

Special Issue

Advanced Control Strategies for Magnet-Free Synchronous Motors

Message from the Guest Editors

We are pleased to invite you to submit state-of-the-art manuscripts to this Special Issue aimed at narrowing the performance gap between magnet-based and magnet-free SMs. Topics of interest include (but are not limited to) the following:

- Parameter estimations and observers applied to SMs.
- Control strategies that aim to improve efficiency, torque ripple and radial forces reduction, extended speed operation, and power factor improvement.
- Machine learning used in SM control applications.
- Modelling techniques of radial and tangential forces.
- Fault-tolerant control strategies for SMs.

Guest Editors

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Deadline for manuscript submissions

closed (30 June 2025)



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About the Journal

Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.

Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.

There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.9 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2026).