Special Issue

Finite Element Analysis of Mechanical Behavior of Metallic Materials

Message from the Guest Editor

In recent years, the high demand for the virtual design of structures and the fast adoption of concepts, such as the digital twin by automotive and aerospace industries, has led to a significant increase in the integrated computational materials engineering of metallic materials.

This Special Issue aims to present the latest advances in the application of FEM for modeling metallic materials, including novel algorithmic aspectsand new constitutive models. We are seeking the work on modeling a wide range of metallic materials across different length scales, ranging from various alloys to metallic composites. These modeling efforts could focus on a variety of applications⬚ not limited to additive manufacturing, forming, welding and joining, metallic biomaterials, corrosion, and high-temperature applications. Also welcome the research articles that integrate FEM and machine-learning algorithms into the analysis and design of metallic material and metal composites.

Guest Editor

Dr. Soheil Soghrati

Department of Mechanical and Aerospace Engineering, Department of Materials Science and Engineering, The Ohio State University, Columbus, OH, USA

Deadline for manuscript submissions

closed (31 May 2022)

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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

Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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