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Call for papers

18th ICAIT (International Conference on Advanced Infocomm Technology) 2026

Workshop on Digital Twin-Augmented Large Language Model Agents

23-27 November 2026 // Auckland, New Zealand

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Large language model (LLM) agents have emerged as critical enablers for information integration, generation, and reasoning across increasingly complex application domains. To enhance their performance and situational intelligence, techniques such as prompt engineering, context augmentation, and advanced fine-tuning have attracted significant research attention. The timely and accurate provision of structured contextual and background information decisively governs the effectiveness of LLM agents. Concurrently, digital twin technology provides a promising paradigm to fulfil this requirement by continuously synchronizing user states, environmental conditions, and task progress, modeling them as expressive features, and delivering these dynamic world models to LLM agents. Despite the promising trend, the systematic coordination between digital twins and LLM agents remains uncharted, presenting a host of open challenges spanning data synchronization, semantic and token alignment, and autonomous decision-making. Inspired by the recent surge of interests, this workshop aims to investigate the envisioned intersection of LLM agents and digital twin technologies, covering the full lifecycle of data acquisition, real-time state synchronization, semantic modelling, agent learning, communication, and practical deployment. We seek original work not currently under review by any other journal, magazine, or conference. Topics of interest include, but are not limited to:

- Digital twin-driven data acquisition and context modeling for LLM and agents
- Real-time synchronization and state consistency mechanisms in digital twin systems
- Semantic modeling, knowledge graph construction, and memory management for digital twins and LLM agents
- Prompt engineering and in-context learning enhanced by digital twin feedback
- Digital twin-empowered fine-tuning, alignment, and personalization of LLM agents
- Digital twin aware function-calling, tool-use, and API orchestration augmentation
- Digital twin empowered reasoning, planning, and model construction
- Token-efficient inter-agent communication and collaboration protocols
- Decentralized resource orchestration and task scheduling for digital twin and LLM agent networks
- Privacy-preserving, secure, and trustworthy data sharing for agent learning via digital twins
- LLM agents for intelligent optimization and management of digital twin edge networks
- Benchmarking, evaluation metrics, and simulation platforms for digital twin and LLM agents
- Continual learning and lifecycle adaptation of LLM agents through digital twins
- Human-in-the-loop interaction, explainability, and value alignment in digital twin and LLM agent systems

Workshop Schedule

Submission Deadline: 15 Aug 2026

Notification: 30 Aug 2026

Registration Due: 15 Sep 2026

Camera Ready: 30 Oct 2026

Workshop Organising Committee

Chair: **Prof. SHEN Jiaying**, Lingnan University, Hong Kong, China

Co-chair: **Prof. SHI You**, Nanjing Tech University, Nanjing, China

Co-chair: **Dr. ZHOU Yuzhi**, Hong Kong Metropolitan University, Hong Kong, China

TPC Chair: **Dr. ZHOU Longyu**, Singapore University of Technology and Design, Singapore



Website

Submission Link: Will be available soon.

In the meantime, please refer to the main conference page for general instructions:

<https://www.ica.it.org/index.html>

If you are interested in submitting, leave your contact via link or QR code, and we will

keep you posted with key reminders and the submission link as soon as it's ready: [HERE](#)



Contact form