Vibrations and Friction: Theoretical, Experimental and Numerical Studies

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Message from the Guest Editors

Friction can be found in almost all engineering systems such as jointed structures in aircraft engines, deployable structures in spacecraft, braking systems in the automotive and railway industries, and drilling systems in the oil & gas industries. It is a major source of nonlinearity and uncertainty in engineering systems. It can lead to a significant implications for structural integrity such as fretting fatigue and wear, leading to significant energy wastage, surface damage, shorter service life cycle, and high maintenance costs.

The Special Issue aims to call for theoretical, experimental, and numerical studies related to vibrations and friction. More particularly, it is dedicated to studies focused on the development of advanced and effective modelling and simulations for the study of such systems, but also on experimental studies that aim at analyzing vibrations in the presence of friction, propose new measurement techniques, or quantify uncertainties. Studies that propose an original use of artificial intelligence would also be appreciated. We invite high-quality original articles that focus on tackling these challenges for this Special Issue.

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