# Special Issue

# Design, Analysis and Manufacturing of High-Performance Electric Machines

## Message from the Guest Editors

The technical requirements of machines, such as power density and efficiency, are continually increasing. There are also a broad range of growing demands including environmental considerations, sustainability, cost, and ethical factors, which often require the limits of materials to be pushed even further. Papers exploring combinations of these factors are encouraged. Accurate high speed-dependent loss calculation, including iron losses, AC copper losses, and PWM considerations, as well as mitigation across all components is a critical electromagnetic subject. These increased losses reduce efficiency and increase the thermal challenges. This is exacerbated by the complexities of high-speed rotating fluid flows and the relatively smaller convective surfaces per unit power. Motor topology selection and material choice must be considered alongside cost implications. Mechanical analysis for heightened static stresses, dynamics, materials, manufacturing arrangements and techniques are welcome, with a further desire for machines which have been fully prototyped and verified experimentally.

## Guest Editors


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## Deadline for manuscript submissions

closed (30 November 2023)


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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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