Special Issue

Recent Advances in Fatigue Strength of Metallic Materials

Message from the Guest Editors

Fatigue is one of the most critical failure modes limiting the service life of mechanical components in aerospace, automotive, biomedical, energy generation and civil infrastructure applications. Recent progress in alloy design, precise processing methods and FE modelling has enabled researchers to understand, predict and improve the fatigue strength and fatigue life of metals exposed to complex mechanical loads and environmental conditions. This Special Issue aims to compile the latest experimental and computational advances that strengthen both the fundamental knowledge and practical engineering of fatigue. We particularly seek manuscripts that demonstrate how improved fatigue performance can contribute to sustainability through life-extension, lightweight design or reduced inspection frequency. Authors are invited to submit original research papers and critical review articles that identify knowledge gaps and delineate future research directions.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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