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## Design, Optimization, Simulation, and Defect Detection for Additive Manufacturing

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### Message from the Guest Editors

Additive manufacturing (AM), colloquially known as 3D printing, is emerging into a general-purpose technology. AM characterizes a group of seven technologies (ISO/ASTM 52900:2021) that deposit, fuse, dispense, bond, and cure a wide selection of feedstocks, composed of polymers, metals, ceramics, elastomers, and hybrid materials, on a layer-by-layer basis.

The advent and proliferation of the additive process is triggering Industry 4.0 and is challenging practitioners and academics alike to establish and substantiate new applications, designs, materials, optimization methods, process simulation, data management, in and ex situ defect detection, and modes of creating end-use parts.

Contributing to the emerging stream of research and advances in AM technologies, the overarching mission of this Special Issue is to provide a leading publication channel for engineers, scientists, researchers, and practitioners in academia and virtually in any industry to document their latest achievements and to identify underlying issues and challenges for future investigations that may define, transcend, and steer the contemporary progress in AM technologies and its widespread adoption.





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## Message from the Editor-in-Chief

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