



energies



an Open Access Journal by MDPI

Fault Detection and Diagnosis Applications for Electric Vehicles and Power Electronics

Guest Editor:

Dr. Maciej Skowron

Department of Electrical
Machines, Drives and
Measurements, Wrocław
University of Science and
Technology, 50-370 Wrocław,
Poland

Deadline for manuscript
submissions:

closed (20 January 2026)

Message from the Guest Editor

Currently, one of the basic requirements for modern electric drives used in industry and mobility applications is their reliability. Ensuring full control of the process by monitoring the status of individual components during their operation is now an inseparable part of automation systems. A key task of supervisory systems is the detection of drive system irregularities, combined with the concept of early fault detection. Defects that occur in drive systems with induction motors and permanent magnet synchronous motors first require detection and mitigation of the impact of the defect on drive operation. With the use of closed AC motor control structures, the effects of some defects can be partially reduced by changes in the control algorithm. However, it is still important to develop detection algorithms that ensure the detection of a defect at the earliest possible stage. The fault diagnosis of drive systems is implemented in three main directions: diagnosis based on mathematical modeling and estimation of object parameters, using analytical methods of signal processing, and systems based on artificial intelligence methods.



mdpi.com/si/198708

Special Issue



energies



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Enrico Sciubba

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

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.

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 Compindex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: CiteScore - Q1 (Control and Optimization)

Contact Us

Energies Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/energies
energies@mdpi.com
[X@energies_mdpi](https://twitter.com/energies_mdpi)