

INTRODUCTION

Sponsored by IEEE, IEEE IAS, organized by Shanghai Jiao Tong University, co-organized by University of Electronic Science and Technology of China, Shandong University, and North China Electric Power University, 2022 IEEE IAS Industrial and Commercial Power System Asia (IEEE I&CPS Asia 2022) Conference will be held during July 8-11, 2022 in Shanghai, China.

IEEE I&CPS Asia 2022 will focus on **'Towards Low-carbon Power System'**, and aim to provide a high quality platform for researchers, practitioners, professionals, and students from all over the world to present their latest research findings, ideas, and applications in the related fields of Power Systems. Featured with keynote session, technical session, tutorial session and special session, IEEE I&CPS Asia 2022 will provide the delegates an unparalleled opportunity to exchange with qualified professionals and build future partnership.

SPECIAL SESSION ON

Integrated Multi-energy Conversion, Control and Operation Planning for Self-Sustained Highway

As a major components of modern transportation system, the highway transportation system is one of the significant carbon emission contributors for the entire transportation sector. Although there are numerous of distributed renewable resources along the highway system, the varied energy resource types and heterogeneous operation conditions present challenges to fully utilize those clean energy sources for the highway transportation system. Towards the carbon peaking and carbon neutrality targets, it is important to investigate the integrated multi-energy control, operation and planning for the self-sustained highway transportation system from an energy-transportation nexus perspective. To this end, the target of this special session to address two major challenges for the low carbon driven self-sustained highway transportation system, which are 1) How to enhance the integration of distributed renewable generation, 2) How to ensure efficient, stable and reliable multi-energy conversion and control.

TECHNICAL OUTLINE OF THE SESSION

The special session focuses on a hot research topic — integrated multi-energy conversion, control and operation planning related technologies for sustained highway transportation system. Novel techniques and theories in related area are encouraged in this special session. Topics of interest include (but are not limit to): planning theory and configuration method for multi-state energy system, control and optimal scheduling strategies for self-sustained highway transportation system, efficient transformation topology and control technology to support self-sustained highway transportation system, development of polymorphic energy router and efficient transformation key equipment, performance evolution and service support technology of polymorphic energy conversion equipment, comprehensive efficiency evaluation method for multi-energy conversion equipment and multi-state energy system, engineering practice of self-sustained highway transportation system, etc.

SPECIAL SESSION ORGANIZERS

Jian Wang

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IMPORTANT DATES

Submission Deadline

May 15, 2022

Notification Deadline

June 15, 2022

PUBLICATION

Submissions to IEEE I&CPS 2022 will be peer reviewed on the basis of technical quality, relevance to conference topics, originality, significance, clarity, etc. Accepted papers will be submitted for inclusion into IEEE Xplore subject to meeting IEEE Xplore's scope and quality requirements.

Please enter IEEE I&CPS Asia 2022 online submission system and choose 'SP008. Integrated Multi-energy Conversion, Control and Operation Planning for Self-Sustained Highway Transportation System' to submit papers.

Submission Link:

<https://easychair.org/conferences/?conf=ieeEICPSAsia2022>

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