

IEEE Internet of Things Journal

Special Issue on

Blockchain Enabled Edge Computing and Intelligence

Internet of things (IoT) has been connecting a massive number of devices to the Internet and playing a key role to enable smart world applications. Huge amounts of data are generated by IoT devices everyday. How to manage and make use of these IoT data to derive intelligence in efficient, secure and economic ways becomes an essential research question. Edge computing is an emerging IoT paradigm that shifts computational tasks to edge devices and greatly reduces data transmission latency and avoids network bandwidth bottlenecks, while edge Intelligence facilitates data intelligence across devices or silos. Blockchain is an innovative distributed ledger technology that enables agreements on transactional data and data sharing across a network of participants without a central trusted authority. How to leverage blockchain in IoT is becoming a hot topic in many industrial scenarios to address IoT problems (e.g. security) and design new decentralization frameworks for IoT (e.g. access control). In this special issue, we are looking for cutting edge technologies and novel studies, which can realize and elevate the effectiveness and advantages of blockchain for edge computing and intelligence assisted IoT applications.

Topics include, but are not limited to the following:

- Blockchain enabled edge computing and intelligence architecture
- Blockchain-based security solutions for edge computing and intelligence
- Blockchain-based data privacy-preserving for edge computing and intelligence
- Blockchain consensus protocols for edge computing and intelligence
- Blockchain-based incentive models for edge computing and intelligence
- Blockchain-based analysis models and algorithms for edge computing and intelligence
- Blockchain-based IoT data sharing and trading
- New IoT applications leveraging blockchain

Important Dates

Submission Deadline: June 1, 2020. Second Reviews Due/Notification: October 30, 2020

First Reviews Due: August 15, 2020. Final Manuscript Due: November 15, 2020

Revision Due: September 30, 2020. Publication Date: 2021

Submission Guidelines

Authors need to follow the manuscript format and an allowable number of pages described at <http://ieeiotj.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

Dr. Qinghua Lu, CSIRO, Australia qinghua.lu@data61.csiro.au (Lead Guest Editor)

Prof. Hans-Arno Jacobsen, University of Toronto, Canada, jacobsen@eecg.toronto.edu

Prof. Sumi Helal, University of Lancaster, UK, s.helal@lancaster.ac.uk

Prof. Jiehan Zhou, University of Oulu, Finland, jiehan.zhou@gmail.com