

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 Artificial Intelligence for Sustainable Energy Systems

Session Code: **SS218**

Session Co-Chairs

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Session Description

This special session deals with the problem of designing, operating, and managing sustainable energy systems under increasing penetration of renewable energy sources, distributed energy resources, electric mobility, and smart infrastructure, where conventional model-based techniques face limitations due to uncertainty, nonlinearity, scalability, and real-time decision-making requirements. The rapid digitalization of power and energy systems has generated large volumes of heterogeneous data, necessitating intelligent, adaptive, and data-driven approaches to ensure efficiency, reliability, resilience, and sustainability. The goal is to bring together researchers, practitioners, and policymakers to present and discuss recent advances in Artificial Intelligence (AI) and Machine Learning (ML) for sustainable energy systems, focusing on the design, control, optimization, forecasting, diagnostics, and secure deployment of AI-enabled solutions. The session aims to highlight innovative methodologies, real-world applications, and emerging challenges related to renewable and storage integration, electric mobility, smart grids, microgrids, and energy policy, while emphasizing explainability, cybersecurity, and societal impact. The session aligns with the vision of promoting responsible and impactful AI for global energy sustainability.

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

- Load, price, and renewable generation forecasting using AI/ML techniques
- Intelligent energy storage management, battery health estimation, and lifecycle prediction
- AI-driven energy dispatch, scheduling, and demand response in hybrid renewable energy systems
- AI for electric vehicle charging coordination, infrastructure planning, and grid impact analysis
- Explainable AI, federated learning, and edge intelligence for energy applications
- Cybersecurity, privacy-preserving AI, and intelligent fault diagnosis for energy systems
- Digital twins for power and energy systems
- AI-driven energy policy design, market mechanisms, and regulatory frameworks

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