



Additive Layer Manufacturing using Metal Deposition

Guest Editor:

Prof. Dr. Patrice Peyre

PIMM-Laboratory of Processes
and Engineering in Mechanics
and Materials, French National
Centre for Scientific Research,
75016 Paris, France

Deadline for manuscript
submissions:

closed (30 April 2019)

Message from the Guest Editor

Dear Colleagues,

Among the additive layer manufacturing techniques for metals, metal deposition techniques are known as versatile, efficient, and robust processes dedicated to the fabrication of low to average complexity parts. Although the LMD process is derived from the usual laser cladding techniques, it is still the object of a large number of research activities due to the increasing industrial demand for this attractive laser-based technique. Moreover, the WAAM process is currently the object of growing industrial interest.

This Special Issue aims to address: (1) new LMD or WAAM procedures (new wavelengths, pulsed laser regimes, dedicated instrumentations, or process controls) and the resulting effects on surface finish, microstructures, and mechanical properties; (2) the additive manufacturing of innovative metals and graded materials; (3) the mechanical or corrosion behaviour of built parts; and (4) the analytical or numerical modeling of WAAM or LMD (such as the numerical optimization of powder streams and nozzles, multiphysic modeling, melt-pool hydrodynamics, and the reduction of models to address large or complex parts).

Prof. Dr. Patrice Peyre

Guest Editor





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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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Metals Editorial Office
MDPI, St. Alban-Anlage 26
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