Call for Papers of The 2022 Workshop on Metaverse as A Frontier in Communications, Networking, and Computing

Organized in conjunction with IEEE IPCCC 2022, November 11th – 13th, 2022, Austin, Texas, USA

With the technological advancements of social networking, blockchain, computer vision, wireless communications, and augmented intelligence techniques, the concept of Metaverse has been started shaping and becoming into reality as a new type of social form and future Internet application. Specifically, the Metaverse has received much attention recently once Facebook renamed its brand name into Meta.

The Metaverse is broadly conceptualized as a collection of 3D virtual world, which enables an immersive experience by developing virtual 3D environments. In this context, such immersive experiences rely on both Internet as well as augmented technologies, including augmented/virtual/mixed/extended realities. On the other hand, in Metaverse scenarios, blockchain based applications and services, for example, smart contracts, non-fungible tokens (NFT), Decentralized application (DApps) are playing important roles to construct the economic and identity management systems.

While contemporary online gaming, messaging, multimedia content sharing, etc. like social networking applications and services are pervasive today, we strongly believe that Metaverse like such massive and immersive virtual environments will be realized and benefit from the future envisioned 6G technologies in several ways. 6G technologies would support to meet high throughout, ultra-reliability & low latency requirements, offer large-scale resource demands, enable strong scalabilities, and at the same time, ensure security and privacy. However, towards provisioning and accessing the Metaverse virtual spaces as well as virtual reality object connection and convergence, there has been a surge of open research questions from communications and networking perspectives in both academia and industry.

The aim of the 1st International Workshop on Metaverse as A Frontier in Communications, Networking, and Computing is to bring researchers, engineers, and experts together from industry, academia, and government agencies interested in the latest advancements in the research field of Metaverse. Interested participants will be invited to present the identified new challenges and discuss the possible solutions in the context of advanced communications and networking technologies for the Metaverse and other closely relevant topics.

Topics of interest include but are not limited to:

- Multi-objective models for metaverse applications and services
- Advanced communications and networking technologies for metaverse ecosystem
- Emerging human-computer interaction for metaverse applications
- Reputations and incentives mechanism designs for user contributions and motivations
- Game-theoretic mechanism designs for metaverse
- Blockchain and smart contract applications in metaverse
- Cloud and edge computing orchestration for metaverse applications
- Generated adversarial network (GAN) for multimedia content generation in metaverse applications
- Federated learning application in metaverse
- Intelligent infrastructure architectures for metaverse
- Security, privacy, and trust in the context of metaverse
- Congestion control and resource allocation for metaverse

Paper requirements: The workshop accepts only novel, previously unpublished papers. All submissions should be written in English with a maximum paper length of six (6) printed pages (double-column,12-point font) including figures. The EDAS link for submission is https://edas.info/N29290.

Important Dates:

- Paper Submissions: July 15th, 2022
- Paper Acceptance Notifications: August 1st, 2022
- Camera-ready Deadline: August 15th, 2022
- Workshop Date: November 13th, 2022