

IEEE Transactions on Consumer Electronics

Call for Papers

Special Section on “Opportunities and Challenges for Consumer Electronics and Metaverse Integration”

Theme:

Consumer electronics and the metaverse are developing quickly, and this connection offers considerable opportunities for researchers, developers, and industry experts to investigate novel ideas and push the envelope of what is practical.

The potential for consumer electronics to improve the user's experience within the metaverse is one of the most intriguing aspects of this convergence. Consumer gadgets can offer fresh ways to connect with this environment as we advance toward a more immersive and interactive virtual reality. Wearables and smart devices, such as VR headsets, haptic feedback systems, and motion sensors, for instance, can give consumers a more realistic and immersive experience, while the metaverse can be accessed by users in novel and creative ways through wearables and smart devices.

The potential for brand-new methods of communication and social interaction within the metaverse is yet another crucial component of this integration. Through the usage of consumer electronics, consumers can communicate with one another in previously impractical ways, opening up new possibilities for collaboration, community development, and socializing. Smart devices allow users to communicate and work together in real time, while virtual reality chat rooms and social networks can offer a more immersive and interesting way to connect with others.

However, these fresh chances also bring fresh risks and difficulties. Since users' private information and virtual identities may be at risk, privacy, and security are crucial factors to take into account when utilizing consumer devices in the metaverse. Moreover, new technologies have the ability to significantly affect our relationships, employment, and daily lives, ethical concerns must also be made.

In order to explore these opportunities and problems, it is desirable to find responsible solutions that improve user experience in the metaverse while guaranteeing users' safety, security, and privacy. This special section will focus on the intersection of consumer electronics and the metaverse, with a specific emphasis on how smart devices can enhance the user's experience within this virtual world.

Topics of interest in this Special Section include (but are not limited to):

- Augmented reality and virtual reality for enhancing user experience in the metaverse
- Smart wearables and haptic feedback systems for immersive experiences in the metaverse
- Privacy-preserving techniques for consumer electronics in the metaverse
- Ethical considerations in the use of consumer electronics in the metaverse
- Smart device-based communication and collaboration in the metaverse
- Integration of AI and machine learning for personalized experiences in the metaverse
- Edge computing and cloud computing for efficient processing and storage of metaverse data
- Security mechanisms for protecting user data in the metaverse
- The impact of consumer electronics on social interactions and relationships in the metaverse
- Design and development of new consumer electronic devices for the metaverse

Important dates:

- End of submission of Manuscripts: December 31, 2023
- Expected publication date (tentative): 3rd quarter, 2024

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