



CALL FOR PAPERS
SPECIAL SESSION ON
(Diagnosis and Fault Tolerant Control Techniques Applied on Power Electronics Converters)
for ICCAD'22
July 13-15, 2022, Lisbon-Portugal

Session Co-Chairs:

- Prof. Kouzou Abdellah, LAADI laboraoty, Djelfa University, Algeria. (kouzouabdellah@ieee.org)
- Prof. Vicenç Puig, Polytechnic University of Catalunya, Spain. (vicenc.puig@upc.edu)
- Prof. Hafaifa Ahmed, LAADI laboraoty, Djelfa University, Algeria. (hafaifa.ahmed.dz@ieee.org)
- Prof. Nabil Derbel, ENIS, Sfax, Tunisia. (n.derbel@enis.rnu.tn)

Session description:

- This special session deals with two main topics, which are required to be applied on power electronics
- converter applications, which nowadays plays crucial role in almost recent and innovative industrial
- technologies and their applications such as; Electrical Machine Control (EMC), Electrical Vehicles (EV),
- Energy Conversion Management (ECM), Grid Tied Renewable Energy Sources (GTRES), Flexible AC
- Transmission Systems (FACTs), High voltage Direct Current (HVDC) power transmission system, Multilevel Inverters for high power application and new and innovative converter topologies. The first topic
- is the diagnosis of faults, failures and malfunction based on the identification, localisation and isolation
- of faults during mode operation. The second topic is the fault tolerant control technique that aims in
- ensuring continuous operation under faults, especially in sensitive and high power industrial processes.
- The main goal of this special session is to bring together academics, researchers, PhD students,
- practitioners and industrial partners who are interested in these emergent topics, which have
- attracted more attention in the last recent years due to their importance in fulfilling the requirements
- of the new topologies and technologies of power electronics converters such as their lifespan and

- healthy operation mode in real industrial applications. This special session will cover the innovative
- researches conducted within these topics for achieving real-time diagnosis and fault tolerant control
- that are expected to ensure an improved capability in terms of performances, power quality, costs
- saving and to overcome the drawbacks found in the basis topologies and new topologies of power electronics converters.
- The topics of interest include, but are not limited to:
 - - Power electronics convert for electrical machines
 - - Multi-level converters
 - - Multi-phase multi-level converters
 - - Conventional topologies of power electronics converters
 - - New and innovative topologies of power converter
 - - Grid tied converter for renewable energy sources
 - - Converters in energy management systems
 - - Electrical Vehicles
 - - FACTs
 - - HVDC electric power transmission system.
 - - Inter-connection in power systems power electronics based.
 - - Other power electronics converter topologies and applications

SUBMISSION

Papers must be submitted electronically for peer review by: **February 28, 2022**

<http://www.iccad-conf.com/submission.html>

All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

For further information please send email to: kouzouabdellah@ieee.org

Technical sponsors

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