IEEE/ACM International Symposium on Quality of Service (IWQoS) 2026
29 June -2 July 2026, Dubai, UAE

Call for Papers

Workshop on QSP-AI-MetaTwin Proposal: QoS-Aware Security and Privacy for AI-Driven Digital Twin and Metaverse Systems

30 June 2026, Dubai, UAE

AI-powered Digital Twin and Metaverse systems represent a transformative paradigm where intelligent, data-driven models mirror physical environments and enable immersive, real-time interaction, simulation, and decision-making. By integrating Artificial Intelligence (AI), Digital Twin technology, and Metaverse platforms, these systems enable autonomous operation, collaborative intelligence, and adaptive responses across dynamic cyber-physical environments. They support advanced applications in smart cities, industrial systems, healthcare, and critical infrastructures, where real-time insights and predictive capabilities are essential. Unlike traditional systems, AI-enabled Digital Twin and Metaverse ecosystems require stringent Quality of Service (QoS) guarantees, including ultra-low latency, high reliability, scalability, and seamless interoperability. At the same time, they must ensure robust security and privacy protections. Conventional security mechanisms often fall short in meeting these strict QoS demands, especially in highly dynamic and distributed environments. This creates a critical need for integrated solutions that jointly address performance, security, and privacy. The QSP-AI-MetaTwin workshop aims to bring together researchers, practitioners, and industry experts from networking, distributed systems, cybersecurity, and AI to explore innovative approaches for building QoS-aware and privacy-preserving AI-driven Digital Twin and Metaverse systems. The workshop will serve as a platform for discussing theoretical foundations, system architectures, algorithms, protocols, and real-world deployment experiences. We invite original research contributions and practical insights in areas including, but not limited to:

- QoS-aware security and privacy frameworks for Digital Twin and Metaverse systems
- AI-driven threat detection and mitigation in cyber-physical environments
- Privacy-preserving federated learning and edge intelligence for immersive platforms
- Secure and low-latency communication protocols for distributed AI applications
- Blockchain-based trust management and access control mechanisms
- Secure multi-user interaction and identity management in Metaverse environments
- Adaptive and QoS-aware cryptographic techniques for edge and IoT networks
- AI-based anomaly detection for industrial systems and smart cities
- Performance evaluation of security and privacy solutions under QoS constraints
- Case studies, prototypes, and real-world deployments of secure AI-enabled Digital Twin and Metaverse applications

This workshop seeks to advance the state of the art in QoS-aware, secure, and privacy-preserving AI systems by fostering interdisciplinary collaboration and accelerating the transition from conceptual research to practical, scalable implementations in next-generation cyber-physical ecosystems.

Workshop Organisers

Mithun Mukherjee
BITS Pilani, Dubai, UAE

Pranav M Pawar
BITS Pilani, Dubai, UAE

Zhigeng Pan
Beihang University, China

TPC Chairs

Raja Muthalagu
BITS Pilani, Dubai, UAE

Ahcene Bouncer
University of Sharjah, UAE

Akanksha Saini
RMIT University, Australia

TPC Members

Zhihong Sun, Naval University of Engineering, Wuhan, China
Suman Kr. Dey, National Institute of Technology Rourkela, India
Mian Guo, Guangdong Polytechnic Normal University, China
Neeli Rashmi Prasad, Smart Avatar B V, Netherlands
Prashant Kumar, National Institute of Technology Jamshedpur, India
Razi Iqbal, Central Michigan University, USA
Qi Zhang, Aarhus University, Denmark
Kaustubh Chakradeo, Aalborg University, Denmark
Shital Patil, Robert BOSCH, Dubai, UAE
Mohammad Zubair Khan, Islamic University of Madinah, Medina, Saudi Arabia.
Rajendra Patil, BITS Pilani, Dubai, UAE
Adel Oulefki, University of Dubai, UAE
Malek Masmoudi, University of Sharjah, UAE
Dnyaneshwar Mantri, University of Pune, India
Nandkumar Kulkarni, MIT-ADT University, India
Prakash Aryan, University of Bern, Switzerland

Important Dates

April 30, 2026	**Submission of Papers**
May 20, 2026	**Notification of Acceptance**
May 30, 2026	**Camera-ready Submission**
June 30, 2026	**Workshop Date**

Submission Guidelines

All workshop papers must be original, unpublished, and follow the IEEE conference format, with a maximum length of 8 single-spaced, double-column pages (10-point font), including references and appendices; templates are available at https://template-selector.ieee.org/ (select “Conferences”). Submissions will undergo a double-blind review process, so manuscripts must not include author names, affiliations, or identifying self-references, and non-compliant papers will be rejected without review. All papers must be submitted as PDF files via https://qsp-ai-metatwin26.hotcrp.com .

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Contact us

Creative Lab, BITS Pilani, Dubai, creativelab@dubai.bits-pilani.ac.in

For more information

https://qspai.netlify.app/

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