

Special Issue

Numerical Analysis of Welding and Processing

Message from the Guest Editor

Numerical modeling of phenomena occurring in the technological processes of metals and their alloys is increasingly attracting the interest of scientists. With regard to welding processes, the main directions of research are the fields of temperature, phase transformations, strains and stresses, and distortions, which have a direct impact on the strength and utility of welded constructions.

The purpose of this Special Issue is to present the latest developments in the field of research on welding techniques of metals and alloys, as well as other technological processes involving heat in the manufacturing process.

The main topics of interest include but are not limited to the following processes:

Welding (GMA, GTA, P-GMAW, SAW, ESW, PAW, etc.);
Laser welding;
Hybrid welding;
Rapid welding prototyping;
Friction welding;
Friction stir welding and processing;
Laser and heat treatment;
Spraying;
Plasma cutting;
Machining;
Coating;
Additive manufacturing.

Guest Editor

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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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