Special Issue

Tribology in Cryogenic Machining

Message from the Guest Editors

Various technologies have been developed to improve the performance of machining processes sustainably. These technologies aim to avoid the use of traditional metalworking coolants as oil-based fluids can cause health and environmental damage. Within this context, cryogenic cutting has emerged as a cleaner and more environmentally friendly solution. However, its effect on tool wear, machined surface integrity, and environmental impact has not yet been thoroughly investigated. Moreover, production costs, consumption rate, and difficulties associated with its application are commonly neglected. This Special Issue therefore intends to share the latest advances in applying cryogenic coolants in metal cutting operations, considering their drawbacks and benefits. Focusing on tribological aspects, it covers tool wear and surface integrity analysis and the machinability of different materials. Both theoretical and experimental investigations are highly welcome.

Guest Editors

Prof. Dr. Carlos Ventura
Department of Mechanical Engineering, Federal University of São Carlos, Rod. Washington Luis Km 235, São Carlos 13565-905, SP, Brazil

Prof. Dr. Wengfeng Ding
College of Mechanical and Electrical Engineering, Nanjing University of Aeronautics and Astronautics, Nanjing 210016, China

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

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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

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