



## Computational Modeling and Numerical Simulation in Mechanical Behavior of Metallic Materials

Guest Editor:

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### Message from the Guest Editor

The demand for innovative materials driven by the requirements of the industry for manufacturing products with better properties has led to the development of many materials with complex or multicomponent structures. Understanding of the mechanical behavior is an essential requirement for the successful implementation of metals in various modern applications. Material properties and their mechanical behavior ensue from their components and internal microstructure, which can be affected by the production procedure.

Although there are a number of experiments that provide precious data, the use of computational modeling and numerical simulation have proved to provide invaluable insight in many aspects of the mechanical behavior of metals. Considering the huge progress of computing power, it is possible to consider physical phenomena such as thermal-mechanical and electro-thermal-mechanical which are commonly used during production of metals and affect their properties. Also, the development and implementation of specialized material models help to conduct simulations as close to reality as possible.

It is my pleasure to invite you to submit a manuscript for this Special Issue.





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## 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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