

CALL FOR PAPERS

SPECIAL SESSION ON

Advanced Computer Vision and Deep Learning for Biomedical Image Analysis

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:

The Special Session on "Advanced Computer Vision and Deep Learning for Biomedical Image Analysis" explores recent advances in artificial intelligence, computer vision, and deep learning for biomedical image interpretation and automated disease diagnosis. The session focuses on innovative architectures, learning methods, and computational approaches that enable intelligent systems to extract meaningful information from complex medical images, detect abnormalities, and support accurate clinical decision-making.

We invite contributions that address emerging challenges in medical image classification, segmentation, feature extraction, anomaly detection, and disease prediction. The session will serve as a platform for researchers developing next-generation AI-driven diagnostic technologies that turn complex biomedical images into meaningful clinical insights and deliver more accurate, efficient, and interpretable healthcare solutions.

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

- ✓ Deep Learning for Biomedical Imaging
- ✓ Medical Image Segmentation
- ✓ Histopathology and Cancer Detection
- ✓ Explainable AI for Medical Imaging
- ✓ Clinical Decision Support Systems
- ✓ Foundation Models for Medical Imaging
- ✓ Self-Supervised and Few-Shot Learning
- ✓ 3D and Volumetric Image Analysis
- ✓ Vision Transformers and Attention Models
- ✓ Brain Imaging and Neurological Disorders
- ✓ Multimodal Biomedical Image Analysis
- ✓ Lightweight and Efficient Medical AI Models
- ✓ Automated Medical Image Interpretation
- ✓ Generative AI and Synthetic Medical Data
- ✓ Federated Learning and Privacy in Healthcare
- ✓ Medical Image Classification and Detection

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).