



CALL FOR PAPERS Special Issue on Tribomechadynamics

CALL FOR PAPERS

[ASME Journal of Vibration and Acoustics](#)

Special Issue on Tribomechadynamics

Tribomechadynamics is a new field at the confluence of nonlinear/structural dynamics, contact mechanics, and tribology. This discipline has been formalized in the joint dynamics community, where the interactions between substructures within an assembly necessitate a detailed understanding of the tribology of interfaces and contact mechanics in order to predict the dynamics of the assembled structure. Tribomechadynamics, though, is broader than the study of joint dynamics; any dynamical system with an interface is Tribomechadynamic in nature. The applications of Tribomechadynamics span magnetic tape drives (where tape moves at high speed over a series of rollers and bearings), tires (where a detailed understanding of the wear-rate is paramount for predicting a tire's life), and turbine blades (where the blade-root geometry must be designed such that the vibration of the turbine blades result in a minimal amount of wear) amongst many other topics. This Special Issue of the *ASME Journal of Vibration and Acoustics* will highlight original research articles on Tribomechadynamics, with a special focus on the influence of Tribomechadynamics on structural vibrations. Reports on experimental and/or computational research are welcome.

Topic Areas

- Hysteretic measurements and modeling of interfaces
- Multi-scale modeling techniques for Tribomechadynamics
- Model reduction schemes for nonlinear systems containing interfaces
- Uncertainty quantification methods for nonlinear systems
- Interface reduction techniques for structural dynamics
- The effects of wear on structural response

Publication Target Dates

Paper Submission Deadline: **October 1, 2019**
Final Review Completed: **March 1, 2020**
Special Issue Publication Date: **August 2020**

Standard Submission Instructions

To submit a manuscript for consideration for the Special Issue, please visit the journal website at:

<http://journaltool.asme.org/home/JournalDescriptions.cfm?JournalID=18&Journal=VIB>

and choose the link **Submit Papers**. Select the *Journal of Vibration and Acoustics* and then choose the Special Issue option for *Tribomechadynamics*.

Early submissions are strongly encouraged. Papers submitted by October 1, 2019 will be reviewed in time for inclusion in the Special Issue. Papers received after that date may still be considered for the Special Issue, if time and space permit. Papers that are not ready for production in time for inclusion in the Special Issue may be considered for a regular issue of the journal.

Special Issue Editor

Matthew Brake

Rice University
Houston, TX, USA
brake@rice.edu

Special Issue Guest Editors

Christoph Schwingshackl

Imperial College London
London, UK
c.schwingshackl@imperial.ac.uk

Malte Krack

University of Stuttgart
Stuttgart, Germany
malte.krack@ila.uni-stuttgart.de