



Advances in Mixed Lubrication

Guest Editors:

Dr. Chunxing Gu

School of Mechanical
Engineering, University of
Shanghai for Science and
Technology, Shanghai 200093,
China

Dr. Qin Dong

School of Mechanical
Engineering, University of
Shanghai for Science and
Technology, Shanghai 200093,
China

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Message from the Guest Editors

Dear Colleagues,

Mixed lubrication is the term applied to the transitional region between full hydrodynamic or elastohydrodynamic lubrication and boundary lubrication. In machine elements, rough surface contacts are often not dry and are lubricated by thin films. Machines are often subjected to extreme operating conditions such as high loading configurations, frequent start–stop conditions, starved lubrication, high temperatures, vibrations, and thin films. Both boundary lubrication and elastohydrodynamic lubrication are bridged together by mixed lubrication, which confirms local events such as solid-to-solid (asperity) contact. The movement of interacting surfaces generates friction forces, which are responsible for high heat generation, thereby causing increased energy loss and severe wear on the surface. Moreover, flow, pressure, stress distribution, friction, wear, and adhesion are significantly impacted by the roughness of interacting surfaces when under mixed lubrication. Understanding mixed lubrication is particularly important. The study of mixed lubrication processes such as fluid mechanisms, contact





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Editor-in-Chief

Prof. Dr. Homer Rahnejat

School of Engineering, University
of Lancashire, Preston PR1 2HE,
UK

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*.

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MDPI, Grosspeteranlage 5
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