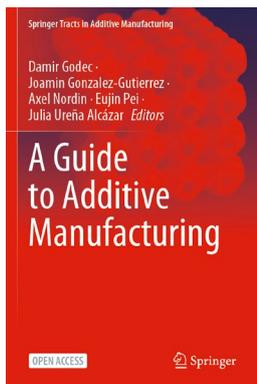


■ Damir Godec, Joamin Gonzalez-Gutierrez, Axel Nordin, Eujin Pei, Julia Ureña Alcázar

A Guide to Additive Manufacturing

This open access book gives both a theoretical and practical overview of several important aspects of additive manufacturing (AM). It is written in an educative style to enable the reader to understand and apply the material. It begins with an introduction to AM technologies and the general workflow, as well as an overview of the current standards within AM. In the following chapter, a more in-depth description is given of design optimization and simulation for AM in polymers and metals, including practical guidelines for topology optimization and the use of lattice structures. Special attention is also given to the economics of AM and when the technology offers a benefit compared to conventional manufacturing processes. This is followed by a chapter with practical insights into how AM materials and processing parameters are developed for both material extrusion and powder bed fusion. The final chapter describes functionally graded AM in various materials and technologies. Throughout the book, a large number of industrial applications are described to exemplify the benefits of AM. ◀

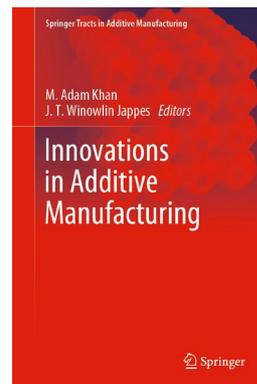


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■ Dr. M. Adam Khan, Dr. J. T. Winowlin Jappes

Innovations in Additive Manufacturing

This book presents the history, fundamentals, process development, applications, post-processing, and experimental results from additive manufacturing. The chapters cover surface treatments, modification, advancements in heat treatment, mechanical hardening and its effect on the material properties. This book also presents content on simulation, modeling, and optimization of materials processing and surface engineering techniques. ◀



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