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Soggetti	Mechanics, Applied Optical materials Materials - Analysis Engineering Mechanics Optical Materials Characterization and Analytical Technique
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	1 A General Mathematical Model to Retrieve Displacement Information from Fringe Patterns -- 2 Full-Field High-Strain Evaluation from Wrapped ESPI Data Using Phasors -- 3 Dynamic Deformation with Static Load -- 4 Full-field Digital Holographic Vibrometry for Characterization of High-speed MEMS -- 5 DD DIC A Parallel Finite Element Based Digital Image Correlation Solver -- 6 Thermal Strain Measurement Using Digital Image Correlation with Systematic Error Elimination -- 7 Investigating the Tensile Response of Materials at High Temperature Using DIC -- 8 Hybrid Stereocorrelation for 3D Thermomechanical Field Measurements -- 9 Experimental Characterization of the Mechanical Properties of 3D Printed ABS and Polycarbonate Parts -- 10 Experimental Determination of Transfer Length in Pre-Stressed

Concrete Using 3D-DIC -- 11 Hybrid Infrared Image Correlation Technique to Deformation Measurement of Composites -- 12 DIC Anisotropic Denoising Based on Uncertainty -- 13 An Applications-Oriented Measurement System Analysis of 3D Digital Image Correlation -- 14 Preliminary study on Determination Pointing-Knowledge of Camera-Pair Used for 3D DIC -- 15 Elimination of Periodical Error for Bi-directional Displacement in Digital Image Correlation Method -- 16 The Cluster Approach Applied to Multi-Camera 3D DIC system -- 17 Self-Adaptive Isogeometric Global Digital Image Correlation and Digital Height Correlation -- 18 Ultrasonic Test for High Rate Material Property Imaging -- 19 Analysis of Dynamic Bending Using DIC and Virtual Fields Method -- 20 The Virtual Fields Method to Rubbers Under Medium Strain Rates -- 21 Inertial Impact Tests on Polymers for Inverse Parameter Identification -- 22 Full-field Identification Methods: Comparison of FEM Updating and Integrated DIC -- 23 Finite Element Stereo Digital Image Correlation Measure for Plate Model -- 24 Opportunities for Inverse Analysis in Dynamic Tensile Testing -- 25 Determination of the Dynamic Strain Hardening Parameters From Acceleration Fields -- 26 Imaged-based Inertial Impact Tests on an Aluminium Alloy -- 27 Inverse Material Characterization from 360-deg DIC Measurements on Steel Samples -- 28 Identification of Plastic Behaviour and Formability Limits of Aluminium Alloys at High Temperature.

#### Sommario/riassunto

Advancement of Optical Methods in Experimental Mechanics, Volume 3 of the Proceedings of the 2016 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the third volume of ten 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 optical methods ranging from traditional photoelasticity and interferometry to more recent DIC and DVC techniques, and includes papers in the following general technical research areas: Advances in Digital Image Correlation Challenging Applications of DIC Uncertainty Analysis & Improvements to DIC Accuracy Photoelasticity, Interferometry, & Moire Methods Applications of Stereovision Inverse Methods at High Strain Rates Inverse Methods in Plasticity.