Call for Papers

Journal title: Cluster Computing Special track: Blockchain and Applications https://www.editorialmanager.com/clus/default.aspx

Aims and Scope:

Internet of Things (IoT) has seen a massive adoption in recent years, with strong potential and applicability in many domains, sectors, and industries. One major problem of today's real-world IoT eco-systems is centralization in terms of management, control, and access. Centralization can be a source of failure, high cost, and more importantly, bureaucracy, mistrust, and privacy evasion. Blockchain is a decentralized, distributed ledger that promises to overcome almost all of the decentralization problems. A blockchain is a technology for recording transactions in a timely-sequenced manner, and with high integrity, resiliency, and reliability guaranteed by the thousands of mining nodes. Blockchain has a great potential to create new foundations for most distributed systems by efficiently establishing trust among nodes. According to International Data Corporation's report, many businesses and governments have been moving aggressively in adopting blockchain-based systems or related applications, with \$2.1 billion spent globally during 2018. However, today's blockchain designs and implementations have known limitations such as scalability, security, privacy, efficiency, availability and dependability. All of these pressing challenges need to be overcome for a sound integration of blockchain and IoT.

This special Issue focuses on research and development of blockchain-enabled IoT. Researchers are invited to contribute high quality articles on the latest advances related to improving and solving key challenges within blockchain and IoT, including fundamental understanding, infrastructure, architecture, applications, and algorithms to improve the overall performance, scalability, privacy, and security. We also encourage researchers to submit articles sharing experiences on the application and use of blockchain to solve problems IoT deployment.

Topics: Both original practical work and review articles are welcome. Topics of interest include but not limited to:

- Blockchain-based IoT, fog, cloud, and mobile devices
- Cross-blockchain IoT ecosystems
- Performance Evaluation of Blockchain in IoT
- Blockchain marketplaces for IoT Computation, Analytics, and Storage
- Consensus mechanisms
- Scalability and performance
- Auditable Blockchain IoT
- Identity and reputation management
- Auditability and traceability
- Distributed storage in blockchain

- Blockchain PaaS
- Applications for smart cities, governments, and manufacturing
- Blockchain for industrial IoT
- Blockchain for Internet of Vehicles and Intelligent Transportation Systems (ITS)
- Blockchain for Cyber Physical Systems (CPS)
- Blockchain in supply chain management
- Blockchain for Autuonoums Vehicles
- Blockchain for auditable systems
- Simulation and performance evaluation techniques
- Supporting architecture for blockchain
- Experience study of deployment of blockchain and IoT
- Consortium governance and ownership models
- Privacy and security of blockchain

Coherent list of topics:

Papers must be tailored to the emerging fields of IoT and Blockchain, and explicitly consider recent advancements and novel tools and techniques for Blockchain IoT. The guest editors maintain the right to reject papers they deem to be out of scope of this special issue. Only originally unpublished contributions and invited articles will be considered for this special issue. The papers should be formatted according to the Cluster Computing guidelines (https://link.springer.com/journal/10586). Authors should submit a PDF version of their complete manuscript via Editorial Manager submission site at (https://www.editorialmanager.com/clus/default.aspx) according to the timetable below.

Important Dates

- Submission deadline: 30/12/2021

Open-submission schedule: in this special issue, we implement an "open" submission approach, where we do not have a submission time period. Interested authors can submit the paper any time before the fixed deadline, and the review process will begin right after the paper submission, i.e., in a first-in first-serve fashion. The submission schedule is:

Guest Editors Dr. Moayad Aloqaily Dr. Lewis Tseng