Special Issue

Machine Learning in Metal Additive Manufacturing

Message from the Guest Editors

We are excited to announce a call for research articles for a Special Issue focused on “Machine Learning in Metal Additive Manufacturing”. As the field of metal additive manufacturing (AM) continues to evolve, the integration of machine learning (ML) techniques is proving to be transformative, offering unprecedented opportunities to optimize processes, enable in situ quality audits and adaptive controls, improve part quality, and predict outcomes (e.g., microstructures, defects formation, mechanical properties) with increased precision, discover optimal material compositions for printing, optimize part designs, to name just a few categories. This Special Issue seeks to provide a comprehensive overview of the current state-of-the-art, offering insights into how the power of ML can be harnessed to push the boundaries of metal AM.

Guest Editors

Dr. Dayalan Gunasegaram

Prof. Dr. T. DebRoy

Prof. Dr. Paulo J. Bártolo

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

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