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Nota di contenuto	Chapter 1.Fracture Properties of Additively Manufactured Acrylonitrile- Butadiene-Styrene Materials -- Chapter 2.Complex Modulus Variation by Manipulation of Mechanical Test Method and Print Direction -- Chapter 3.Piezoelectric Inkjet Printing as a Method for the Selective Deposition of Energetic Material -- Chapter 4.A New Heat Transfer Simulation Model for Selective Laser Melting to Estimate the Geometry of Cross Section of Melt Pool -- Chapter 5.Heat Conduction and Geometry Topology Optimization of Support Structure in Laser-based Additive Manufacturing -- Chapter 6.Strain Energy Dissipation Mechanisms in Carbon Nanotube Composites Fabricated by Additive Manufacturing -- Chapter 7.Mechanical Properties of 3-D LENS and PBF Printed Stainless Steel 316L Prototypes -- Chapter 8.Effect of Heat

Treatment on Friction Stir Welded Dissimilar Titanium Alloys -- Chapter 9. Effect of Porosity on Thermal Performance of Plastic Injection Molds Based on Experimental and Numerically Derived Material Properties -- Chapter 10. ODS Coating Development Using DED Additive Manufacturing for High Temperature Turbine Components -- Chapter 11. Processing and Characterization of Ti64/AZ31 Multilayered Structure by Roll Bonding -- Chapter 12. Vibration Characteristics of Unit Cell Structures fabricated by Multi-Material Additive Manufacturing -- Chapter 13. Defects, Process Parameters and Signatures for Online Monitoring and Control in Powder-based Additive Manufacturing -- Chapter 14. The Effect of the 3-D Printing Process on the Mechanical Properties of Materials -- Chapter 15. Tool Wear Mechanisms of Physical Vapor Deposition (PVD) TiAlN Coated Tools Under Vegetable Oil Based Lubrication.

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Sommario/riassunto

Mechanics of Additive and Advanced Manufacturing, Volume 9 of the Proceedings of the 2017 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the ninth volume of nine from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies, including: Design, Optimization Experiments Computations Materials for Advanced Manufacturing Processes (3D printing, micro- and nano-manufacturing, powder bed fusion, directed energy deposition, etc.) Mechanics Aspects of Advanced Manufacturing (e.g. mechanical properties, residual stress, deformation, failure, rate-dependent mechanical behavior, etc.).

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