33rd International Council on Electrical Engineering Conference

ICEE 2027

4 - 7 July 2027 Hong Kong, China

Organised by

HKIE THE HONG KONG INSTITUTION OF ENGINEERS 香港工程師學會

Co-Organised by

中国电机工程学会 SEE CSEE

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KIEE

Powering the Future: AI Integration, Grid Modernisation and Net-zero Electrification



Join us at the conference to discover breakthrough research and applications, cutting-edge products, and visionary keynote insights. Submit your papers and be part of the innovation shaping tomorrow's energy systems.

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The International Council on Electrical Engineering Conference is jointly organised by the Institute of Electrical Engineers of Japan (IEEJ), the Korean Institute of Electrical Engineers (KIEE), the Chinese Society for Electrical Engineering (CSEE), and the Hong Kong Institution of Engineers (HKIE). Founded in 1995, ICEE has grown into an annual forum for electrical engineers from leading economies across Asia, including Japan, Korea, Mainland China, and Hong Kong, as well as participants from the Americas and Europe, to share experiences and new ideas through presentations and panel discussions on emerging issues.

ICEE 2027 will be held from 4 to 7 July 2027 in Hong Kong, China. The theme of ICEE 2027 is "**Powering the Future: AI Integration, Grid Modernisation and Net-zero Electrification**." The conference will feature **Invited Technical Sessions**, where experts in the field will share their insights and achievements, as well as **Paper Presentation Sessions** for oral and poster papers accepted through the Call for Papers.

Opening Session with Keynotes Speeches including keynote speakers:
Ir Prof CHUNG Chi Yung, President of IEEE Power & Energy Society
Mr HOU Jinlong, President of Huawei Digital Power

5 Invited Technical Sessions
- Nurturing Our Young Professionals
- State-of-the-Art Research and Development
- Innovation for Success Spotlights
- Breakthrough Technologies from Industry
- Smart E&M Infrastructure at Kai Tak Sports Park

Technical Visit on Landmark Achievements
Hong Kong Kai Tak Sports Park on building facilities, electrical systems, IT facilities

Call for Papers

AI Applications
- Physics informed neural networks (PINNs) for power system dynamics
- Digital twins of substations, lines, and converters for planning, training and predictive maintenance
- Explainable AI for protection, dispatch, and operational planning (operator trustable models)
- Unmanned aerial vehicle (UAV) and robot-based inspection of lines and substations with onboard AI for defect detection

Power Electronics
- Solid state transformers for distribution networks and DC distribution
- Modular multilevel converter (MMC) control for DC grids and large renewables
- High density converters for on board electric vehicle chargers and aviation electrification
- Battery energy storage systems for grid support

Power System Protection, Control and Operation
- Grid forming and grid-following inverters for 100% inverter-based systems (stability, protection, black start)
- AI assisted adaptive protection in active distribution networks with high distributed energy resources (DER) and bidirectional power flow
- Cyber resilience of smart grids: intrusion detection and self-healing control for energy / distribution management system
- Advanced microgrids: multi-microgrid coordination, islanding and resynchronisation strategies
- Multi-agent control
- Data centre implementation

Net-zero Electrification
- Electric vehicle (EV) charging infrastructure and grid integration
- Vehicle-to-grid and vehicle-to-everything technologies
- Building electrification and zero-emission buildings
- Carbon-neutral campuses, districts, and communities
- Policy, regulation, standards, and market design for net-zero electrification

Electrophysics and Materials
- High voltage power engineering
- Electrophysics of semiconductor and wide-bandgap material for power electronics
- Smart materials
- Electromagnetics and optics in power applications
- Modelling and simulation of electrophysical processes in electrical systems

Smart Grid and Renewable Energy Integration
- 5G/6G and time-sensitive network (TSN) networking for protection and control
- Distributed and multi-agent control for microgrids and active distribution networks
- Forecasting of renewable generation and load demand
- Climate resilience and extreme-weather impacts on renewable-integrated grids

Deadline for Submission of Abstract	**31 December 2026**
Notice of Abstract Acceptance	2 February 2027
Deadline for Submission of Full Papers	1 April 2027
Notice of Acceptance for Presentation	2 May 2027
Deadline of Registration for Paper Publication & Early Bird Registration	15 May 2027

Selected papers can be further published in the HKIE Transactions (a Scopus-Indexed Journal)
Please visit the website for more updates: https://www.hkie.org.hk/icee2027