

# THE 8TH IEEE CONFERENCE ON ENERGY INTERNET AND ENERGY SYSTEM INTEGRATION

NOV. 29 - DEC. 02, 2024 | SHENYANG, CHINA

## Special Session 02

### Advances in Sustainable Energy Systems on the Demand Side

#### INTRODUCTION AND TOPICS

The goal of this special session is to explore cutting-edge research and advancements in sustainable energy systems from the perspective of demand-side management within the realm of electrical engineering. The focus is on innovative strategies, technologies, and methodologies that enhance energy efficiency, optimize energy usage, and integrate renewable energy sources at the consumer end. This special session invites high-quality contributions that address theoretical, computational, and experimental developments in the following areas:

- Demand Response and Management: Techniques for real-time demand response, load forecasting, and strategies for peak load reduction.
- Smart Grid Technologies: Integration of smart meters, IoT devices, and intelligent control systems for efficient energy management.
- Energy Storage Solutions: Advances in battery technologies, virtual storage systems, and their applications in residential, commercial, and industrial settings.
- Renewable Energy Integration: Methods for seamless incorporation of solar, wind, and other renewable sources into existing energy networks on the demand side.
- Energy Efficiency: Innovations in energy-efficient appliances, building energy management systems, and optimization algorithms for reducing energy consumption.
- Electric Vehicles (EVs): Impact of EVs on demand-side energy systems, including smart charging infrastructure, vehicle-to-grid (V2G) technologies, and load balancing.
- Peer-to-Peer Energy Trading: Development and implementation of P2P energy trading platforms, blockchain applications, and market mechanisms.
- Microgrids and Distributed Generation: Design, operation, and control of microgrids, and their role in enhancing local energy resilience and sustainability.
- Policy and Regulation: Analysis of regulatory frameworks, incentives, and policies that promote demand-side energy sustainability.
- Data Analytics and Machine Learning: Applications of big data, machine learning, and artificial intelligence in optimizing demand-side energy management.

#### SPECIAL SESSION CHAIRS



**Dr. Yuanxing Xia**  
Hohai University, China



**Dr. Yu Huang**  
Nanjing University of Posts  
and Telecommunications, China

#### PUBLICATION & SUBMISSION

Submissions will be reviewed by the conference technical committees, and accepted papers will be published in IEEE EI<sup>2</sup> 2024 International Conference Proceedings, which will be submitted for inclusion in the **IEEE Xplore Digital Library**, and submitted for indexing by **El compendex** and **Scopus**.



Scan the QR code on the left or open the submission link to submit your paper.

• Submission link: <https://easychair.org/conferences/?conf=ei22024>

Submission Deadline: 15 October, 2024

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For any questions, please contact the conference secretary, Ms. Joyce Zhong, via [EI2\\_2024@outlook.com](mailto:EI2_2024@outlook.com).