2024 IEEE Digital Twin Conference

Denarau Island, Fiji, December 2-7, 2024

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Important Dates

Paper Submission Deadline: 04 AUG 2024
Workshop Papers' Deadline: 20 AUG 2024
Authors Notification: 15 SEP 2024
Camera-ready Submission: 15 OCT 2024
Conference dates 2-7 DEC 2024

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Introduction

Digital twin, as a recent iconic phrases of fashions, has been coined and broadened somewhat in that it is now being extensively applied, or rather used, to characterize a variety of digital simulation models that run alongside real-time processes that pertain to social and economic systems as well as physical systems since its inception. It is even conceivable that latency between when data is received from the basic system and when the users closest to the system can use is often short enough to enable good corrective actions. Progress towards digital twins will surely enable us to gain ever deeper insights into the nature of reality and its virtual form.

The 2024 IEEE International Conference on Digital Twin will provide a high-profile, leading-edge forum for researchers, engineers, and practitioners to present state-of-art advances and innovations on Digital Twin, as well as to identify emerging research topics and define the future of Digital Twin. We seek submissions of papers which invent new techniques, introduce innovative methodologies, and propose new research directions in advanced digital twin theories, methods, implementations, and applications.

IEEE Digital Twin 2024 Topics

Track 1: Digital Twin Fundamentals
- Concepts and theories
- Architecture and frameworks
- Methodology, lifecycle and processes
- Data-driven based modelling and technologies
- Simulation based approach and technologies
- Multi-physics and multi-scale simulation
- Model-based system engineering
- Computational dynamic modelling
- Process and workflow modelling and simulation
- Dynamic prediction and projection

Track 2: Digital Twin Interaction
- Physical and Virtual twin communication
- Physical and Virtual twin interaction
- Distributed digital twin systems
- Digital twin interoperability
- Cooperative and Collaborative digital twin
- Digital twin network and organisation
- Distributed machine learning for digital twins
- Twins and user interactions
- User interface for digital twin
- The Internet of Digital Twins

Track 3: Digital Twin Security and Privacy
- Threat modelling in digital twin
- Cybersecurity for digital twin
- Cross-layer defence for digital twin
- Digital twin for cybersecurity
- Privacy protection in digital twin
- Blockchain-based digital twin
- Digital twin based intrusion detection systems
- Digital twin based intrusion response systems

Track 4: Digital Twin Systems and Applications
- Development tools and platforms
- Standardization and regulation
- Servitisation of digital twin
- Automation and manufacturing
- Digital health and assisted systems
- Smart Cities and transportations
- Automotives and aerospace
- Sustainable Energy

Five Co-located Conferences

- The 21th IEEE Int'l Conf. on Ubiquitous Intelligence and Computing **(UIC 2024)**
- The 21th IEEE Autonomous and Trusted Vehicle Conference **(ATC 2024)**
- The 24rd IEEE Int'l Conf. on Scalable Computing and Communications **(ScalCom 2024)**
- The 10th IEEE Int'l Conf. on Privacy Computing and Data Security **(PCDS 2024)**
- The 2024 IEEE Int'l Conf. on Metaverse **(Metaverse 2024)**

Digital Twin 2024 Paper Publication

All types of papers must be submitted via the EDAS system from the 2024 congress website. Regular, Workshop and Forum papers are limited to 8, 6 and 3 pages respectively. All accepted papers will be published by IEEE (IEEE-DL and EI indexed) in the Smart World Congress Proceedings. Best Paper Awards will be presented to high quality papers. Selected papers will be recommended to a number of special issues of prestigious journals.

IEEE Digital Twin 2024 Website: https://www.ieee-smart-world.org/2024/digitaltwin/