

IEEE Internet of Things Journal Special Issue on

Intelligent Blockchain for Internet of Things

We have witnessed the exponential growth of diverse Internet of Things (IoT) devices as well as complex IoT systems, following by huge volume of heterogeneous IoT data. Those unique features of IoT bring difficulties in managing distributed IoT devices, transmitting and processing massive IoT data. Although the convergence of cloud computing and artificial intelligence (AI) can potentially address the issue with IoT data analytics, the centralized cloud architectures are also vulnerable to single- point-of-failure, malicious attacks and privacy leakage. Featured with decentralization, data immutability, secured data protection, blockchain brings opportunities in overcoming the above limitations of IoT. Despite the advantages of integrating blockchain with IoT, the fusion of blockchain and IoT poses several emerging challenges including poor scalability, difficulties in identifying malicious behaviours of blockchain, detecting vulnerable codes in smart contracts and maintaining reliable blockchain systems for IoT systems. Therefore, it becomes necessary to design and develop intelligent blockchain systems for IoT. The recent successes of AI in diverse application fields motivate the integration of AI with blockchain to overcome the challenges in blockchain for IoT. In this special issue, we aim to gather the state-of-art advances in enabling intelligent blockchain for IoT.

Topics include, but are not limited to the following:

- New concepts and architectures for intelligent Blockchain for IoT
- AI-enabled scalable Blockchain for IoT
- AI-enabled cloud/edge computing orchestration in Blockchain for IoT
- AI-enabled operation and maintenance of Blockchain systems for IoT
- Incentive mechanisms and game theory in Blockchain for IoT
- Communications, computing and storage issues in Blockchain empowered IoT
- Intelligent detection of malicious smart contracts for IoT
- Big data analytics to identify malicious behaviours on Blockchain for IoT
- Security and privacy issues with solutions in intelligent Blockchain for IoT
- Intelligent blockchain driven IoT applications

Important Dates:

Submission Deadline: August 15, 2020

First Review Due: October 30, 2020

Revision Due: December 15, 2021

Sec. Review Due/Notification: January 15, 2021

Final Manuscript Due: January 30, 2021

Publication Date: 2021

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/>.

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