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Data-Driven Modeling, Simulation and Design for Additive Manufacturing

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Message from the Guest Editors

Dear Colleagues,

As additive manufacturing (AM) technology surges forward, it is important to remain aligned with the most recent developments in modeling and simulation methodologies. Such advancements not only foster effective design for additive manufacturing (DfAM), but also provide guidance on process planning to ensure the desired properties are obtained and to control the uncertainties. This Special Issue delves extensively into AM with an acute focus on the mathematical and numerical strategies that underpin our comprehension and predictions concerning material behaviors and the AM workflow.

A novel and particularly exciting avenue being explored is the application of machine learning in AM. By adopting data-driven methodologies, these machine learning techniques are used to meticulously analyze vast datasets collected from AM processes. These data-driven insights bring forth remarkable enhancements in the realms of the efficiency, precision, and overall capabilities of AM.

It is our pleasure to invite you to submit your work to this Special Issue. Research papers, reviews, and communications are welcome.



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Special Issue



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Message from the Editor-in-Chief

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