

Special Issue

Performance Analysis of Sliding Bearings

Message from the Guest Editor

The sliding bearing is a key component in mechanical transmissions that are extensively used in fuel-, hydro-, and wind-power generators, vehicles, and other industrial equipment. The friction determines the transmission efficiency of sliding bearings, while the oil film thickness reflects the lubrication health. An effective performance analysis method will facilitate new bearings design and improvement, on the other hand, helps machine maintenance, avoiding costly failure. Driven by such motivation, researchers in this area focus on novel testing methods that evaluate the performance of sliding bearings in terms of friction and oil film thickness, such as ultrasonic reflection, acoustic emission, and electrical impedance; multiphysics modeling and simulation of sliding bearings, including computational fluid dynamics (CFD) and finite element analysis (FEA); advanced signal processing and machine learning techniques that enable accurate performance monitoring and life prediction of sliding bearings. This Special Issue will reveal state-of-the-art testing methods that experimentally and numerically analyze the performance of sliding bearings.

Guest Editor

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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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