



The XXIth International Conference on Electrical Machines
ICEM 2014
September 2-5, 2014
Berlin - Germany

Special Session on
EFFICIENT AND RELIABLE HYBRID AND ELECTRIC
PROPULSION SYSTEMS

organized and co-chaired by:

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Call for Papers

The transport sector is a major contributor to environmental pollution and has a significant impact on climate change, accounting for more than 25% of all CO₂ emissions. In Europe, traffic-related pollution costs amount to 1.7% GDP, approximately €160 billion per year. Moreover, the automotive sector is particularly sensitive to the crisis which is affecting the world economy because of some intrinsic features: great dependency from non-renewable energy sources, difficulty of expansion in emergent markets, production overcapacity at a world level, hypercompetition, reduced margins, etc.. Some of these aspects affect other transport sectors as well. All the stakeholders are called to give their contribution to these challenging issues, applying the concept of sustainable mobility. In particular, scientists and technicians are charged to develop innovative components and strategies to make the propulsion systems compatible with the essential requirements of energy savings and reduced environmental impact. At the same time, also important economical-political choices have to be made to provide the necessary infrastructures. In the meanwhile, hybrid propulsion systems can bridge the gap between the conventional engine-based powertrains and full-electric systems. As to road vehicles, they can also contribute to reduce pollution in urban areas.

This Special Session focuses on the efficiency and reliability of propulsion systems in road vehicles and also in other mobility applications (ships, railways, aircrafts, etc.).

Topics of interest (to be intended with reference to the above applications) include, but are not limited to:

- Generators and Traction Drives
- Electric machine design and analysis
- Power electronic converters
- Variable speed drives control
- Monitoring and diagnostics
- Fault tolerance
- Power Supplies
- Battery and supercapacitor design
- Fuel cell design and optimization
- Energy management

Provisional full paper submission deadline: 23 February 2014

(The deadline is the same as for regular papers – check the website for changes)

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

<http://www.icem2014.de>