Special Issue

New Trends in Fatigue of Metals

Message from the Guest Editors

With the advent of new materials and new technologies and manufacturing processes, as is the case of additive manufacturing (AM), it is essential to improve our knowledge of material behavior, to estimate the failure of systems and structures during service. Among other issues, the phenomenon of fatigue is of the utmost importance due to its presence in most failure cases and the economic impact, respectively. The Special Issue will cover a large spectrum of recent developments regarding fatigue phenomena from different points of view, i.e., new design methodologies considering artificial intelligence, machine learning and data science, new theoretical approaches or models, new techniques in numeric simulations, new experimental set-ups concerning different loading conditions, new specimen types to achieve uniaxial, biaxial, and triaxial states of stress, and different environmental conditions. Moreover, examples of innovative and successful applications in case studies or real applications, as well as non-conventional experimental or numerical approaches, are welcome.

Guest Editors

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About the Journal

Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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