



**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY**  
An Autonomous Institute Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbti.ac.in

COMMITTED TO RESEARCH, INNOVATION AND EDUCATION

47 years



# SASIGD 2026

2026 International Conference on Sustainable AI for Social Impact and Global Development

August 13-14, 2026

Technically Co-Sponsored by IEEE SSIT, #68127

## CALL FOR PAPERS – SPECIAL SESSION

Machine Learning Models for AI-Enhanced Image Processing and Vision Systems

Session Code: **SS236**

### Session Co-Chairs

- Dr. Prithi Samuel**, Department of Computational Intelligence, School of Computing, SRM Institute of Science and Technology, Chennai, India. (email: drprithisamuel@gmail.com)
- Dr. K. Vijay**, Department of Artificial Intelligence and Machine Learning, Rajalakshmi Engineering College, Chennai, India. (email: vijayk.btech@gmail.com)
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- Dr. S. Ravikummar**, Department of Computer Science & Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai, India. (email: ravikumars@veltech.edu.in)

### Session Description

This special session deals with the problem of developing advanced machine learning models to enhance image processing and vision systems. As more and more applications need the accurate, effective, and real-time processing of visual information, classical image processing approaches have some limitations on scalability, complexity of process, and automation. This session aims to tackle the above challenges by discussing how AI and machine learning techniques can be connected to enhance a spectrum of visual tasks, including detection, segmentation, facial recognition, medical image analysis, and scene understanding. By bringing in new ideas and improving performance with smart methods, many of these techniques are likely to make significant improvements in accuracy, efficiency, and usefulness, even in tough real-world situations. The goal is to offer commentary on state-of-the-art machine learning models and their application to image processing and vision systems. It intends to demonstrate how computer vision, deep learning, convolutional neural networks (CNNs), and other machine learning models can work in modern visual AI applications. The session will also discuss the real-world deployment of these models in applications such as health care (e.g., medical imaging), autonomous vehicles, and surveillance, promoting the exchange of ideas on innovation, challenges, and future directions.

The topics of interest include, but are not limited to:

- Image classification and object detection in visual data
- Deep learning models (CNNs, RNNs, Transformers) for visual tasks
- Image segmentation for medical imaging and autonomous systems
- Generative models (GANs) for image generation, enhancement, and restoration
- AI-powered robotics and automation with vision systems
- Explainable AI (XAI) techniques in image processing for transparency
- Real-time image processing in embedded systems and IoT
- AI applications in medical image analysis and early disease detection
- Multi-modal vision systems integrating image, text, and sensor data
- Video processing, action recognition, and activity detection
- Edge AI for image processing and computer vision in mobile environments
- AI-enhanced optical character recognition (OCR) for document digitization
- AI for facial recognition and biometric identification systems
- Adversarial attacks and defenses in computer vision models
- Data augmentation and synthetic data generation for training visual models

### IMPORTANT SUBMISSION DEADLINES

- Call for Special Session proposals: **February 22, 2026**
- Call for Regular Papers: **March 1, 2026**
- Call for Student Posters: **March 8, 2026**



### PAPER SUBMISSION

Scan the QR Code or Visit

<https://sasigd.org/special-sessions.php>



### REVIEWERS REGISTRATION

Scan the QR Code or Visit

<https://forms.gle/oBdwKjcHC8gs6PyaA>

Experts are invited to join as reviewers for SASIGD 2026.

All the accepted & presented papers will be submitted for possible inclusion in IEEE Xplore.

### INTERNATIONAL ADVISORY COMMITTEE

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**August 13-14, 2026**



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### CONFERENCE CHAIRS

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IEEE SSIT Vice President (Memberships)

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Chair, IEEE SSIT Hyderabad Section Chapter

Join us in shaping Responsible and Sustainable AI for Global Development!