



4th International Conference on Smart Grid and Renewable Energy

www.sgre-qa.org

8-10 January 2024
Doha, Qatar

Special Session on Advanced Nonlinear Control Techniques for Power Electronics Converters organized and co-chaired by:

Hasan Komurcugil
Sertac Bayhan
Naki Guler

hasan.komurcugil@emu.edu.tr
sbayhan@hbku.edu.qa
gulern@gazi.edu.tr

Call for Papers

Outline of the Session:

The demand for high-quality electrical energy has increased considerably in recent years. Basically, the power converters can be used in wide range of applications which require electrical power conversion, conditioning, compensation, and active filtering through the use of well-designed control methods which should meet the desired objectives set for each application. These applications involve integration of renewable energy sources to the utility grid by means of appropriate converter topology, uninterruptible power supplies, power quality improvement, electrical vehicles (EVs), and microgrid. This session is intended to provide an insight on the latest advanced nonlinear control methods such as sliding mode control, passivity based control, repetitive control, state feedback linearization, fuzzy logic control and Lyapunov-function based control of various power converters mentioned above.

Topics of the session include, but are not limited to:

- New sliding mode control methods
- New passivity based control methods
- New repetitive control methods
- New state feedback linearization methods
- Fuzzy logic control methods
- Extended Lyapunov-function based control methods
- Combination of existing nonlinear control methods

Author's schedule:

Deadline for submission of special session papers

September 15, 2023

Notification of acceptance

October 15, 2023

Deadline for submission of final manuscripts

November 15, 2023

All the instructions for paper submission are included in the conference website:

<http://www.sgre-qa.org/>