

CALL FOR PAPERS

SPECIAL SESSION ON

Generative AI and Large Language Models for Intelligent Real-World Applications

for the 11th International Conference on Control, Automation and Diagnosis (ICCAD'27)

July 6-8, 2027, Paris, France

Session Co-Chairs:

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Session description:

Generative AI and Large Language Models (LLMs) are transforming how intelligent systems are designed, trained, and deployed. Models that generate text, images, code, and data, and that reason and act as autonomous agents, are now moving from research labs into healthcare, education, engineering, energy, and business. Realizing their full potential still requires advances in efficiency, reliability, explainability, and responsible use. The Special Session on "Generative AI and Large Language Models for Intelligent Real-World Applications" brings together researchers and practitioners to share recent advances in methods, tools, and applications of generative AI.

We welcome theoretical, methodological, and applied contributions, including new model architectures, training and fine-tuning strategies, retrieval-augmented and agentic systems, evaluation methods, and case studies of real-world deployment. Papers using deep learning and foundation models for prediction, decision support, and data generation are equally encouraged, as are interdisciplinary works that demonstrate measurable impact in practical settings.

Topics of interest include, but are not limited to, the following:

- ✓ LLM Architectures and Fine-Tuning
- ✓ Prompt Engineering and RAG Systems
- ✓ Agentic AI and Multi-Agent Systems
- ✓ Multimodal Generative Models
- ✓ Diffusion Models and GANs
- ✓ Deep Learning and Foundation Models
- ✓ Efficient and Edge LLMs
- ✓ Trustworthy and Explainable GenAI
- ✓ Generative AI for Healthcare and Medicine
- ✓ Generative AI for Education and Learning
- ✓ LLMs for Engineering and Industrial Systems
- ✓ Generative AI for Energy and Sustainability
- ✓ Generative AI for Cybersecurity
- ✓ Foundation Models for Time-Series Data
- ✓ Synthetic Data Generation and Augmentation
- ✓ Hallucination, Bias, and AI Ethics

SUBMISSION

Papers must be submitted electronically for peer review by: January 31, 2027

https://www.iccad-conf.com/submission/

All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).