Special Issue

Rolling Bearing and Rotor System Modeling and Simulation, Monitoring and Control, and Performance Diagnosis

Message from the Guest Editors

Rolling bearings and rotor systems, as the core functional components of machine tools, play an important role in the stability of the machine tool and the integrity of the cutting surface. With the development of modern industrial technology, higher requirements are put forward for the service performance of rolling bearings and rotor systems. Therefore, it is necessary to carry out research from two aspects of design simulation and service guarantee to ensure the high efficiency and balance of the performance of the rolling bearing and rotor systems. With the increase in modern computing capabilities, new methods are required for the design optimization, experiment, condition monitoring, diagnostics, and prognostics of rolling bearing and rotor systems. This Special Issue is meant to cover topics related to mathematical modeling, optimization, dynamics, tribology, machine learning, etc., aiming at improving reliability, flexibility, and accuracy, extending the lifetime, and reducing the design costs of rolling bearing and rotor systems.

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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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