Special Issue

Condition Monitoring of Electrical Machines Based on Models

Message from the Guest Editors

AC induction and permanent magnet machines are used in almost any sector: power generation, industry, public and private transportation, and services. Although electrical machines are robust, they can also suffer from failures with severe consequences if not detected in time. Fault detection and diagnosis systems are therefore necessary, and the earlier the fault is detected, the more helpful they will be. This will prevent the incipient failure from evolving into a catastrophic one. This is a very active field of research. Many fault detection techniques have been developed based on monitoring different physical variables of the machines, such as vibrations, electric currents, stray flow, temperature, torque, speed, etc. Assisted or automated diagnostic systems based on statistical classifiers or AI techniques are also being developed. These diagnostic systems can be data-driven, model-based, or hybrid.This Special Issue aims to present and disseminate the most recent advances in using models and related techniques to monitor the condition of all-electric machines.

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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.

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