



## IEI<sup>2</sup> 2023 Special Session **03**

### Theory and Application of Rural Energy Internet

#### Introduction and topics

The Theory and Application of Rural Energy Internet is an emerging and interdisciplinary field that focuses on the integration of renewable energy, smart grid technologies, and information communication systems to create a sustainable and efficient energy ecosystem in rural areas. This special session aims to provide a platform for researchers, practitioners, and industry experts to gather and discuss the latest research findings, exchange ideas, address challenges, and explore opportunities in the development and implementation of the Rural Energy Internet.

This special session aims to facilitate knowledge sharing, collaboration, and innovation in order to drive the sustainable development of rural energy systems. Let's advance the field and create a more sustainable future for rural energy internet.

Topics:

- 1. Smart Grid Technologies for Rural Energy Systems:
  - Advanced monitoring and control systems for rural energy systems
  - Integration and management of renewable energy sources in rural areas
  - Demand response strategies and load balancing techniques in rural energy systems
- 2. Internet of Things (IoT) Applications in Rural Energy Internet:
  - Sensor networks and data collection methods for real-time monitoring in rural energy systems
  - Smart home and building automation for improving energy efficiency in rural areas
  - Remote monitoring and maintenance of renewable energy infrastructure
- 3. Data Analytics and Decision Support Systems for Rural Energy Internet:
  - Predictive modeling and optimization for renewable energy generation in rural areas
  - Energy forecasting and planning tools for rural communities
  - Decision support systems for policy-making in rural energy management
- 4. Financing and Business Models for Rural Energy Internet:
  - Innovative financing mechanisms for rural energy systems
  - Public-private partnerships for sustainable rural energy development
  - Business models and market mechanisms for decentralized energy generation in rural areas
- 5. Case Studies and Demonstrations of Rural Energy Internet:
  - Successful implementations of the Rural Energy Internet in various regions
  - Economic, social, and environmental impacts of the Rural Energy Internet in rural communities

#### Special Session Chairs



**Xueqian Fu**  
China Agricultural University



**Liwei Ju**  
North China Electric Power University



**Gen Li**  
Technical University of Denmark



**Wei Gan**  
Cardiff University

#### Publication



Website

The conference papers will be published by the IEEEExplore website and indexed by EI, and high-quality papers will be recommended to Energy Conversion and Economics, Energy Internet, Journal of Modern Power Systems and Clean Energy (MPCE), CSEE Journal of Power and Energy Systems (CSEE JPES), Applied Energy, and others.

Submission Link: <https://easychair.org/conferences/?conf=ei22023>

Full Paper Submission Deadline: Oct. 31th, 2023

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