



Additive Manufacturing: Topology Optimization and Cellular Microstructures

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Message from the Guest Editors

Dear Colleagues,

Topology optimization (TO) is a mathematical method that spatially optimizes the distribution of material within a defined domain, by fulfilling predefined constraints and, if required, the cost function. Additive manufacturing (AM) is a well-established technology already applied for the fabrication of structural components with nearly no geometric constraints. The combination of TO and AM allows for the creation of optimized parts with reduced mass and increased stiffness.

The purpose of this Special Issue is to encourage the two scientific communities of additive manufacturing and topology optimization to focus on this novel and rapidly growing research area. In addition to the above fields, example topics may include new auxetic materials applications, machine learning applications, and novel algorithms linking topology optimization with additive manufacturing. This issue will publish original research papers, short reports, and reviews related to cellular structures fabricated with 3D printing and topology optimization methods for additive manufacturing.

