applied sciences

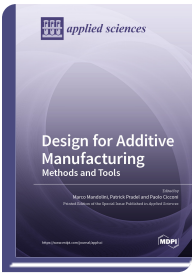
IMPACT FACTOR 2.5

CITESCORE 5.3

Special Issue Reprint

Design for Additive Manufacturing

www.mdpi.com/books/reprint/6021



Edited by
Marco Mandolini
Patrick Pradel
Paolo Cicconi

ISBN 978-3-0365-4925-5 (Hardback)
ISBN 978-3-0365-4926-2 (PDF)

This Special Issue book aims to take stock of the most recent design for additive manufacturing (DfAM) methodologies, methods, and tools. After an overview prepared by the Editors, which summarizes the present situation and predicts future trends in the research area, the book collects a series of papers which are arranged as follows.

The first part presents papers on innovative design for additive manufacturing and optimization workflows. The primary purpose of these works is to support design engineers during the entire design process. They illustrate how to integrate methods and tools, and they provide information on the contexts in which DfAM methodologies can guarantee maximum benefits. The second part focuses on DfAM methods (e.g., cell modelling and self-supporting topologies), topological optimization (integrated within workflow design), and process simulation (also based on machine learning approaches). The third part begins with an extensive review of presently available DfAM tools. Then, it continues with the presentation of systems to support design processes (e.g., simulation for predicting the mechanical characteristics; definition of the tool path for the optimization of structural performance). The last part presents some significant applications for the research presented thus far. The applications refer to the electronics sector (novel resistive sensors), the biomedical sector (clips for measuring exposure in the breathing zone; shaped ceramic bone implants), and the energy sector (composite structures for marine energy systems).

MDPI

Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/6021

MDPI Books

Publishing Open Access Books & Series

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.

Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.

Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.

High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.

High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).

Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.

MDPI AG
Grosspeteranlage 5
4052 Basel
Switzerland
Tel: +41 61 683 77 34
www.mdpi.com/books
books@mdpi.com