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Titolo	Selected Topics in Manufacturing : Emerging Trends from the Perspective of AITeM's Young Researchers // edited by Luigi Carrino, Luigi Maria Galantucci, Luca Settineri
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Nota di contenuto	3D printing of shape memory polymers: embedding nichrome-wires to enhance their performance -- Aerosol Jet Printing Of 3D Biocompatible Gold Nanoparticle-based Micro-structures -- Surface quality improvement techniques for 3D printed metal samples -- Arc oscillation for microstructural and geometric control of solids produced by WAAM -- Optimisation of process parameters in fused filament fabrication by machine learning -- Unlocking New In-Situ Defect Detection Capabilities in Additive Manufacturing with Machine Learning and a Recoater-Based Imaging Architecture.
Sommario/riassunto	This book presents selected contributions covering various scientific and technological areas by AITeM (Italian Association of Manufacturing). The first part, "AITeM Young Researcher Award 2023," written by young AITeM associates, reflects the multifaceted nature of manufacturing research. It explores emerging technologies and interdisciplinary connections to go beyond product fabrication, developing a complex value creation ecosystem for high-value-added

global competition. Topics include additive manufacturing, materials processing technology, assembly, disassembly, circular economy, manufacturing systems design and management, quality engineering, production metrology, process and system simulation, optimization, and digital manufacturing. The second part, "White Papers," features five contributions on emerging trends in manufacturing. These papers are prepared by Working Groups focusing on strategic research topics in the manufacturing sector, including metallic prosthetic implants, lasers in electric mobility, digital twins, naval and marine applications, and surface functionalization in biomedical implants. These papers provide an overview of challenges in these frontier areas, highlighting the need for a multidisciplinary and innovative approach from the community to successfully address them.
