

Call for Papers

Special Section on High-Reliability Electric Machine Systems and Fault-Tolerant Operation Technology

The electric machine systems have been utilized widely and played important roles in many industrial applications, e.g., electrified transportation, wind power generation and aerospace applications. In those applications, the failures in electric machine systems may cause drive chains to lose the power partially or even totally, and lead to catastrophic damages. The high-reliability electric machine systems and fault-tolerant operation technology are critical enablers for the industry to unlock significant improvements in system maintainability, total life-cycle costs, and overall system reliability.

The high-reliability electric machine systems offer features of simple and robust structures in electrical machines, power converters and controllers, and low failure rate. When unavoidable failures occur, the faulty parts in electric machine systems should be diagnosed accurately and isolated effectively. The fault-tolerant strategies can help the system maintain operation performance in some certain aspects, and thus keep the total system working continuously. Today, the high-reliability electric machine systems and fault-tolerant operation technology not only become the hot topics in academic research, but also have practical significance in industrial applications.

Detailed topics include but are not limited to:

- Reliable topologies and control schemes of electrical machines
- Reliable topologies and modulation strategies of power converters
- Design and analysis of high-reliability electric machine systems
- Condition monitoring of electric machine systems
- Fault diagnosis of electric machines and power converters
- Fault-tolerant operation of electric machines and power converters
- Sensorless control of electric machines and power converters
- Electrolytic capacitorless motor drives and power generation systems
- Magnetic bearing and bearingless motor drives
- Applications of high-reliability electric machine systems

Brief guideline for authors:

Papers styles:

1. Review articles.
2. Original research.
3. Rapid communications.

All submitted papers must be in English, must not be published by or currently under review for any other journal or conference.

Detailed submission guideline and template are available at the submission website. All manuscripts and any supplementary materials should be submitted via the site <https://mc03.manuscriptcentral.com/tems>, choosing "**SS: High-Reliability Electric Machine Systems and Fault-Tolerant Operation Technology**" as the manuscript type.

About the journal

The CESTEMS is a brand-new quarterly journal published by the China Electrotechnical Society (CES) and the Institute of Electrical Engineering of the Chinese Academy of Sciences, with co-sponsorship of IEEE PELS, starting from March 2017.

Topics of the CESTEMS include but are not limited to electrical machine topologies and designs, field analysis, motor drives, motion control and servo systems, power electronics and power converters, EMI and EMC techniques, renewable energies, xEV and other electrified transportation techniques, applications of new materials, and many others related to the electrical machines and systems.

The CESTEMS is an open-access journal, currently with no publication charge applied to the authors. Published papers will be included in the IEEE Xplore. Inclusion in other globally recognized data base such as the Web of Science (SCI) is under arrangement.

www.cestems.org



Joint Publication of CES and
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Important Dates

Fullpaper submission:

20 April, 2020

Final decision notification:

20 May, 2020

Publication:

20 June, 2020

In Vol.4, No.2, 2020