Special Issue

Tribology of Cycloidal Reducers: Enhancing Efficiency, Durability and Reliability through Experimental and Numerical Methods

Message from the Guest Editors

This Special Issue aims to highlight the cutting-edge research and developments in the field of cycloidal reducers, a critical component widely utilized in robotics and increasingly in power transmission systems. Recognized for their high transmission ratios, high power density, minimal backlash, and robust overload resistance, cycloidal reducers have become the cornerstone for several industrial applications such as aerospace, precision machinery, and automated manufacturing, among others. However, the longevity and reliability of cycloidal reducers are often compromised by wear and overheating, which remain the primary causes of system failure. Addressing these challenges, this Special Issue focuses on the tribological aspects of cycloidal reducers, seeking to foster advancements that will lead to more compact, efficient, durable, and reliable designs.

Guest Editors

Prof. Dr. Mirko Blagojević

Faculty of Engineering, University of Kragujevac, 34000 Kragujevac, Serbia

Dr. Lorenzo Maccioni

Faculty of Engineering, Free University of Bozen/Bolzano, Piazza Università 5, 39100 Bolzano, Italy

Deadline for manuscript submissions

30 September 2026



Lubricants

an Open Access Journal by MDPI

Impact Factor 2.9 CiteScore 4.5



mdpi.com/si/202088

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

mdpi.com/journal/ lubricants





Lubricants

an Open Access Journal by MDPI

Impact Factor 2.9 CiteScore 4.5





Message from the Editor-in-Chief

Friction, wear, and lubrication are tribological phenomena that govern the behavior of interacting surfaces in a wide range of machine components. Understanding the physical and chemical nature of these phenomena is critical to achieving long component lifetime and economical operation. Research in the field of tribology is highly interdisciplinary, and encompasses the fields of physics, chemistry, engineering, and mathematical modeling. Lubricants invites contributions on new advances in all areas of tribology for publication as peer-reviewed research articles, reviews of current research, letters, and communications. We are committed to providing timely reviews of all articles submitted. Please consider sharing your work with the scientific community through publication in Lubricants.

Editor-in-Chief

Prof. Dr. Homer Rahnejat School of Engineering, University of Lancahire, Preston PR1 2HE, UK

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Mechanical) / CiteScore - Q2 (Mechanical Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).

