2018 IEEE International Conference on Blockchain (Blockchain 2018)

http://cse.stfx.ca/~blockchain2018/index.php

Introduction

As a promising technique to achieve decentralized consensus, blockchain has been successfully applied into digital currency - bitcoin for serving as a public ledger for transactions. Its secure design for supporting a distributed computing system with high Byzantine fault tolerance is attracting wide attention all over the world. Blockchain has a great potential for event recording, identity management, fault provenance, behaviour tracking, and so on, especially in a distributed system without a trusted authority or central server. On one hand, blockchain will play an important role for secure decentralization in such emerging fields as Internet of Things, Cyber Physical Systems, edge computing, social networking, crowdsourcing and next generation wireless communications, and even more other fields. On the other hand, its advance should be further evolved in terms of scalability, privacy, efficiency, flexibility and high dependability.

The 2018 IEEE International Conference on Blockchain (Blockchain-2018) will provide a high-profile, leading-edge forum for researchers, engineers, and practitioners to present latest advances and innovations in key theories, infrastructure, schemes, and significant applications for the blockchain, as well as to identify emerging research topics and define the future.

Topics

The emergence and popularity of blockchain techniques will significantly change the way of digital system operation and management. In the meantime, the application of blockchain will exhibit a variety of complicated problems and new requirements, which brings more open issues and challenges for research communities.

IEEE Blockchain-2018 will be held on July 30 – August 03, 2018 in Halifax, Canada. The goal of this conference is to promote community-wide discussion identifying the advanced applications, technologies and theories for blockchain. We seek submissions of papers that invent novel techniques, investigate new applications, introduce advanced methodologies, propose promising research directions and discuss approaches for unsolved issues.

Topics of interest include, but are not limited to:

- Theories of blockchain and its evolution
- Smart contract and distributed ledger
- Blockchain and Bitcoin security
- Distributed consensus on resource-limited devices
- Blockchain schemes for decentralization
- Byzantine fault tolerance
- Security, privacy and trust of blockchain and decentralized schemes
- Performance optimization of blockchain and decentralized schemes
- Applications with blockchain technique
- Lightweight protocols and algorithms based on blockchain
- Blockchain based lightweight data structures for IoT data
- Blockchain based IoT security solutions
- Blockchain in cyber physical systems

- Blockchain in social networking
- Bolckchain in crowdsourcing and crowdsensing
- Blockchain in 5G
- Blockchain in edge and cloud computing

Submissions

All papers need to be submitted electronically through the conference website (https://easychair.org/conferences/?conf=blockchain2018) with PDF format. Submitted papers must not substantially overlap with papers that have been published or that are simultaneously submitted to a journal or a conference with proceedings. Papers must be clearly presented in English, must not exceed 8 pages in IEEE Computer Society proceedings format (or up to 10 pages with the pages over length charge), including tables, figures, references and appendices. Papers will be selected based on their originality, significance, relevance, and clarity of presentation assessed by at least three reviewers. Submission of a paper should be regarded as a commitment that, should the paper be accepted, at least one of the authors will register and attend the conference to present the work. Blockchain 2018 reserves the right to exclude a paper from distribution after the conference (e.g., removal from the digital library and indexing services), if the paper is not presented at the conference. All accepted papers will be published in IEEE CPS proceedings (EI Indexed) and collected by IEEE Xplorer Digital Library. One outstanding papers will be selected to receive the Best Paper Awards.

Important Dates

Workshop Proposal Due:	February 15, 2018
Paper Submission Deadline:	March 15, 2018
Author Notification:	April 15, 2018
Final Manuscript Due:	May 15, 2018

Committee

General Chairs
Laurence T. Yang, St. Francis Xavier University, Canada
Zheng Yan, Xidian University, China and Aalto University, Finland

Program Chairs
Mohammed Atiquzzaman, University of Oklahoma, USA
Jin Li, Guangzhou University, China
Weizhi Meng, Technical University of Denmark, Denmark

Special Session and Workshop Chairs
Qinghua Lu, CSIRO, Australia
Hongsheng Zhou, Virginia Commonwealth University, USA (unconfirmed)
Xin Huang, University of Xi'an Jiaotong Liverpool, China

Technical Program Committee
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Shlomi Dolev, Ben-Gurion University, Israel
Zeki Erkin, Delft University of Technology, Netherlands

Steering Committee

Special Issues:

- IEEE Transactions on Systems, Man, and Cybernetics (IF: 6.22) (SI on Blockchain and Knowledge Automation https://mp.weixin.qq.com/s/GU7u3E2kZ-S35xvQV-_Rhg)
- Future Generation Computer Systems, Elsevier (IF: 3.997) (Special Issue on Blockchain and Decentralization for Internet of Things https://www.journals.elsevier.com/future-generation-computer-systems/call-for-papers/special-issue-on-blockchain-and-decentralization-for-interne)
- IEEE Transactions on Big Data (Special Issue on Blockchain and Big Data Fusion)

- Digital Communications and Networks (SI on Blockchain and Communication Networks)
- Journal of Network and Computer Applications, Elsevier (IF: 3.50)