



## SPECIAL SESSION XVIII

### Predicting Electricity Production and Load from Renewable Sources

ORGANIZED AND CHAIRED BY

• **Dimitri Thomopoulos**, [dimitri.thomopoulos@unipi.it]  
University of Pisa

Predicting electricity production and load from renewable sources is a crucial area of research within sustainable energy. It involves developing and refining methodologies, algorithms, and models to accurately forecast energy generation and consumption patterns specifically related to electricity derived from renewable sources like solar, wind, and hydroelectric power. This topic is essential for optimizing the integration of renewable electricity into existing power grids, ensuring grid stability, and maximizing the utilization of renewable resources. Researchers focus on various factors influencing electricity production and load prediction, including weather patterns, geographical considerations, technological advancements, and demand fluctuations. Enhancing our ability to forecast renewable electricity production and load facilitates the efficient deployment and management of renewable energy systems, ultimately advancing sustainable energy solutions. The objectives for this session include exploring innovative methodologies, comparing results and models, identifying challenges and opportunities, promoting collaboration, and examining the impact of predictions on management decisions. Additionally, the session aims to identify future research areas and priorities for enhancing prediction accuracy and addressing emerging challenges in renewable electricity forecasting.

Topics of interest of this special session include, but are not limited to:

- **Advanced forecasting methodologies for renewable production and load.**
- **Impact of weather patterns and geographical factors on renewable production and load prediction.**
- **Optimization strategies for maximizing the utilization of renewable resources.**
- **Evaluation of demand fluctuations and their influence on renewable forecasting.**
- **Comparative analysis of prediction models and algorithms for renewable electricity.**
- **Future trends and research directions in renewable electricity forecasting and management.**

All the instructions for paper submission are included in the conference website [www.eeeic.net](http://www.eeeic.net)