IEEE I&CPS Asia 2022

SHANGHAI, CHINA
JULY 8-11, 2022

2022 IEEE IAS INDUSTRIAL AND COMMERCIAL POWER SYSTEM ASIA

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

Emerging Modeling, System Architecture, and Applications for Low Carbon Energy Systems

This special session will provide a forum for the advances in modeling, system architecture, and applications for various energy systems toward carbon neutralization, ranging from smart grid to marine energy systems. The focus will be advance modeling and simulation for power electronic based power systems with a special concern for the dynamic stability, data driven modeling to achieve better prediction for smart grid applications with the aid of the advanced artificial intelligence, and system architecture for a cyber-physical energy system to better deal with a more complex system of systems.

TECHNICAL OUTLINE OF THE SESSION

Global pledge and efforts for carbon neutrality urge the energy sector which makes up nearly three-quarters of global emissions to keep adopting advanced technologies to fulfill the emission target, which ranges from the power system on the land to the marine energy applications.Modeling for various energy systems featured by the power electronics system interfaced renewable and energy storage witness its improvement from both the physical-based and data-driven methodologies. For instance, a continuous effort of this has been made to improve the dynamic stability of the system by adopting most advanced analysis and simulation methods. As ICT penetrate more into various power systems, it provides the system with enhanced observability, controllability, intelligence as well as interoperability with other energy systems. Data-driven modeling and applications powered by the most advanced artificial intelligence will offer new solutions for various applications, especially for the operation of the distribution side. Both this modeling and application need foundation guidance, that is, the system architecture, and thus this topic will also be covered in this session to provide a systematic overview.The focus of the special issue includes but is not limited to the following items:

- Advance microgrid modeling and simulation method and application
- Advance conversion and energy management for marine energy systems
- Challenges in turning various energy systems into cyber-physical systems, such as system architecture, interdependence analysis, and cyber-security
- Application of artificial intelligence to conversion and energy management
- Carbon tracing and trading embedded in the energy management.

SPECIAL SESSION ORGANIZERS

Chendan Li	Norwegian University of Science and Technology
Weipeng Chen	Nanjing University of Aeronautics and Astronautics
Xu Cheng	Smart Innovation Norway

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 'SP011. Emerging Modeling, System Architecture, and Applications for Low Carbon Energy Systems' to submit papers.

Submission Link:
https://easychair.org/conferences/?conf=ieeeicpsasia2022

Contact Details

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