

# Special Issue

## Behavior of Lubricated Bearings in Electric Circuits

### Message from the Guest Editors

The electrical behavior of both rolling and plain bearings is a hot topic in machine element research as well as in electric machine development. Recent challenges are, for example, current passages which can damage rolling bearings; the load-dependent behavior of rotor bearings in electric machines that influence the performance and reliability of the overall system; and challenges that arise, e.g., when coatings and components are used that affect the electrical conductivity. However, the electrical characteristic of bearings, such as the load-dependent electrical behavior, the use of insulating and conductive coatings, or the integration of further components, make these bearings attractive as sensory elements to accelerate digitization processes. Finally, damage patterns resulting from electric effects need to be explained, quantified and predicted for all kinds of lubricated bearings including the lubricant itself. Therefore, researchers and practical engineers are invited to contribute their most recent results on the electrical behavior of grease- or oil-lubricated bearings with rolling or sliding contact.

### Guest Editors

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### Deadline for manuscript submissions

closed (30 June 2023)



## Lubricants

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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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### Editor-in-Chief

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