

ECHAHID HAMMA LAKHDAR UNIVERSITY - EL-OUED
Under the supervision of the DGRSDT and in collaboration with the CRTI
International Pluridisciplinary PHD Meeting (IPPM'2020)
1st Edition , February 23-26, 2020

<https://www.univ-eloued.dz/ippm20/>

Electrical Engineering Applications: Multi-phase Machines and Recent Converter Topologies

organized by

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Nowadays, power electronics and electrical machines play a crucial role in almost recent and innovative industrial technologies and applications such as Electrical Vehicles (EV), Sensorless Control and Fault Tolerance for Multi-Phase Machines (SCMPM and FTMPM), Energy Conversion Management (ECM), Grid Tied Renewable Energy Sources (GTRES), multilevel and multi-phase converters, Topologies of Zero Impedance Source Inverters (T-ZSI) and new and innovative converter topologies. Indeed, these topics have attracted more attention in the last recent years from researchers and industries to full-fill the requirements of new technologies. These innovative topologies and their control strategies are expected to ensure an improved capability in terms of performances and power quality and to overcome the drawbacks found in the basis topology of classical electric machines and power electronics converters.

The Electrical Engineering Applications session in the International Pluridisciplinary PhD Meeting (IPPM'20) will cover two main topics: Multi-phase electrical machines and recent converter topologies. The main goal of this session is to bring together academic community (in particular PhD students) and industry partners. The main objectives are respectively to share new and innovative ideas within theoretical and experimental aspects, and to be in touch with industries and to have a clear idea about their practical needs and requirements.

This special session will cover but not limited to the following topics:

- Multiphase machines
- Open-end multiphase machines
- Multi-level converters
- Multi-phase multi-level converters
- Z-source Inverters
- qZ-source inverters
- Sensorless control in multi-phase machines
- Grid tied converter topologies
- Control of Grid tied converters
- Converters in energy management systems
- Power electronics in electrical vehicles
- Multi-phase machines in electrical vehicles
- Fault tolerant control techniques of multi-phase machines
- Fault tolerant control techniques of multi-phase and multi-phase converters

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More information at : <https://www.univ-eloued.dz/ippm20/>