

11th IEEE Innovation Smart Grid Technologies Asia 1 - 5 November 2022 Marina Bay Sands, Singapore



“Energy Resilience & Sustainability for Smart Nations”

Call for Papers

The 11th International Conference on Innovative Smart Grid Technologies (**IEEE ISGT-Asia 2022**), sponsored by the IEEE Power & Energy Society (PES), will be held in **Singapore** from **1 – 5 November 2022**, the world’s gateway to Southeast Asia. The IEEE PES ISGT-Asia 2022 conference will be a melting pot with participants from academia, industry, R&D, electric power utilities, energy service providers, and the government to discuss, share and exchange ideas related to state-of-the-art innovations in smart grid technologies for the future grid. The theme of this year’s conference is **“Energy Resilience & Sustainability for Smart Nations”** and the event includes industrial panel sessions, keynote speeches, tutorials, papers and poster presentation. The proceedings will be published in [IEEE Xplore and indexed in Ei Compendex database](#).

Conference Topics, 2nd – 4th November 2022:

Contributions in all areas related to smart grid technologies, including (but not limited to) the following:

TRK1. System Planning and Operation with High-Level Renewable Energy Resources

Smart grid system planning, operation, reliability, T&D interface issues and solutions, system modeling, real-time simulation, co-simulation techniques, preventive maintenance, active distribution network, innovative state estimation tools, frequency response, ancillary services, and large-scale operation with distributed generation.

TRK2. Information and Communication Technologies (ICT) and Cyber-Physical Security

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Role of ICT in smart grids, smart metering, data acquisition and monitoring, sensor networks, information and communication protocols and standards, 5G techniques and applications to smart grid, big data analytics, cloud computing, data management, substation automation, and cyber-physical security.

TRK3. Renewable Generation Integration and Low-Inertia Grid

Power electronic circuit topologies and control strategies, integration of inverter-based resources (IBRs), grid-forming and grid-following controls, stability and power quality issues, grid-connected energy storage systems and their control, electric vehicle charging technologies and its impact in grid operation, overlay grids, electric drives, electric vehicle technologies, solid-state transformers.

TRK4. Artificial Intelligence (AI) for Grid Resilience Enhancement

Models and tools to simulate and quantify climate change impacts on grid reliability and resiliency, resiliency metrics and hardening techniques, use of renewable energy for grid resilience, proactive control, fast restoration, AI/machine learning for grid resilience, machine learning for transient stability analysis, smart grid protection solutions.

TRK5. Grid-Edge Systems and Technologies

Microgrid, Islanding, energy & demand-side management system, and consumer behavior, grid-interactive efficient buildings, energy efficiency, grid-edge intelligence, district heating and cooling, smart cities solutions, restoration and mitigation of extreme events.

TRK6. Electricity Market, Innovative Business Mechanism, Policy/Regulatory Aspects

Regulatory aspects, policies, standards, electricity market mechanics, design and business models, economic impacts on energy market price, and smart grid awareness.

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Keynote Speakers:



Saifur Rahman
IEEE President-Elec 2022
Joseph Loring Professor, Virginia
Tech, USA



Jessica Bian
President IEEE PES,
Vice-President at Grid-X
Partners, USA



Shay Bahramirad
President-Elect 2022 IEEE PES
Senior Vice President, LUMA
Energy, USA



Claudio Cañizares
Professor, UWaterloo, Canada,
and Hydro One Endowed Chair



Shu Yuen (Ron) Hui
MediaTek Endowed Professor,
NTU



Amit K. Gupta
Director of the Electrical
Programme at Rolls-
Royce@NTU Corporate lab



Nando Ochoa
Professor of Smart Grids and
Power System, University of
Melbourne, Australia



Thomas Reindl
Deputy CEO of the Solar
Energy Research Institute of
Singapore, NUS

For more detailed information visit [Keynote Speakers' Biography and Synopsis](#)

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Special Sessions, 2nd – 4th November 2022:

