Special Issue

Nonlinear Mechanical Vibration in Machine Design

Message from the Guest Editor

Vibration is inevitable in every machine, mechanical system, and structure due to the application of various excitation forces. The modeling, analysis, and identification of mechanical systems and structures are important in predicting their vibration and structural dynamics, as well as for fault diagnostics and damage detection. Furthermore, having an accurate model is crucial for optimizing the performance and controlling the behavior of systems and structures. The integration of experimental and theoretical approaches in vibration analysis allows for a more holistic exploration of the dynamic behavior of systems. This Special Issue focuses on publishing breakthrough research in the following areas:

- Linear and nonlinear vibration analysis;
- Experimental and theoretical approaches in vibration analysis;
- Model identification, validation, and verification;
- Finite element model updating in structural dynamics.

We look forward to receiving your submissions and encourage contributions that leverage experimental verification to enhance the depth and significance of the research presented.

Guest Editor

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Deadline for manuscript submissions

closed (30 October 2024)

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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.

Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso
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