

Call for Papers

IEEE Transactions on Vehicular Technology

Special Section on

Condition Monitoring and Fault Accommodation in Electric and Hybrid Propulsion Systems

In a world where environment protection and energy conservation are growing concerns, the development of electric vehicles (EV) and hybrid vehicles (HEV) has taken on an accelerated pace. Electricity is gaining more importance in critical applications such as transportation (with more electric aircrafts and electric vehicles) where continuity of operation is crucial and there is a growing demand for safety, reliability, maintainability, and survivability. However, several failures afflict the electrical machines, the sensors, the wiring network and power converters for example. To ensure the required levels of reliability and safety in transportation, efficient methods of diagnosis, monitoring and fault accommodation are mandatory.

This special section intends to focus on state-of-the-art research and development as well as future trends in (but not limited to) the following topics of interest in vehicular technology (electric, hybrid electric, fuel cell and plug-in hybrid electric vehicle powertrains):

- Fault modeling, detection and isolation of electric machines;
- Fault modeling, detection and isolation of power converters;
- Fault modeling, detection and isolation of wiring network;
- Fault modeling, detection and isolation of energy sources and energy storage devices (batteries, fuel cells, supercapacitors, etc.);
- Data monitoring, transmission and management for diagnosis and maintenance purposes;
- Implementation issues of fault detection and diagnosis techniques;
- Innovative design of reliable powertrain components;
- Fault accommodation strategies in both propulsion and recharging modes (interaction with the grid).

Authors should follow the IEEE TVT manuscript format and submission procedure which can be found at the IEEE TVT home page <http://transactions.vtsociety.org> under Information for Authors. Please make a submission via the journal online system at <http://mc.manuscriptcentral.com/tvt-ieee>

Timeline:

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Revised Paper Deadline: November 15, 2012
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