

IEEE Internet of Things Journal
Call for Papers
Digital Twin for 6G Internet of Everything

The exponential growth of intelligent devices has given rise to the emergence of the intelligent Internet of Everything (IoE) as a significant scenario within 6G networks. In this context, Digital Twin (DT) plays a vital role in integrating 6G with IoE by providing a virtual replica of physical entities, facilitating seamless communication and integration between the physical and virtual realms. By leveraging advanced machine learning (ML) techniques to analyze digital networks, DT empowers optimization and decision-making processes within the physical networks of IoE. This creates transformative opportunities across domains such as smart transportation, smart healthcare, smart energy, and smart cities. However, achieving a high-precision DT network entails higher requirements for the 6G wireless communication system. These requirements include higher data rates, lower latency, enhanced reliability, and other crucial performance metrics. The seamless communication between the physical entities and their digital replicas necessitates robust and efficient wireless connectivity, capable of supporting the demanding needs of DT-based applications within the IoE.

This special issue aims to gather the latest advancements in DT for 6G IoE, exploring theoretical foundations, practical implementations, and real-world applications. Topics of interest include, but are not limited to:

- Architecture for DT 6G IoE networks
- DT enabled 6G networking/6G enabled DT networks
- DT IoE application areas, including manufacturing, healthcare, smart transportation, and smart cities
- Cloud, edge, and hybrid deployment of DT in 6G networks
- MEC-assisted DT deployment/ DT-assisted MEC networking
- AI for DT in 6G IoE Networks
- Security and privacy in DT IoE networks
- Dynamic DT networks in IoE
- Prototype and testbeds for DT IoE
- DT interactive with other emerging 6G technologies

Important Dates:

Submission Deadline: January 15th, 2025

First Review Due: March 1st, 2025

Revision Due: April 15th, 2025

Second Review Due/Notification: May 15th, 2025

Final Manuscript Due: May 31st, 2025

Publication Date: August 2025

Submission Guidelines:

All original manuscripts or revisions to the IEEE IoT Journal must be submitted electronically through IEEE Manuscript Central, <http://mc.manuscriptcentral.com/iot>. When the authors reach the “Article Type” step in the submission process, they should select SI: Digital Twin for 6G Internet of Everything. Solicited original submissions must not be currently under consideration for publication in other venues. Author guidelines and submission information can be found at <http://ieeetj.org/guidelines-for-authors/>.

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