

Special Issue on Failure Analysis and Prevention in Electrified Transportation Applications

Electrification of transportation systems continues to increase both to reduce the negative effect of petroleum-based transportation on the climate and the quality of life and to allow for enhanced safety and comfort of transportation at large. These developments are often subject to tight constraints on cost, mass, and volume. At the same time, the requirements on the reliability of the systems in these applications are becoming more demanding. Significant literature is available on power electronic systems at large. Yet, the specifics of the analysis and prevention of failures of different components, sub-systems, and systems as they apply in automotive, vehicular, and other transportation systems have, at large still, not been fully addressed.

This special issue aims to document novel approaches to the analysis and prevention of different failures as they may occur with these systems. This applies both to the traction drives and the availability of electric power within the different vehicles, and to the significant number of auxiliary drives and other electric systems used therein. Prospective authors are invited to submit manuscripts for review for possible publication in this special issue. Original research and practical contributions as well as surveys and state-of-the-art tutorials are welcome. Topics of interest include (but are not limited to):

- Causes, modes, mechanisms, and development of faults and failures in electric traction systems and their components.
- Reliability improvement of electric traction systems and their components through design, operation, monitoring and control.
- Modeling, simulation, and testing of electric traction systems and their components.
- Causes, modes, mechanisms, and development of faults and failures in auxiliary electric drive systems and their components.
- Reliability improvement of auxiliary electric drive systems and their components through design, operation, monitoring and control.
- Modeling, simulation, and testing of in auxiliary electric drive systems and their components.
- Electromagnetic interference (EMI) and electromagnetic compatibility (EMC) considerations.
- Other failure, reliability, and safety related concepts and solutions.

Submission of Manuscripts to the Transactions:

All manuscripts must be submitted through Manuscript Central at <http://mc.manuscriptcentral.com/tte-ieee>. Submissions must be clearly marked "Special Issue on Failure Analysis and Prevention in Electrified Transportation Applications" on the cover page. When uploading your paper, please also select the "Special Issue on Failure Analysis and Prevention in Electrified Transportation Applications." Refer to the following link for general information about electronic submission through Manuscript Central <https://www.ieee-pels.org/publications/ieee-transactions-on-transportation-electrification>.

Important Dates:

- **Full Paper Submission Deadline: March 31, 2020**
- Expected Publication Date: March 2021

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