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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Chap1. Effects of Adiabatic Heating Estimated from Tensile Tests with Continuous Heating -- Chap2. Effect of Pre-Strain, Processing Conditions, and Impact Velocity on Energy Dissipation in Silicone Foams and Rubber -- Chap3. Strain Rate Sensitivity of Richtmyer-Meshkov Instability Experiments for Metal Strength -- Chap4. Impact Response of Density Graded Cellular Polymers -- Chap5. Dynamic Mixed-mode Crack Initiation and Growth in PMMA and Polycarbonate -- Chap6. Dynamic Reponse of Alumina Ceramics under Brazilian Disc Test Conditions -- Chap7. Digital Gradient Sensing Method to Visualize

and Quantify Crack-tip Deformations in Soda-lime Glass under Static and Dynamic Loading -- Chap8. Construction of Phase Diagrams of Mg-Zn with Selected Rare Earth (R.E) Elements -- Chap9. High Strain Rate Transverse Compression Response of Ballistic Single Fibers -- Chap10. WIAMan ATD Polymeric Material Characterization for Under-Body Blast Environment Simulation -- Chap11. Investigation of Transmission of a Shock Wave through Thin Films -- Chap12. Experimental Testing and Computational Analysis of Viscoelastic Wave Propagation in Polymeric Split Hopkinson Pressure Bar -- Chap13. Mode I Rigid Double Cantilever Beam Test and Analysis Applied to Structural Adhesives -- Chap14. Brute Force Ceramic Constitutive Model Parameterization -- Chap15. High-Strain Rate Compressive Behavior of a "Natural Soil" Under Uniaxial Strain State -- Chap16. Latest Results for Elasto-plastic Identification at High Rates using Inertial Impact -- Chap17. Mesoscale Modeling of Porous Materials Using New Methodology for Fracture and Frictional Contact in the Material Point Method -- Chap18. Underwater Blast Response of Weathered Carbon Composite Plates -- Chap19. Characterization of a Visco-hyperelastic Synthetic gel for Ballistic Impacts Assessment -- Chap20. On the Microstructural Aspects of Shock Induced Failure in Magnesium Alloys -- Chap21. High Speed Imaging Techniques To Study Effects of Pressure Waves From Detonating Explosive Charges on Biological Tissues -- Chap22. Computational Study on the Driver Section Design of an Explosively-Driven Conical Shock Tube -- Chap23. Unidirectional Carbon-Epoxy Composite Plates Subjected to Extreme Marine Environments -- Chap24. Hybrid Computational and Experimental Approach to Identify the Dynamic Initiation Fracture Toughness at High Strain Rate -- Chap25. High-rate Mechanical Response of Aluminum using Miniature Kolsky Bar Techniques -- Chap26. Time-Resolved Penetration of Metal Alloys During Ballistic Impacts -- Chap27. Compaction Wave Propagation Characteristics in Polymer Bonded Explosives at Macro-Meso Scale -- Chap28. Direct Compression Loading Using the Pre-Stretched Bar Technique -- Application to High Strains under Moderate Strain Rates -- Chap29. Compaction Wave Characteristics of Polymeric Foams under Dynamic Loading -- Chap30. Comparison of Numerical Simulations with Experiments of Blast-induced Pressure Wave Impact on a Surrogate Head Model -- Chap31. Pressure Sensing in Clay: a New Metric for Characterizing the Ballistic Backface Deformation Response of Personnel Protection Equipment -- Chap32. Evaluation of Concrete Penetration Resistance Using Small Caliber Bullets -- Chap33. Dynamic Analysis of a Bi-Stable Buckled Structure for Vibration Energy Harvester -- Chap34. Effects of Strain Rate on Mechanical Properties and Fracture Mechanisms in a Dual Phase Steel -- Chap35. Nonlinear and Inertant Acoustic Metamaterials and their Device Implications -- Chap36. Evaluation of Stress Equilibrium in Dynamic Tests on Agglomerated Cork -- Chap37. High Strain Rate Induced Phase Transition of Polymer.

Sommario/riassunto

Dynamic Behavior of Materials, Volume 1 of the Proceedings of the 2017 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the first volume of nine from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on fundamental and applied aspects of Experimental Mechanics, including papers on: Quantitative Visualization Fracture & Fragmentation Dynamic Behavior of Low Impedance Materials Shock & Blast Dynamic Behavior of Composites Novel Testing Techniques Hybrid Experimental & Computational Methods Dynamic Behavior of Geo-materials General