- SS1. Artificial Intelligence enabled smart control for advanced energy management systems in Modern Microgrid.**
Dr. Pengfeng Lin, Assist. Prof. Jianfang Xiao, and Mr. Romain Migné
- SS2. Cloud-Based Control of Distributed Energy Resources in Energy Internet.**
Dr. Yu Wang, Assist. Prof. Mazher Syed, Assoc. Prof. Yan Xu, and Prof. Graeme Burt.
- SS3. Advances in Virtual Power Plant: Modelling, Optimization, and Implementation.**
Dr. Cuo Zhang, Prof. Zhao Yang Dong, and Assoc. Prof. Junjie Hu:
- SS4. Coordinated Operation of Active Distribution Networks.**
Assist. Prof. Bing Yan and Dr. Wei Lin
- SS5. Toward Digitalized Microgrids with Blockchain, Data Driven Techniques, and Cyber-Resilience Enhancement Methods.**
Mr. Jiahong Dai, Dr. Pengfeng Lin, Dr. Chao Ren, Mr. Jiawei Yang, and Dr. Pengfei Tu
- SS6. Topical Developments of Power Electronics Converter with their Futuristic Control Approach in System Resilience Enhancement.**
Assist. Prof. Nitin Gupta, Assist. Prof. Dhivya Sampath K., Dr. Nirav Patel, Assist. Prof. Ajay Kumar, and Assist. Prof. Manoj Kumawat
- SS7. Internet of Energy Innovations with Blockchain Enabled Decentralized Infrastructure.**
Assist. Prof. Jun Zhao, Dr. S. M. Suhail Hussain, Dr. Mansoor Ali, and Dr. Muhammad Musthafa Roomi
- SS8. Energy Transition Strategies, and Environment and Climatic Benefits of Pushing Forward NetZero Target.**

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Organizing Committee:

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Registration Co-Chair/ Web Chair	Dr. Muhammad Ramadan Saifuddin <i>Singapore University of Technology and Design</i>

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Important Dates:

Proposal Tutorial/Special Session submission deadline: 31 March 2022

Proposal Tutorial/Special Session decision notification: 30 April 2022

Regular Paper submission deadline: 30 April 2022

Special Session Paper submission deadline: 15 June 2022

Regular & Special Paper decision notification: 15 July 2022

Camera-Ready submission deadline: 5 September 2022

Early Bird registration: 5 September 2022

Conferences Collaboration:

The organizers of the **IEEE SmartGridComm** (25-28 Oct 2022) and **IEEE ISGT-Asia** (1-5 Nov 2022) are glad to share that the two conferences will be held back-to-back in Singapore. The organizations would like to encourage participants to consider planning their stay in Singapore for both weeks and attend both conferences. This will serve as a great opportunity for fostering collaboration among the members of IEEE ComSoc, IEEE PES, and other sister societies. More information visit [IEEE SmartGridComm 2022](https://www.ieee.org/conferences-events/smart-grid-comm-2022).



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IEEE ISGT-Asia 2022 Registration Fees:

*Virtual registrations will be charged the same.

	Early Bird <i>(Before 5 September 2022)</i>	Standard <i>(5 September to 17 October 2022)</i>	Onsite <i>(After 17 October)</i>
IEEE PES Member	SGD 900	SGD 1,080	SGD 1,220
IEEE Member	SGD 1,035	SGD 1,240	SGD 1,400
Non-Member	SGD 1,350	SGD 1,620	SGD 1,800
IEEE PES Student Member	SGD 450	SGD 540	SGD 610
IEEE Student Member	SGD 540	SGD 650	SGD 730
IEEE Life Member	SGD 450	SGD 540	SGD 610
Tutorial Registration (1 November 2022 only)			
Regular	SGD 320	SGD 380	SGD 450
Student	SGD 200	SGD 250	SGD 300

Contact:

Website: <https://iee-isgt-asia.org/>

Email: sec.singapore@ieee.org

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