



Call for Papers for the Special Session on

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLICATIONS IN RENEWABLE ENERGY AND ENERGY STORAGE SYSTEMS

Organized and co-chaired by

Dr. Ghulam Amjad Hussain, University of Dubai, UAE.

ghussain@ud.ac.ae

Dr. Siddharth Joshi, Pandit Deendayal Energy University,
India.

siddharth.joshi@sot.pdpu.ac.in

Dr. Preeti Sharma, Pandit Deendayal Energy University, India.

Preeti.Sharma@spt.pdpu.ac.in

Dr. Ameer Daiya, Freelancer, India.

ameedaiya7@gmail.com

Technical Outline of the Session and Topics

Renewable energy sources and electric storage devices such as batteries, supercapacitors, and electric vehicles (EVs) are increasingly integrated into AC/DC grids and microgrids to enable efficient cogeneration, peak shaving, and energy conservation for future use. Within this evolving landscape, Artificial Intelligence (AI) and Machine Learning (ML) are emerging as powerful tools that significantly enhance the intelligence, flexibility, and overall performance of renewable energy and energy storage systems. By enabling smarter control, adaptive operation, and data-driven decision-making, AI and ML help these systems respond more effectively to changing grid conditions and user demands. The AI and ML algorithm also emphasizes about prediction of parameters and its prediction of renewable energy systems.

Topics of the session include, but are not limited to:

- Intelligent Energy Management Systems
- AI Enabled Power Electronics Control
- Advanced EV Charging and Vehicle-To-Grid (V2G) Intelligence
- Fault Detection, Diagnosis, and Predictive Maintenance
- Digital Twins and AI-Based Optimization
- Compliance With Grid and EV-Related Standards through Intelligent Control
- Intelligent Control of AC and DC Microgrid **OR**
- Any Relevant Topic which Applies to AI And ML Integration for Smart Power Systems

Timeline for Authors

All the instructions for paper submission are available on the conference website. Please visit www.iecon2026.org or scan the QR code for the timeline.

