Call for Papers

The First International Workshop on Integrating Metaverse with Blockchain and 6G for Next-generation IoT (Meta-IoT 2022)

in conjunction with the 15th IEEE International Conference on Internet of Things (iThings 2022)
August 22 - 25, 2022, Espoo, Finland

Summary

Most recently, the concept of metaverse has captured the interest of both academia and industry. Stemming from the science fiction novel Snow Crash, metaverse depicts a virtual environment parallel to the physical world, blurring the boundary between virtual and reality by digitally representing, augmenting, and interacting with the real world. However, this ambitious prospect poses critical challenges to the existing technologies in various research areas such as Internet of things (IoT), next-generation networking (NGN), and blockchain. The construction and maintenance of a metaverse requires a large volume of data, most related to user privacy, to be generated, executed, and universally recorded, which is far beyond the capability of a centralized system. Moreover, the highly complex ecology and interactivity are extremely demanding in terms of latency, reliability, and peak rate. These problems must be addressed for the evolution of future metaverse.

As a fundamental component of metaverse, blockchain has been the focus of many scholars, engineers, and governmental agencies in the past few years. Serving as a decentralized database, blockchain not only guarantees virtual assets to be circulated and traded with high immutability, security, and transparency, but also preserves data integrity and user privacy among untrusted network entities. Meanwhile, the rapid development of the sixth-generation (6G) communications aims to provide enhanced quality of service with mass IoT connectivity, ultra-reliability, and extremely low latency. The integration of metaverse with blockchain and 6G will indeed promote user experience and help create a better virtual reality that connects to the real world.

Blockchain and 6G are envisioned to play essential roles in developing metaverse as enabling technologies. However, it remains underexplored how these state-of-the-arts can be applied to metaverse for better quality of experience (QoE), and what metaverse can achieve through deep integration of these technologies. Thus, it is urgent to develop novel methods, algorithms, and mechanisms for the blockchain/6G-empowered metaverse to facilitate diverse metaverse applications.

The purpose of this workshop is to seek practical solutions fusing metaverse with blockchain and 6G, and to discuss novel ideas, theories, frameworks, and testbeds for the promotion of future metaverse.

Call for Papers

The topics of interest include, but are not limited to, the following:

- Blockchain/6G-spurred metaverse applications
- New architectures for blockchain/6G-based metaverse
- Blockchain/6G-empowered metaverse ecosystem

- Blockchain-as-a-service for metaverse services
- Blockchain/6G-enhanced metaverse quality of experience (QoE)
- Security and privacy issues with blockchain-based solutions for metaverse
- Proof-of-concept blockchain/6G-enhanced metaverse: experimental prototyping and testbeds
- Energy-efficient and low-carbon solutions for blockchain/6G-based metaverse
- Market structures and pricing policies for resource allocation in blockchain/6G-based metaverse

Submission: https://edas.info/newPaper.php?c=29460&track=111826

Important Dates

Paper Submission Deadline: May 7th,2022

Authors Notification: June 10th, 2022

Final Manuscript Due: June 25th, 2022

Conference Date: August 22th-25th, 2022

Submission

Author Instructions

All papers need to be submitted electronically through the EDAS website (https://edas.info/newPaper.php?c=29460&track=111826) 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 6 pages in IEEE Computer Society proceedings format (or up to 8 pages with the pages over length charge), including tables, figures, references and appendices. The limit length of accepted papers should be 6 pages with at most 2 extra page charge.

Papers will be selected based on their relevance, novelty, originality, significance, soundness of methodology and clarity. Based on the research areas and expertise of the program committee members, all submitted manuscripts will be peer-reviewed rigorously, with at least three reviewers assessing each submitted manuscript.

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 iThings 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.

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