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Fatigue Damage of Additively Manufactured Parts

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Deadline for manuscript submissions:
closed (15 July 2019)

Message from the Guest Editors

The design freedom, customization potential, and significant reduction in product development cycle brings additive manufacturing (AM) to the forefront of the fourth industrial revolution. It has developed in the last few years to a level where it results now in mechanically-sound structures. The potential of light-weighting, functional enhancement by design and/or selective material compaction, development of new alloys specific for additive manufacturing are topics of current interest. The application of the technology to functional components subjected to fatigue loading still needs careful design with respect to the available material data. This Special Issue is focused on scientific contributions to serve as a compendium of research currently available on fatigue of AM parts. Papers are open for all material classes and AM processes. Studies covering the following or associated topics are welcome:

- Influence of AM-specific microstructure on fatigue behavior
- Fracture behavior as compared to conventional alloys
- Fatigue of multi-material and hybrid-processed structures
- Fatigue modeling of AM parts
- Prediction of fatigue life in AM parts
- LCF/HCF/VHCF behavior

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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