

Special Track on IoT and blockchain-enabled applications for cyber-physical supply chain systems: Ensuring integrity, resilience, and security.

Supply Chain (SC) networks are in the midst of a significant technological shift driven by disruptive technologies like the Internet of Things (IoT) and blockchain. The convergence of these technologies is blurring the lines between physical operations and digital flows across SC networks, thus paving the way for the development of complex cyber-physical SC ecosystems. However, the operational effectiveness and efficiency of current SC ecosystems are hindered by several barriers like a) lack of data interoperability and information sharing, b) opportunistic behavior, c) lack of transparency and visibility and d) cyber-physical threats. As SC networks are becoming more sophisticated, highly disjointed, and geographically spread issues of security, resilience, business continuity, and integrity are gaining importance. By providing trust in distributed environments, blockchain has the potential to offer full transparency and visibility within SC ecosystems, build confidence in legitimate operations, safeguard products' quality, reduce administrative costs and provide a trustworthy chain-of-custody for SC processes. Further benefits from the adoption of blockchain-enabled applications, and IoT in cyber-physical SC networks may relate to data interoperability, greater access to finance, auditability, integrity, and resilience.

The objective of this session is to collect and report on recent high-quality research that addresses different topics related to the adoption of blockchain, and IoT enabled applications in cyber-physical SC ecosystems with a particular focus on integrity, resilience, and security. High-quality contributions addressing related theoretical and practical aspects are expected that cover (but are not limited to) the following topics:

Topics

- Blockchain-based security protocols for cyber-physical SC systems
- SC business process privacy and integrity management based on blockchain
- Blockchain tokens for cyber-physical SC systems and relevant applications
- Blockchain-based authentication/authorization mechanisms for SC cyber-physical systems
- SC provenance and tracing mechanisms
- Blockchain-enabled resilience for SC cyber-physical systems
- Blockchain-based lightweight data structures for IoT data in cyber-physical SC systems
- Blockchain and IoT in SC process integration
- Blockchain-enabled compliance of SC processes and operations
- SC workflow forensics based on blockchain and smart contracts
- Blockchain-enabled cloud/edge computing for cyber-physical SC systems
- Blockchain and governance in cyber-physical SC systems

Paper Submission

- Papers due: **June 22, 2019**
- Notification due: June 30, 2019
- Camera-ready due: July 14, 2019
- Conference date: September 20-22, 2019

Organisers and Co-Chairs

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Submission Guidelines

(1) Short papers (3-4 pages) are also accepted.

(2) Please follow the instructions (<https://seeda2019.unipi.gr/authors/>) for the submission process and choose "Special Track 5..." for the Topic selection.

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