

Special Issue

Recent Advances in Control for PMSM Drives

Message from the Guest Editor

Permanent Magnet Synchronous Motors (PMSMs) are key to high-performance electric drives due to their efficiency, power density, and dynamic response. Recent advances in PMSM control address the growing electrification demands in electric vehicles, industrial automation, renewable energy, and aerospace. This Special Issue invites original research and reviews on cutting-edge PMSM control strategies, including but not limited to:

- Advanced nonlinear and model predictive control
- Multilevel inverter control
- Sensorless control and state estimation
- High-speed, high-efficiency operation across wide loads
- AI/ML-based adaptive and intelligent control
- Fault-tolerant and resilient control
- Harmonic reduction, torque ripple minimization, noise suppression
- Real-time implementation and hardware-in-the-loop validation

We aim to unite theoretical advances and practical solutions to push PMSM drive control boundaries. Contributions from academics and practitioners are welcome. Looking forward to your submissions.

Guest Editor

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Deadline for manuscript submissions

28 February 2026



Machines

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CiteScore 4.7



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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.

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