

1. Record Nr.	UNINA9910544873703321
Titolo	Thermomechanics & Infrared Imaging, Inverse Problem Methodologies, Mechanics of Additive & Advanced Manufactured Materials, and Advancements in Optical Methods & Digital Image Correlation, Volume 4 : Proceedings of the 2021 Annual Conference on Experimental and Applied Mechanics // edited by Sharlotte L.B. Kramer, Rachael Tighe, Ming-Tzer Lin, Cosme Furlong, Chi-Hung Hwang
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-030-86745-5
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (109 pages)
Collana	Conference Proceedings of the Society for Experimental Mechanics Series, , 2191-5652
Disciplina	531
Soggetti	Mechanics, Applied Materials - Analysis Imaging systems Industrial engineering Production engineering Thermodynamics Heat engineering Heat transfer Mass transfer Engineering Mechanics Materials Characterization Technique Imaging Techniques Characterization and Analytical Technique Industrial and Production Engineering Engineering Thermodynamics, Heat and Mass Transfer
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Super Resolution Optical Microscopy to Detect Virus (SARS-CoV-2) in Real Time -- Chapter 2. Mesostructure Evolution During

Powder Compression: Micro-CT Experiments and Particle-Based Simulations -- Chapter 3. Surface Pressure Reconstruction in Shock Tube Tests Using the Virtual Fields Method -- Chapter 4. Stress Concentration Evaluation of a Plate with Symmetrical U-notches Under Tensile Load Using TSA and a Lepton IR Camera -- Chapter 5. Evaluation of Thermal Deformation of Fastening Structure of Carbon Fiber Reinforced Plastic and Aluminum Using Stereo Image Correlation -- Chapter 6. Full-field Analysis of Strain-induced Crystallization in Natural Rubber -- Chapter 7. Evaluating Pulse Simulator Using Fluorescent DIC -- Chapter 8. Predicting Temperature Field in Powder-Bed Fusion (PBF) Additive Manufacturing Process Using Radial Basis Neural Network (RBNN) -- Chapter 9. Thermoelastic Characterization of 3D Printed Thermoplastic Elastomers -- Chapter 10. Reduction of Micro-crack in Ni-based Superalloy IN-713LC Produced by Laser Powder Bed Fusion -- Chapter 11. Thermomechanical Analysis of Shape Memory Polymers in Equi-Biaxial Condition by Means of Hydraulic Bulge Test -- Chapter 12. Inverse Identification of the Post-necking Behavior of Metal Samples Produced with Additive Manufacturing -- Chapter 13. Heat Source Reconstruction Applied to Fatigue Characterization Under Varying Stress Amplitude -- Chapter 14. Analysis of the Thermomechanical Response of a Rubber-like Granular Material -- Chapter 15. Which Pattern for a Low Pattern-induced Bias?.

Sommario/riassunto

Thermomechanics & Infrared Imaging, Inverse Problem Methodologies and Mechanics of Additive & Advanced Manufactured Materials, and Advancement of Optical Methods & Digital Image Correlation, Volume 4 of the Proceedings of the 2021 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the fourth volume of four from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on a wide range of areas, including: Test Design and Inverse Method Algorithms Inverse Problems: Virtual Fields Method Material Characterizations Using Thermography Fatigue, Damage & Fracture Evaluation Using Infrared Thermography Mechanics of Additive & Advanced Manufactured Materials DIC Methods & Its Applications Photoelasticity and Interferometry Applications Micro-Optics and Microscopic Systems Multiscale and New Developments in Optical Methods .
