

Call for Papers

Special Section on Multiphysics Analysis and Design Optimization of Electrical Machines and Systems

Electrical machines are the hearts of many modern appliances and industrial systems. Their analysis and design optimization processes become more and more complex as more disciplines/domains and constraints are involved, such as electromagnetics, structural mechanics, heat transfer, and control strategies. To achieve multi-objective optimal performance of electrical machines and systems for applications of challenging specifications, such as electric vehicles and wind power generation, it is of great significance to conduct a multi-physics analysis and take a systematic design optimization approach. On the other hand, the performance and quality of batch produced electrical machines depend highly on the material diversities and manufacturing tolerances. To reduce the effects of these uncertainties, effective robust design optimization methods should be investigated.

This Special Section aims to provide a forum for professionals worldwide from both academia and industry to exchange their experiences and achievements within the scope of advanced magnetic materials, multi-physics analysis, efficient design and optimization of electrical machines and drive systems. Detailed topics include but are not limited to:

- Advanced magnetic materials and their applications in electrical machines
- Multi-physics analysis of electrical machines
- Multi-physics design optimization methods for electrical machines
- Effects of material diversities and manufacturing uncertainties on electrical machines
- Robust design optimization for high manufacturing quality
- Design optimization considering control aspects
- Systematic analysis and design optimization of drive systems
- Multi-objective optimization of electrical machines and systems

Contact the deputy editor-in-chief if your manuscript is not within the listed topics, as papers within the general topic of electrical machines and systems are all welcome by the CES TEMS.

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All submitted papers must be in English, must not be published by or currently under review for any other journal or conference.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: Multiphysics Analysis and Design Optimization of Electrical Machines and Systems**" as the manuscript type.

About the journal

The CES TEMS 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 CES TEMS 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 CES TEMS 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 database such as the Web of Science (SCI) is under arrangement.

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