

Special session on

Recent trends in Artificial Intelligence and Machine Learning for Energy Analysis and Forecasting.

Energy analysis and forecasting are essential aspects of the energy sector, with a significant impact on the economy and the environment. As the energy sector becomes more complex and dynamic, the use of AI and ML techniques has become increasingly important. These techniques have shown promising results in various aspects of energy analysis and forecasting, such as demand forecasting, renewable energy integration, energy efficiency, and grid stability.

The proposed special session aims to bring together experts, researchers, and practitioners from academia and industry to share their latest research findings, exchange ideas, and explore possible collaborations on AI and ML for energy analysis and forecasting. The session will cover various topics, including but not limited to:

- AI and ML techniques for energy demand forecasting by analysing large datasets.
- AI and ML for renewable energy production, forecast variability, and enhance grid efficiency and stability.
- Energy efficiency
- AI and ML optimization of energy consumption and identification of energy-saving opportunities.
- AI and ML for prediction and prevention of grid disturbances, monitoring performance, and ensure grid stability.
- AI and ML for energy management, cost reduction, improving energy efficiency, and enhancing grid reliability and stability.

The special session will provide a platform for participants to present and discuss their latest research findings, share experiences, and explore possible collaborations. We welcome contributions in the form of original research papers, case studies, and review articles.

Special Chair names and contact emails:

Dr. Sarat Kumar Sahoo, *Professor Department of Electrical Engineering Parala Maharaja Engineering College Govt. Engineering College, Berhampur Odisha, India*

Dr. Vikram Kulkarni, *Assistant Professor (Senior), Department of Information Technology Mukesh Patel School of Technology, Management, and Engineering, NMIMS University, Mumbai campus, Maharashtra, India*

Dr. Fernando Yanine, *Faculty of Engineering, Universidad Finis Terrae (Santiago, Chile)*