

**THE 45TH ANNUAL CONFERENCE OF THE
IEEE INDUSTRIAL ELECTRONICS SOCIETY
OCTOBER 14-17, 2019
LISBON, PORTUGAL**

**Special Session on
“Power Electronics for Fuel Cell System in
Transportation Applications”**

Organized by

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Call for Papers

In recent years, fuel cell energy generation system has become a very active research field and has been given a lot of attentions from academic and industry in the domain of electrified transportation, such as automotive, aircraft, marine and railway. Since fuel cell system can couple electrochemical, thermal and fluidic phenomena, the energy power generation needs to be controlled properly for satisfying high efficiency. The integration and control of fuel cell system into the powertrain of electrified transportation could be challenging and complicate. It is essential to investigate the control strategy applied to a fuel cell system and the corresponding power electronic interfaces. This special section focuses on latest progresses and developments in design and control methods of power electronics in fuel cell applications to improve the lifespan and the robustness of the transportation system.

Topics of interest include, but are not limited to:

- Fuel cell electric vehicle powertrain topologies design and analysis
 - Advanced control techniques to improve system robustness
 - Control strategies for maximizing lifetime of power generation systems
 - DC-DC converters, DC-AC inverters stability analysis for FCEVs
 - Fault identification, isolation techniques, and stability analysis of power electronics
 - Fuel cell modelling and Hardware-in-the-loop applications
 - FCEV real-time simulation and its energy management control strategy
- **IES Technical Committee Sponsoring the Special Session:** TC on Transportation Electrification