Special Issue

New Insights into Metal Additive Manufacturing through Modeling and Simulation

Message from the Guest Editor

We are pleased to invite authors to submit original research articles and review articles that will contribute to the broad areas of modeling and simulation in metal additive manufacturing processes. Potential topics include, but are not limited to: Potential topics include, but are not limited to:

- Directed energy deposition (DED);
- Metal powder bed fusion (PBF);
- Wire arc additive manufacturing (WAAM);
- Cold spray additive manufacturing;
- Laser cladding additive manufacturing;
- Novel AM processes and machine configurations;
- Microstructure modeling;
- Property prediction;
- Defect control;
- Residual stress and distortion control;
- Novel sensor systems and imaging techniques;
- Process control strategies and systems;
- Data analytics and machine learning;
- Physics-informed machine learning;
- Topology optimization for AM parts;
- AI for the design of AM parts;
- Tool path or scan path generation.

Guest Editor

Dr. Dayalan Gunasegaram
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Deadline for manuscript submissions

closed (30 April 2024)

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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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