email: [x.zhai@derby.ac.uk](mailto:x.zhai@derby.ac.uk)

Lu Liu  
University of Derby, UK  
Email: [l.liu@derby.ac.uk](mailto:l.liu@derby.ac.uk)