



6th Global Power, Energy and Communication Conference

Budapest/HUNGARY

June 4-7, 2024

Special Session on **Advances in DC-DC Converters and Control Techniques for Sustainable Energy**

In the dynamic field of DC-DC converters, addressing the pressing challenges of fossil fuel depletion and environmental issues has intensified interest in clean energy alternatives. DC microgrids have emerged as pivotal players, seamlessly integrating renewable energy sources (RES). This microgrid facilitates the direct supply of clean energy from RES to local loads and redirects surplus energy back to the primary grid. The inherent flexibility of the DC microgrid empowers consumers to independently generate, store, and manage their daily energy needs. At the heart of the microgrid's effectiveness lies the strategic selection of the power electronic interface, emphasizing the central role of advanced DC-DC converters. This session aims to convene innovative academics and industry experts in a collaborative forum, with a specific focus on advancements in DC-DC converters and their control. This session aims to bring together innovative academics and industry experts in a collaborative forum, aligning with the global Sustainable Development Goals (SDG) 7 and 12. These goals recommend affordable and clean energy solutions, emphasizing the pivotal role of DC-DC converters in shaping a sustainable energy future.

Topics of interest include, but are not limited to:

- Innovative High Voltage Gain DC-DC Power Converter Designs
- Switched Inductor and Switched Capacitor Topologies.
- Application of DC-DC Multilevel Converters in PV-Integrated Microgrids
- Bidirectional Converters for Electric Vehicle Systems with Renewable Energy Integration
- Advanced Voltage Boosting Techniques in Multistage DC-DC Converters
- Advanced Control Strategies for DC-DC Converters in Microgrids
- Innovative Power Electronic Interfaces in DC Microgrids
- Efficiency Optimization Techniques for DC-DC Converters
- Integration of Renewable Energy Sources in DC Microgrids
- Storage and Management Systems in DC Microgrid Environments
- Strategic Selection of Power Electronic Interfaces for Energy Independence
- Technological Innovations in DC-DC Converter Design
- Evaluating the Role of DC-DC Converters in Achieving SDG 7 and 12 Targets

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Deadlines of the special session:

Full paper submission (maximum 6 pages):	March 24, 2024
Notification of acceptance:	April 21, 2024
Final submissions due:	May 12, 2024

All the instructions for paper submission are included at the conference website.

<https://gpecom.org/2024/guidelines/>