

1. Record Nr.	UNINA9910136622303321
Titolo	Dynamic Behavior of Materials, Volume 1 : Proceedings of the 2016 Annual Conference on Experimental and Applied Mechanics // edited by Dan Casem, Leslie Lamberson, Jamie Kimberley
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (285 p.)
Collana	Conference Proceedings of the Society for Experimental Mechanics Series, , 2191-5652
Disciplina	620
Soggetti	Mechanics, Applied Solids Materials - Analysis Solid Mechanics Characterization and Analytical Technique
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	1 Atomistic Simulation of a Two-Dimensional Polymer Tougher Than Graphene -- 2 Transverse Compression Response of Ultra-high Molecular Weight Polyethylene Single Fibers -- 3 Morphology and Mechanics of the Young Minipig Cranium -- 4 Dynamic Characterization of Nitronic 30, 40 and 50 Series Stainless Steels by Numerical Analysis -- 5 Mechanical Response of T800/F3900 Composite at Various Strain Rates -- 6 Full-Field Temperature and Strain Measurement in Dynamic Tension Tests on SS 304 -- 7 Dynamic Fracture Response of a Synthetic Cortical Bone Simulant -- 8 Fracture Response of Cross-Linked Epoxy Resins at High Loading Rate as a Function of Glass Transition Temperature -- 9 Measurement of Dynamic Response Parameters of an Underdamped System -- 10 Dynamic Penetration and Bifurcation of a Crack at an Interface in a Transparent Bi-Layer: Effect of Impact Velocity -- 11 Influence of Loading Rate Effects Fracture Strength of Individual Sand Particles -- 11 Arrested Compression Tests on two Types of Sand -- 12 Composite Plate Response to Shock Wave Loading -- 13 Initial Experimental

Validation of an Eulerian Method for Modeling Composites -- 14
Characterization of High Strain Rate Dependency of 3D CFRP materials
-- 15 High-strain Rate Compressive Behavior of a Clay under Uniaxial
Strain State -- 16 Mesoscopic Modelling of High Performance Fiber
Reinforced Concrete under Dynamic Loading -- 17 Comparison of
Failure Mechanisms due to Shock Propagation in Forged, Layered, and
Additive Manufactured Titanium Alloy -- 18 Instrumented Penetration
of Metal Alloys during High-Velocity Impacts -- 19 Confined
Underwater Implosions using 3D Digital Image Correlation -- 20
Response of Composite Cylinders Subjected to Near Field Underwater
Explosions._ 21 Microstructural Effects on the Spall Properties of Al
5083: Equal-Channel Angular Extrusion (ECAE) plus Cold Rolling -- 23
Experimental Study of the Dynamic Fragmentation in Transparent
Ceramic Subjected to Projectile Impact -- 24 Instrumented Projector for
Dynamic Testing -- 25 NIST Mini-Kolsky Bar: Historical Review -- 26 A
General Approach to Evaluate the Dynamic Fracture Toughness of
Materials -- 27 Which one has More Influence on Fracture Strength of
Ceramics: Pressure or Strain Rate? -- 28 Dynamic Strength and
Fragmentation Experiments on Brittle Materials Using Theta-specimens
-- 29 DTEM in situ Mechanical Testing: Defects Motion at High Strain
Rates -- 30 High-Strain-Rate Deformation of Ti-6Al-4V through
Compression Kolsky Bar at High Temperatures -- 31 Parametric Study
of the Formation of Cone Cracks in Brittle Materials -- 32 Shockless
Characterization of Ceramics -- 33 Dynamic Hyper Elastic Behavior of
Compression Shock Loaded Vibration Dampers -- 34 Specimen Size
Effect on Stress-Strain Response of Foams Under Direct-Impact -- 35
Texture Evolution of Fine-grained Mg Alloy at Dynamic Strain Rates --
Failure Processes Governing High Rate Impact Resistance of Epoxy
Resins Filled with Core Shell Rubber Nanoparticles -- 37 Ballistic
Response of Polydicyclopentadiene vs. Epoxy Resins and Effects of
Crosslinking.

Sommario/riassunto

Dynamic Behavior of Materials, Volume 1 of the Proceedings of the 2016 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the first 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 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 Material Behavior.
