



The XXIth International Conference on Electrical Machines
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Special Session on

**FAULT-TOLERANT SOLUTIONS IN THE DESIGN OF
ELECTRICAL MACHINES**

organized and co-chaired by:

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Call for Papers

In many application fields of electrical drives, including industrial equipment, vehicular traction systems and household appliances, a key requirement is service continuity in case of faults. This means that the electric apparatus is expected to guarantee uninterrupted operation, although with degraded performance, even in the event of fault, that could occur either in the electrical machine or in the upstream supply systems (power grid or power electronics converters). Meeting fault-tolerance requirements is in general a challenging issue, that can be approached in several ways, such as acting on the overall drive architecture through appropriate redundancies, or implementing specific control strategies. This special session is devoted to fault-tolerance solutions and expedients that specifically pertain to the design of the electrical machine. Topics of interests therefore include (but are not limited to):

- Multiphase design solutions for electrical machine uninterrupted operation with one or more faulty phases
- Stator winding design solutions capable of withstanding short circuit faults
- Permanent-magnet machine design strategies aimed at avoiding or protecting demagnetization risks
- Electrical machine design for multi-motor drive architectures
- Reliability improvements through redundancy in the electrical machine design, including hybrid rotor excitation systems
- Multi-stator electrical machine designs
- Use of new materials for the construction of more fault-tolerant electrical machines
- Methods for the study, analysis, modeling and simulations of electrical machines under faulty operating conditions and for fault-tolerance capability assessment.

Submission of papers:
Final Deadline is 23 February 2013

All the instructions for paper submission are included in the conference website:
<http://www.icem2014.de>