



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

AI-Driven Biotechnological Innovations for Climate-Resilient and Sustainable Agriculture

Session Code: **SS109**

Session Co-Chairs

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Session Description

Global agriculture faces unprecedented challenges due to climate change, soil degradation, water scarcity, and increasing food demand. Recent advances in biotechnology integrated with artificial intelligence (AI) offer transformative solutions for building climate-resilient, resource-efficient, and sustainable farming systems. This special session focuses on cutting-edge research that combines AI, bioinformatics, genomics, and agricultural biotechnology to enhance crop productivity, soil health, pest resistance, and precision farming practices. Emphasis is placed on scalable, data-driven solutions that support sustainable agriculture, especially in developing and climatevulnerable regions.

The session aims to foster interdisciplinary collaboration among AI researchers, biotechnologists, agronomists, and sustainability experts to accelerate innovation for next-generation smart agriculture.

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

- AI-assisted genomic and phenotypic analysis for crop improvement
- Machine learning models for predicting crop stress, disease, and yield
- Bioinformatics-driven climate-resilient seed development
- AI-enabled soil microbiome analysis for sustainable soil health
- Smart pest and disease management using biotech + AI fusion models
- AI-based optimization of bio-fertilizers and bio-pesticides
- Precision agriculture using biological sensors and AI analytics
- Sustainable farming decision systems using multi-omics data
- Ethical, environmental, and policy considerations in AI-biotech agriculture
- Case studies on AI-supported sustainable farming practices

IMPORTANT SUBMISSION DEADLINES

Call for Special Session proposals: **February 12, 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.

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