

Special Issue

Modeling and Characterization of Wear

Message from the Guest Editors

Wear on materials predominantly contributes to the degradation and failure of mechanical systems. The lack of understanding of wear is explicable due to the challenges in simulating and characterizing wear phenomena effectively for different tribological conditions, especially given the synergistic and transient nature of wear. The limitations range from analysis of worn specimens to developing lab-scale experiments and multiscale wear models, replicating tribological systems. The scope of this Special Issue will include research work on experimental wear characterization and numerical wear models. The research approach taken can employ related studies on contact mechanics, surface engineering, as well as frictional and lubrication. Of interest are numerical and experimental methods to simulate and analyze complex wear phenomena such as three-body abrasive wear, surface fatigue, adhesive wear, fretting, tribochemical wear, erosion, and lubricant wear.

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