Special Issue

Advancements in Condition Monitoring of Electric Motors: Integrating Digital Twins, AI, and IoT for Enhanced Operational Efficiency, Fault Diagnosis, and Cybersecurity

Message from the Guest Editors

The aim of this Special Issue is to contact and highlight research developments in key aspects such as i) techniques for continuous monitoring of the operational status of electric machines; ii) the collection and processing of large volumes of data in real and continuous time using IoT technology; iii) the correct placement of sensors in the motor so that data are collected accurately; iv) the detection, diagnosis, and prognosis of faults; v) digital twins-enabled condition monitoring; vi) AI-assisted fault diagnosis; vii) secure data transfer to avoid unforeseen interference; viii) development of advanced security mechanisms for WSNs in industrial applications; ix) ensuring the integrity, confidentiality, and availability of data transmitted between motors; x) minimizing vulnerabilities and weaknesses of digital transformation systems; and xi) improving resilience to fault diagnosis and cyberattacks.

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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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