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Condition Monitoring and Fault Diagnosis for Rotating Machinery

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Deadline for manuscript submissions:
30 November 2024

Message from the Guest Editors

Dear Colleagues,

Rotating machinery, such as turbines, jet engines, compressors, and electric propulsion systems, comprises classical engineering units. Due to their dynamic nature and complex system structures, rotating machinery is prone to various faults, such as fatigue cracks, misalignment, eccentricities, and wear. The rapid detection and diagnosis of these faults, before they lead to a catastrophic failure, is necessary. Condition monitoring and fault diagnosis are essential for their reliability and safety. While industrial applied condition monitoring and fault diagnosis methodologies are limited to signal energy analysis and Fourier spectrum analysis, many sophisticated methodologies have been reported and developed. The recent advances in understanding the fault mechanism, condition monitoring, and fault diagnosis methodologies have been substantial.

This Special Issue aims to collect original research articles and reviews. The topics of interest include, but are not limited to:

- Dynamics modeling;
- Fault mechanism;
- Condition monitoring techniques;
- Signal processing methods;
- Information fusion strategy;
- Machine learning algorithms.

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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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