Special Issue

Numerical and Experimental Advances in Innovative Manufacturing Processes (2nd Edition)

Message from the Guest Editors

Processing methods and systems used in the manufacturing of metallic components are in constant evolution, either through optimizations of classical techniques, such as applying these to new alloys, or through the promotion of new techniques that change the form of, join, add, or remove materials. In this Special Issue, we aim to collect a set of contributions in fields related to this topic, which include, but are not limited to, the following:

- Innovations and optimizations in classical processes: rolling, forging, sheet forming, machining, and casting processes;
- Additive manufacturing and joining technologies;
- Laser forming, hydroforming, incremental forming, and other innovative forming technologies;
- Evolution of material properties and constitutive modeling (including multiscale methods) under new manufacturing conditions;
- Design and behavior of innovative equipment and tools.

Papers reporting new and unpublished advances either concerning numerical advances or experimental techniques on any aspect of these topics are welcomed to be submitted to this Special Issue.

Guest Editors

Prof. Dr. Gilmar Ferreira Batalha

Dr. Wiesław A. Graboń

Prof. Dr. Marcin Adamiak

Deadline for manuscript submissions

closed (20 January 2025)

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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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