Call for Papers

1st International Workshop on Blockchain Security and Scalability (BSS2022)

in conjunction with the 5th IEEE International Conference on Blockchain (Blockchain 2022)

August 22 - 25, 2022, Espoo, Finland

Blockchain is one of the disruptive technologies of the current era, which enables trustworthy transaction processing through participation of distributed nodes. The widespread adoption of blockchain has been facilitated by research on blockchain beyond cryptocurrencies where significant efforts have been made to devise different business models, its applicability in various domains and to optimise its adaptability for different applications. Being the most notable blockchain-based application, the success of Bitcoin has introduced an innovative model of decentralised, trustworthy application development across diverse domains such as healthcare, e-voting logistics, and finance. structure among transactions as well as public availability of distributed ledgers of transaction-records in a peer-to-peer network.

The increasing use of blockchain within diverse domains has also identified several challenges which have to be addressed for its widespread adoption. Among these, security and scalability are the most prominent challenges which require further research efforts to address them. For instance, attack vectors such as encryption scheme used in the transactions, methods for verifying transactions and the design of the transaction have been identified as sources of threats for blockchain-based applications. Furthermore, with growing applications and users for blockchain-based applications, scalability is a critical challenge and as such has been translated into parameters such as transactions per second, block generation rate, and block size.

Areas of interest:

We invite submissions from researchers and practitioners from government, industry, and academia in the following and related areas:

- Blockchain and distributed ledger technologies
- Proof-of-work and consensus algorithms for blockchains
- Decentralization, scalability, and security trade-off
- Simulation and performance evaluation techniques
- Secure smart contract and chain code
- Trust and reputation within blockchain-based systems
- Blockchain-based solutions to aid cutting-edge in AI and machine learning
- Analysis and evaluation of security, scalability, and other performance metrics of blockchains
- Authentication and authorization solutions within blockchains
- Blockchain-based solutions for emerging domains such as 5G, edge computing, and SDNs
- Applications of blockchains within e-government, logistics, healthcare, SmartX systems and other areas

Important dates:
Due date for submissions: May 15, 2022
Notification of decision to authors: June 10, 2022
Camera-ready of accepted papers: June 25, 2022
Workshop: August 22-25, 2022

Authors of Selected papers will be invited to submit an extended version of their work to:

- ACM's journal on Distributed Ledger Technologies: Research and Practice
- MDPI Electronics, Special Issue on the "Security and Privacy in Blockchain and IoT"

Submission Instructions:

• All papers need to be submitted electronically through the EDAS website (https://edas.info/N29554) in 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 6 pages in IEEE Computer Society Proceedings Format, including tables, figures, references and appendices. The limit length of accepted papers should be 6 pages with 2 extra page charge.

• Papers will be selected based on their originality, significance, relevance, and clarity of presentation assessed by at least three reviewers.

• All submitted papers will be judged through double-blind reviews, where the identities of the authors are withheld from the reviewers. As an author, you are required to preserve the anonymity of your submission, while at the same time allowing the reader to fully grasp the context of related past work, including your own. Papers that do not conform to our double-blind submission policies will be rejected without review.

• 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. IEEE Blockchain 2022 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 Xplore Digital Library.

Double-blind Submission

• Remove the names and affiliations of authors from the title page.

• Remove acknowledgments.

• Remove project titles or names that could be used to trace back to the authors via web search.

• Carefully refer to related work, particularly your own. Do not omit references to provide anonymity, as this leaves the reviewer incapable of grasping the context. Instead, reference your past work in the third person, just as you would any other piece of related work by another author. For example, instead of "In prior work [1], we presented a scheme that ...," sentences in the spirit of "In prior work, Clark et al. [1] presented a scheme that ..." should be used. With this method, the full citation of the referred paper can still be given, such as "[1] A. Clark ..., "Analysis of...", and it is not acceptable to say "[1] Reference deleted for double-blind review."

Workshop Co-Chairs:
Junaid Arshad, Birmingham City University, UK
Mohammad Hammoudeh, King Fahd University of Petroleum & Minerals (KFUPM), KSA

Programme Co-Chairs:
Adel Aneiba, Birmingham City University, UK
Thanasis Papaioannou, Athens University of Economics and Business, Greece
M. Ajmal Azad, University of Derby, UK

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John Hayes, Birmingham City University, Birmingham, UK
Thanasis Papaioannou, Athens University of Economics and Business, Greece
Daniele Francesco Santamaria,University of Catania, Sicily, Italy