

CALL FOR PAPERS
SPECIAL SESSION ON
AI-Enabled Satellite and UAV Technologies for Smart Agriculture and Environmental Monitoring
for ICCAD 2027
July 6-8, 2027, Paris, France

Session Co-Chairs:

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Session description:

Satellite and drone technologies are rapidly becoming essential tools for addressing global challenges related to food security, environmental sustainability, climate change, and natural resource management. The integration of intelligent sensing platforms with AI-based analytics offers unprecedented opportunities for improving monitoring accuracy, operational efficiency, and decision-making capabilities.

This special session seeks to promote interdisciplinary collaboration among researchers in control systems, automation, robotics, artificial intelligence, remote sensing, agriculture, environmental sciences, and smart infrastructures. It will provide a venue for exchanging innovative ideas and showcasing practical solutions that contribute to sustainable and resilient ecosystems.

Recent advances in Earth Observation technologies, Unmanned Aerial Vehicles (UAVs), Artificial Intelligence, and Internet of Things (IoT) systems have revolutionized the way agricultural and environmental resources are monitored, analyzed, and managed. The increasing availability of high-resolution satellite imagery, drone-based sensing platforms, and intelligent data analytics enables real-time decision-making and supports sustainable resource management.

This special session aims to bring together researchers, practitioners, and industry experts working on innovative approaches that combine satellite remote sensing, drone technologies, intelligent control systems, machine learning, and data-driven decision support tools for agriculture and environmental applications.

The session will provide a forum for presenting recent advances, addressing technical challenges, and discussing future research directions in smart agriculture, environmental monitoring, precision farming, ecosystem management, climate resilience, and natural resource protection.

Particular emphasis will be placed on intelligent sensing, image analysis, autonomous monitoring systems, predictive analytics, and AI-driven decision support frameworks leveraging aerial and satellite observations.

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

- Satellite Image Processing and Earth Observation
- UAV-Based Monitoring and Inspection
- Machine Learning and Deep Learning for Remote Sensing
- Precision Agriculture and Smart Farming
- Crop Monitoring and Yield Prediction
- Plant Disease Detection and Classification
- Soil and Water Resource Management
- Forest Monitoring and Management
- Forest Fire Detection, Prediction and Early Warning Systems
- Wildfire Monitoring Using Satellite and UAV Data
- Environmental and Ecosystem Monitoring
- Climate Change Assessment and Adaptation
- Multi-Sensor Data Fusion
- Computer Vision for Agriculture and Environment
- Autonomous UAV Navigation and Control
- Digital Twins and Decision Support Systems
- IoT and Edge AI for Smart Monitoring

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).