1. Record Nr. UNINA9910299881903321

Titolo	Fracture, Fatigue, Failure and Damage Evolution, Volume 7 : Proceedings of the 2017 Annual Conference on Experimental and Applied Mechanics / / edited by Jay Carroll, Shuman Xia, Alison M. Beese, Ryan B. Berke, Garrett J Pataky
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-62831-3
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (VIII, 127 p. 120 illus., 87 illus. in color.)
Collana	Conference Proceedings of the Society for Experimental Mechanics Series, , 2191-5652
Disciplina	620.1126
Soggetti	Mechanics, Applied Solids Engineering geology Materials - Analysis Solid Mechanics Geoengineering Characterization and Analytical Technique
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Chapter 1.Interface Mechanical Strength and Elastic Constants Calculations via Nano Impact and Nanomechanical Raman Spectroscopy -- Chapter 2.Effect of Strain Rate and Interface Chemistry on Failure in Energetic Material -- Chapter 3.Characterization of Crack Tip Plasticity in IN-617 Using Indentation and Nano-mechanical Raman Spectroscopy -- Chapter 4.The Two-Way Relationship between Residual Stress and Fatigue/Fracture -- Chapter 5.Designing Brittle Fracture Specimens to Investigate Environmentally Assisted Crack Growth -- Chapter 6. Flexible Energy Harvesting/Storage Structures for Flapping Wing Air Vehicles -- Chapter 7.The Influence of Formulation Variation and Thermal Boundary Conditions on the Near-Resonant Thermomechanics of Mock Explosives -- Chapter 8.Detecting Fatigue Crack Closure and Crack Growth Delays after an Overload Using DIC Measurements --

Chapter 9.In-situ Observation of Damage Evolution in Quasi-Isotropic CFRP Laminates -- Chapter 10.Contamination-induced Degradation/Enhancement of Interfacial Toughness and Strength in Polymer Matrix Composite Interfaces -- chapter 11.Simultaneous Extraction of Mixed-Mode Traction-Separation Relations -- Chapter 12.Damage Evolution in 304L Stainless Steel Partial Penetration Laser Welds -- Chapter 13.Cross-axis Coupling and Phase Angle Effects due to Multiaxial Vibration -- Chapter 14.Behavior of Steel-Concrete Composite Beams under Fatigue Loads -- Chapter 15.Studying the Fracture of Tropical Wood Species with the Grid Method -- Chapter 16. Generalization of Integral Parameters to Fatigue Loading in Room Temperature -- Chapter 17.Fracture Behavior of Unidirectional Composites Analyzed by Acoustic Emissions Technique.

Sommario/riassunto

Fracture, Fatigue, Failure and Damage Evolution, Volume 7 of the Proceedings of the 2017 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the seventh volume of nine from the Conference, brings together contributions to this important area of research and engineering. Session organizers include: Jay Carroll, Shuman Xia, Allison Beese, Ryan Berke, Garrett Pataky, Samantha Daly, Kavan Hazeli, Antonios Kontsos,Omer Ozgur Capraz, Scott Grutzik, Onome Scott-Emaukpor The collection presents early findings and case studies on a wide range of areas, including: Mechanics of Energy & Energetic Materials Vibration Effects in Fracture & Fatigue Fracture & Fatigue of Additively Manufactured Materials In Situ Techniques for Fatigue & Fracture Microscale & Microstructural Effects on Mechanical Behavior Fracture & Fatigue of Composites Integration & Validation of Models with Experiments Fracture & Fatigue in Extreme Environments Novel Experimental Methods for Fatigue and Fracture Fracture of Brittle & Ductile Materials Interfacial Fracture.