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Nota di contenuto	Blast Production by a Shock Tube for use in Studies of Exposure of the Tympanic Membrane to High-intensity Sounds -- Preliminary Characterization of a Hollow Cylindrical Ultrasonic Motor by Finite Element Modeling and Digital Holographic Interferometry -- Evaluating Strains Around Fiber and Matrix Interface of CFRP Using Global Digital Image Correlation -- The Development of a Novel Photoelastic and Mechanoluminescent Coating for Full-Field Strain Measurements -- Two-Step Fringe Analysis for Fringe Projection Profile Measurement -- Non-destructive Crack Detection by High-speed Digital Holographic Interferometry and Impact-induced Traveling Waves -- On the use of RBF for Global Field Description in DIC -- Comparative Study of High-

speed Digital Holographic Interferometry and Scanning Laser Doppler Vibrometry for Modal Analysis -- Automated Point Tracking Measurements using a Smartphone to Measure Strain and Displacement -- Shape Measurements in Additive Manufacturing by Structured Light Projection In-situ -- Preliminary Study on Improving DIC Analysis Using Optical Flow to Reject Outer Images -- On the Calibration of Telecentric Optics -- Effect of the Chemical Composition on Fatigue Properties of Carbon Black Filled Natural Rubber -- Criticality of Cracks in Rails using Photoelasticity and Finite Elements -- Effect of Pre-Accumulated Plastic Strain on Stress Corrosion Cracking and Fatigue Life of Steels; Experiment and Modeling -- Layered Jamming Functional Polymer-Based Composite Structures -- Comparison of Stress Fields in a Single Edge Crack Specimen from Phase Field Model and Photoelasticity -- Interrogating the Effects of Rate and Orientation on the Dynamic Failure Response of -quartz Under Uniaxial Stress Compression.

Sommario/riassunto

Advancement of Optical Methods and Fracture and Fatigue, Volume 3 of the Proceedings of the 2023 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the third volume of five 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: Coherent Imaging and Computer Vision DIC Challenges and Applications DIC-Nano & Soft Materials Fatigue and Fracture of Polymers Fracture of Metals Fringe Analysis and Gradient Methods In situ & Methods Photoelasticity Methods and Applications Tracking Temporal Motions Vibrations and High-cycle Fatigue.