

Special Session on
**OPTIMIZATION AND DESIGN TECHNIQUES OF PROPULSION AND AUXILIARY
ELECTRICAL DRIVES FOR EV_s AND FCV_s**

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Call for Papers

In the context of a growing part of electrical power in automotive, there is a strong need to develop specific, fast and efficient design methodologies. Adapted optimization and design technologies for propulsion and auxiliary electrical drives will allow a lower consumption energy and therefore a larger autonomy in special for the context of Electric Vehicles (EVs), and Fuel Cell Vehicles (FCVs). The design of these systems requires a multi-objective optimisation approach as their improvement depends on several criteria including high operation efficiency and reduced volume, while keeping costs competitive. Other than propulsion drives, innovative optimal design techniques may improve Auxiliary drives implied in energy production or comfort.

Topics of interest include, but are not limited to:

- Electrical Drives Optimization using a large number of parameters
- Electrical Drives Optimization based on high cost computing models such as FEM models and multi-physical models
- Optimal control design of electric machines and associated drive electronics
- optimal design based on driving cycle
- Specific constrained optimization for automotive applications
- Topological optimization
- Multi-criteria optimization

Keywords: Finite element methods, optimization methods, electrical drives design

Deadlines:

Submission of abstracts: April. 30, 2017
Notice of acceptance: June 15, 2017
Submission of full papers: Sep. 15, 2017

All special session digests must be prepared and submitted in the same way as those for the conference regular tracks (see <http://www.vppc2017.org/>), except that the corresponding special session should be identified during submission.