

Special Issue

Modeling Approaches of Electromagnetic Devices for R&D Engineers

Message from the Guest Editors

Electromagnetic devices (e.g., electric machines, electrolyzers, fuel cells, etc.) are used in various fields of electrical engineering, including transportation (e.g., electric/hybrid/ fuel cell vehicles, railway traction, and aerospace), energy harvesting (e.g., flywheel, etc.), renewable energy (e.g., wind power turbine, hydroelectric power plant, etc.), and magnetic refrigeration devices, among others. Traditionally, numerical methods (i.e., the finite-element, finite-difference or boundary-element analysis) have been extensively employed in R&D departments due to their accuracy compared to experimental measurements. However, particularly in 3D design, these approaches are time-consuming and unsuitable for application to optimization problems. Nowadays, engineers aim to create comprehensive computer-aided design for electromagnetic devices, using accurate and fast simulation models to reduce the computation time. Hence, the main objective of this Special Issue is to present the latest advancements in mathematical modeling and the design of electromagnetic devices for diverse applications.

Guest Editors

Dr. Frédéric Dubas

Département ENERGIE, FEMTO-ST, CNRS, University Bourgogne Franche-Comté, F90000 Belfort, France

Dr. Baocheng Guo

Electrical Engineering Department, Nanjing Normal University, Nanjing, China

Deadline for manuscript submissions

closed (31 December 2024)



Energies

an Open Access Journal
by MDPI

Impact Factor 3.9
CiteScore 8.3



mdpi.com/si/188388

Energies

Editorial Office

MDPI, Grosspeteranlage 5

4052 Basel, Switzerland

Tel: +41 61 683 77 34

energies@mdpi.com

[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)





Energies

an Open Access Journal
by MDPI

Impact Factor 3.9
CiteScore 8.3



[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)



About the Journal

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University
Niccolò Cusano, 00166 Roma, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q1 (Control and Optimization)