

13th IEEE International Symposium on Power Electronics for Distributed Generation Systems (PEDG)

Call for Papers

The 13th IEEE International Symposium on Power Electronics for Distributed Generation Systems (PEDG) will be held on June 26–29, 2022, in Kiel, Germany. The symposium invites experts in power electronics and power system to discuss the energy transformation towards greener production and more efficient consumption, preserving and improving the energy system stability and resilience.

This international symposium, sponsored by IEEE Power Electronics Society (PELS) and organized by the Kiel University, will provide an international visible platform for presenting innovative and cutting-edge results in the area of power electronics and distributed generation systems.

PEDG 2022 will feature plenary speeches, tutorials, and regular technical sessions on theory, analysis, design and development, testing, deployment, and impact of power electronics for distributed generation, energy storage, and sustainable sources. Particular attention will be given in this edition to studies, applications, and test cases for the transformation to 100 % power electronics based energy production and consumption, leading to a fully electronic power grid system. The conference will also focus on the reliability of power electronics solutions and their role in increasing the resilience of the energy supply. Attention will also be given to solutions involving a higher social acceptance, achieved involving the local communities, of the green production and use of the energy.

Selected papers of PEDG 2022 will be invited for possible publication in IEEE Open Journal for Power Electronics at discounted rate, in special compendium celebrating PEDG 2022. The Selection will be based on PEDG 2022 review scores and on feedback from participants to the presentation at the conference. Authors will receive a feedback following the PEDG 2022 conference.

In the previous years, the PEDG workshops have been held with great success in Charlotte, NC, USA (2018), Xi'an, China (2019), Dubrovnik, Croatia (2020), and as a virtual event in 2021. **The 2022 event will be a hybrid (in presence and virtual) event combining the best of the two experiences.** The conference papers will be indexed by EI and included in IEEE Xplore. Please visit <https://pedg2022.org/> for further information!

Track 1: Power Electronics for Sustainable Sources and Green Energy Carriers

- New power converters and controls for wind, solar, combined heat and power, wave, tidal
- New power converters and controls for hydrogen-based technologies
- High-efficiency and higher reliable power conversion for sustainable sources: efficiency improvements using new topologies, WBG power semiconductor devices, and magnetic materials
- Grid integration using solid-state transformers, and medium voltage DC distribution, leading to smart transformers as key player of the future distribution
- Islanding detection, protection, and standards of DG systems
- Real-Time modelling and control of power electronics systems

Track 2: Energy Storage Systems

- Power electronics for battery, supercapacitor, and hybrid energy storage systems
- Power electronics for charging and operation of electric, hybrid electric, and plug-in hybrid electric vehicles
- Energy management, optimal sizing of energy storage, and power converter systems for various cases, including peak shaving, intermittency mitigation, etc.
- Power- and Hardware-In-the-Loop experimental validation of energy storage systems

Track 3: Distributed Generation Interacting with Power Transmission and Distribution Systems

- Microgrids and nanogrids – grid interconnected and islanded operation
- Distributed generation power electronics and electric power quality – voltage, frequency, harmonics impacts and mitigation
- Power electronics as power stations: demand response, high penetration of distributed generation power electronics in the grid, and renewables generation forecasting applied to power electronics
- Asynchronously-connected grids: operations, control, and protection.

Track 4: Other Emerging Topics

- Power semiconductor modules development for distributed generation power electronics
- Power electronics and cybersecurity issues
- Energy policy and public policy issues relating to power electronics-based distributed and sustainable generation systems

Guidelines

Prospective participants are invited to submit an extended abstract of their original work. The document should be in English and should not exceed five single-column double-spaced pages (excluding references). The submitted abstracts will be subjected to a peer-review process. Detailed instructions on preparation of the abstracts and the submission process will be available on the symposium website <https://pedg2022.org/for-authors>. The submission is now open: <https://pedg2022.exordo.com/login>

Contact Information

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Important Dates for Technical Papers

February 15, 2022

Extended abstract submission deadline

April 15, 2022

Notification of acceptance

May 7, 2022

Final paper submission

May 15, 2022

Full paper acceptance

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Important Dates for Tutorials

February 15, 2022

Proposal submission deadline

March 15, 2022

Notification of acceptance

May 25, 2022

Final tutorial material submission

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