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Nota di contenuto	1. Digital Projection Speckle Technique for Fringe Generation -- 2. Quantifying Wrinkling During Tow Placement On Curvilinear Paths -- 3. Experimental Mechanics, Tool to Verify Continuum Mechanics Predictions -- 4. Study the Deformation of Solid Cylindrical Specimens under Torsion using 360o DIC -- 5. Mutiscale XCT Scans to Study Damage Mechanism in Syntactic Foam -- 6. An Investigation of Digital Image Correlation Technique for Earth Materials -- 7. Dynamics of Deformation-to-Fracture Transition Based on Wave Theory -- 8. Fatigue Monitoring of Dented Pipeline Specimens using Infrared

Thermography, DIC and Fiber Optic Strain Gages -- 9. Development of Optical Technique for Measuring Kinematic Fields in Presence of Cracks, FIB-SEM-DIC -- 10. DIC Determination of SIF in Orthotropic Composite -- 11. Determining In-plane Displacement by Combining DIC Method and Plenoptic Camera Built-in Changing Focal Distance Function -- 12. Identification of Interparticle Contacts in Granular Media using Mechanoluminescent Material -- 13. Color Transfer in Twelve Fringe Photoelasticity (TFP) -- 14. Infrared Deflectometry -- 15. Real-time Shadow Moiré Measurement by Two Light Sources -- 16. Study of MRI Compatible Piezoelectric Motor by Finite Element Modeling and High-Speed Digital Holography -- 17. Digital Volume Correlation: Progress and Challenges -- 18. Development of Camera Calibration-free 3D Shape Measurement Using Feature Quantity Type Whole-Space Tabulation Method -- 19. Temporal Phase Unwrapping for High-Speed Holographic Shape Measurements of Geometrically Discontinuous Objects -- 20. Projection-based Measurement and Identification.

Sommario/riassunto

Advancement of Optical Methods & Digital Image Correlation in Experimental Mechanics, Volume 3 of the Proceedings of the 2019 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the third volume of six 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: DIC Methods & Its Applications Photoelsticity and Interferometry Applications Micro-Optics and Microscopic Systems Multiscale and New Developments in Optical Methods DIC and its Applications for Inverse Problems.