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

Dr. Min Yu

Department of Mechanical Engineering, Faculty of Engineering, Imperial College London, London SW7 2AZ, UK

Deadline for manuscript submissions

closed (31 October 2023)

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

mdpi.com/si/163708

Machines
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
machines@mdpi.com

mdpi.com/journal/machines

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

mdpi.com/journal/machines

About the Journal

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
CISE - Electromechatronic Systems Research Centre, University of Beira Interior, Calçada Fonte do Lameiro, P-6201-001 Covilhã, Portugal

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Mechanical) / CiteScore - Q1 (Control and Optimization)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.9 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).