

Special Issue

Numerical Simulation of Metals Welding Process

Message from the Guest Editor

I invite you to send scientifically valuable articles for a special issue entitled "Numerical Simulation of Metals Welding Processes". Its scope is very wide and covers all issues of computer aided use, in particular numerical analyses in the design and diagnostics of welded elements and structures. The purpose of this Special Issue is to present the latest developments in the field of numerical simulations of welding so I suggest that the articles should concern the issues of numerical analyses of welding and heat treatment processes as well as their use in the design and diagnosis of welded structures. Studies of the influence of the welding heat cycle on the properties, structure and stresses and distortions distribution of welded joints, supported by computational methods, are also welcome.

- Finite Element Method (FEM)
- Numerical simulations
- Arc/plasma/laser welding and cladding
- Welding and heat treatment
- Stresses and distortions of welded joints
- Metallurgical phases transformations
- welding of high-strength steels
- welding non-ferrous metals
- weld quality assessment
- fatigue of welded joints

Guest Editor

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Deadline for manuscript submissions

closed (31 March 2023)



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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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).