

RPG 2025

Invited Session Call for Papers

**The 14th International Conference on
Renewable Power Generation****24-26 October 2025 | Shanghai, China****Full Paper Submission Deadline: 05 June 2025 | <https://rpg2025.theiet.org.cn/>****Session Chair:**

- Session Chair: Weiji HAN, Shanghai Jiao Tong University
- Co-Session Chair: Chao LI, Tianjin University

Invited Session on:

11 Emerging techniques for the management and control of battery systems in smart grids and electric vehicles

Battery energy storage systems (BESSs) play a pivotal role in supporting the integration of renewable energy sources and the transition to electrified transportation systems. This special session aims to showcase emerging techniques and the latest advancements in BESSs, forming a foundation for the development of renewable energy integration and transportation electrification.

The topics of interest include, but are not limited to:

- Design of BESSs
- Modeling and simulation of BESSs
- Analysis and modeling of battery operation and degradation
- Power control and optimization in BESSs
- Intelligent algorithms for renewable energy systems with BESSs
- Design or control of power conversion systems (PCSs) for BESSs
- Design or control of energy management systems (EMSs) for BESSs
- Battery state estimation (SoX): State of Charge (SoC), State of Health (SoH), State of Power (SoP), State of Energy (SoE), etc.
- Grid-level energy storage and vehicle-to-grid (V2G) technologies
- Battery management systems (BMSs) in electric vehicles (EVs)
- Resilience and security strategies for transportation electrification
- Applications of BESSs to Smart Grids
- Maintenance, management, and control of stationary energy storage plants

Session Chair: Weiji HAN, Shanghai Jiao Tong University**Chair's Bio:**

Weiji Han is an Associate Professor at China-UK Low Carbon College, Shanghai Jiao Tong University. He graduated with a PhD degree in electrical engineering from University of Connecticut, United States, in 2018, and worked as a Postdoc and then a Researcher at Chalmers University of Technology, Sweden, for 3 years. His research interests have been focused on the modeling, analysis, control, and optimization of battery energy storage systems, as well as its applications in electric vehicles and smart grids. He has published more than 30 articles in high-level international journals and conferences. Currently, he is also serving as an Associate Editor of IET Generation, Transmission & Distribution, and a Guest Editor of Batteries.

BENEFITS OF SUBMITTING

- Successful Authors will receive **10% off the Adult Registration Fee** (early bird or standard registration) Please use code **INVITED25** during registration
- Accepted paper will be published in the RPG 2025 conference proceeding
- Accepted paper will be published on **IET Digital Library** and indexed by **IET Inspec, Scopus, IEEE Xplore and Ei Compindex**
- Around 30 papers from the conference will be awarded the Best Conference Paper prize and will be invited to submit an extended version to IET renewable Power Generation Journal (open access journal, APC fee applies)