

The Convergence of Blockchain and IoT: Opportunities, Challenges and Solutions

The internet of things (IoT), coming with billions of connected devices, could potentially transform our daily life but could also create a serious security headache. Traditional security protection mechanisms are almost centralized, which has the difficulty in scaling up to meet the security demands of the internet of things. Blockchain technology, with the cryptographic processes behind it, offers an intriguing distributed solution to ensure security protection for IoT. Moreover, *SmartContracts* built upon blockchains offers the opportunity to build reliable sensitive IoT applications operating autonomously over *trustful* environments. In fact, the convergence of blockchain technology and IoT is on the agenda for many companies, and there are projects, solutions and initiatives in myriad possible IoT applications, including smart city, Internet of vehicles, and smart grid. This special issue will focus on the technical challenges in blockchain based security protection in IoT. Topics of interest include, but are not limited to:

- Theory and foundation research of blockchain in IoT
- Decentralized blockchain schemes for IoT systems
- Innovative IoT applications enabled by blockchain technology
- Experiment measurement of blockchain based IoT solutions
- Blockchain application in crowdsensing IoT systems
- Scalable blockchain solution to IoT systems
- Integration of blockchain and edge computing technologies
- Blockchain solution to security protection of Internet of vehicles

Important Dates

Submissions Deadline: **June 1, 2018**

Second Reviews Due/Notification: October 15, 2018

First Reviews Due: August 15, 2018

Final Manuscript Due: **November 15, 2018**

Revision Due: September 15, 2018

Publication Date: 2019

Submissions

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://iee-iotj.org/>. The IEEE IoT Journal encourages authors to suggest potential reviewers as part of the submission process, which might help to expedite the review of the manuscript. Please suggest only those without conflict of interest. Each submission must be classified by appropriate keywords.

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