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## **IEEE Transactions on Industrial Informatics**

## **CALL FOR PAPERS**

for Special Section on



## Scalable Blockchain Enabled Industrial Internet of Things

Theme: Industrial Internet of Things (IIoT) is reshaping various industrial sectors, such as manufacturing, logistics, transportation, healthcare, energy, and utilities. IIoT consists of various smart objects distributed throughout the whole industrial system to collect massive industrial data, which can then be used to troubleshoot faults, identify performance bottlenecks and detect malicious behaviors consequently enforcing effective and efficient control to the physical world. However, there are several challenges posed on IIoT before the formal adoption of IIoT across various industrial sectors. Among them, security and privacy preservation on IIoT data are the most crucial concerns. On the other hand, blockchain technology is transforming industries by enabling anonymous and trustful transactions in a decentralized and trustless environment. As a result, blockchains help to reduce system risks, mitigate financial fraud, and cut down operational costs. The integration of IIoT with blockchains may potentially overcome the deficiencies of IIoT consequently resulting in the realization of IIoT in industrial sectors. Both industrial practitioners and academic researchers aim at realizing general, scalable, and deployable blockchain-based IIoT platforms in various application domains while there are a number of challenges like scalability, data analytics with privacy-preservation, and incentive mechanisms in IIoT systems. To fill the gap, this special section solicits high quality and unpublished work on recent advances in Blockchains for IIoT.

### This special section will focus on (but not limited to) the following topics:

- Advanced technologies for blockchain-enabled IIoT:
  - New consensus algorithms for blockchain-enabled IIoT
  - New security mechanisms for blockchain-enabled IIoT
  - New privacy preservation mechanisms for blockchain-enabled IIoT
  - New scalable blockchain platforms for IIoT
  - Advances in edge/cloud computing orchestration for blockchain-enabled IIoT
  - Advances in federated learning/machine learning for blockchain-enabled IIoT
  - Advances in big data analytics in blockchain-enabled IIoT

### • Applications for blockchain-enabled IIoT:

- Design, development, and application of blockchain technology in IIoT
- Intelligent manufacturing based on blockchain-enabled IIoT
- Energy/smart grids/utility applications based on blockchain-enabled IIoT
- Smart supply chain applications based on blockchain-enabled IIoT
- Intelligent transportation applications based on blockchain-enabled IIoT
- Applications of big data analytics in blockchain-enabled IIoT

Follow the guidelines in "Information for Authors" in the IEEE Transaction on Industrial Informatics <a href="http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics">http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics</a>. Please submit your manuscript in electronic form through Manuscript Central web site: <a href="https://mc.manuscriptcentral.com/tii">https://mc.manuscriptcentral.com/tii</a>. On the submitting page #1 in popup menu of manuscript type, select: SS on Scalable Blockchain Enabled Industrial Internet of Things

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Regular manuscript length is 8 pages.

**Note:** The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

Timetable: Deadline for manuscript submissions April 15, 2021

Expected publication date (tentative) December 2021

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