

Special Session Title
**AI-Driven Computer Vision and Mathematical Intelligence for Emerging
Healthcare and Intelligent Systems**

Session Organizers

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Scope:

This special session aims to bring together researchers and practitioners working at the intersection of computer vision, biomedical image analysis, graph theory, mathematical modeling, and intelligent systems. The session focuses on novel AI-driven methodologies for healthcare, pattern recognition, image understanding, and mathematical intelligence.

Objectives

The objectives of this special session are to:

- Present recent advances in AI-driven computer vision.
- Discuss state-of-the-art biomedical imaging techniques.
- Explore mathematical intelligence for intelligent systems.
- Promote graph-theoretic and optimization approaches.
- Encourage interdisciplinary collaboration among AI, healthcare, and mathematics researchers.
- Showcase emerging applications in healthcare and engineering.

Topics of Interest

- Computer Vision and Image Understanding
- Medical and Biomedical Image Analysis
- Deep Learning for Healthcare Applications
- Vision Transformers and Foundation Models
- Explainable and Trustworthy AI in Medical Imaging
- Medical Image Segmentation and Classification
- Graph Theory and Graph Neural Networks
- Mathematical Structures and Discrete Mathematics
- Fractal Geometry and Fractal Graphics
- Computational Geometry
- Optimization Algorithms
- Bio-inspired Computing
- Quantum Machine Learning
- Intelligent Decision Support Systems
- Multi-Agent Intelligent Systems
- Explainable Artificial Intelligence (XAI)
- Digital Health and Smart Healthcare