

Special Issue

Fracture, Fatigue and Structural Integrity of Metallic Materials

Message from the Guest Editors

Fracture, fatigue and other subcritical processes, such as creep crack growth or stress corrosion cracking, present numerous open issues from both scientific and industrial points of view. These phenomena are of special interest in industrial and civil metallic structures, such as pipes, vessels, machinery, aircrafts, ship hulls and bridges, given that their failure may imply catastrophic consequences for human life, the natural environment and/or the economy. Moreover, an adequate management of their operational life, defining suitable inspection periods, repairs or replacements, requires their safety or unsafety conditions to be defined. This Special Issue is focused on new advances in fracture, fatigue, creep and corrosion analysis of metallic structural components containing defects (e.g., cracks, notches, metal loss, etc.), and also on those developments that are being or could be incorporated to structural integrity assessment procedures such as BS7910, R6 or API 579-1/ASME FFS-1. We invite you to submit original research and review articles, as well as short communications, related to these topics.

Guest Editors

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Deadline for manuscript submissions

closed (30 April 2019)



Metals

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Impact Factor 2.5
CiteScore 5.3



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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.

Editors-in-Chief

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