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Nota di contenuto	Chapter 1. Diagnosis of Deformation Stages with Optical Interferometric Technique and Comprehensive Theory of Deformation and Fracture -- Chapter 2. Non-Contact Measurement of Strains Using Two Orthogonal Sets of Twin ‘Blue’ Lasers -- Chapter 3. Experimental Observations on the Fracture of Metals -- Chapter 4. A Digital Laser

Speckle Technique for Generating Slope, Curvature, and Deflection Contours of Bent Plates -- Chapter 5. Holography and Holographic Interferometry via Photopolymer Film -- Chapter 6. Evaluating Stresses from measured strains in Viscoelastic Body Using Numerical Laplace Transformation -- Chapter 7. Evaluation of the Influence of Water Absorptivity on the Properties of CFRP Cylinder Materials by SHPB Impact Compression Test -- Chapter 8. Speckling and Testing with DIC at Micro Scales -- Chapter 9. Perspective Compensation of 2D-DIC Measurements by Combination with Speckle Imaging -- Chapter 10. Holographic Measurement of Semi-Transparent Tympanic Membrane Shape Using Multiple Angle Illuminations -- Chapter 11. Characterization of Interface Debonding Behavior Utilizing an Embedded Digital Image Correlation Scheme -- Chapter 12. Preliminary Characterization of a Plastic Piezoelectric Motor Stator Using High-speed Digital Holographic Interferometry -- Chapter 13. DIC Measurement of Anisotropy for Plastically Deformed Thermoplastic.

Sommario/riassunto

Advancement of Optical Methods & Digital Image Correlation in Experimental Mechanics, Volume 4 of the Proceedings of the 2020 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the fourth volume of seven 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 ApplicationsMicro-Optics and Microscopic SystemsMultiscale .