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Nota di contenuto	Chapter 1. Effects of Water Saturation and Low Temperature Coupling on the Mechanical Behavior Mechanical Behavior of Carbon and E-Glass Epoxy Laminates -- Chapter 2. Initiation and Propagation Fracture Toughness of AA7475-T7651 under Different Loading Conditions -- Chapter 3. Flow Stress and Fracture Toughness Behavior of AA5083 under Quasi-static Loading -- Chapter 4. Development of Carbon-glass Fiber Reinforced Hybrid Composites: Applications in Offshore Wind Turbine Blades -- Chapter 5. Effect of the Graphene Nano Platelets (GnP) on the Mechanical Properties in Recycled PP Based Hybrid Composites -- Chapter 6. Static and Dynamic Behaviour of Recycled AA7075 Based Composites reinforced with ZrO2 - gamma-Al2O3 Fibre and SiC -- Chapter 7. Recycled "Al431+A1050" based

Composites Reinforced with "TiC" Ceramic Powders for Aeronautical Applications -- Chapter 8. Experimental and Finite Element Study of Recycled Aluminium (AA7075) Matrix Composites Reinforced of TiC/MoS₂/-Al₂O₃ Fibre/Nb₂Al -- Chapter 9. Tailored Behaviour of Scrap Copper Matrix Composites Reinforced with "Zn-Ni-Al" Low Cost Shape Memory Structures -- Chapter 10. Mechanical Properties of Recycled Rubber modified Epoxy Resin based Composites for Aircraft Auxiliary Structures -- Chapter 11. Manufacturing of Thin Sheet "Ni-Ti" Based Composites Reinforced with Nb₂Al/TiB₂ through hot-forged Bonding: Sandwich Structures -- Chapter 12. Design of Nb-Aluminium (Nb₂Al) Intermetallics based Composites An Experimental and Numerical Approach for Toughening Mechanism -- Chapter 13. Numerical Modeling of Recycled Rubber Based Composites Reinforced with Glass Fibers at High Strain Rates -- Chapter 14. Piezoelectric Actuators as Control Surfaces for Morphing Vehicle -- Chapter 15. Alternative Concretes: Study of Concrete Performance with Addition of Copper Tailings Reinforced and Steel Fiber -- Chapter 16. Cyclical Instrumented Indentation Testing for Fatigue Characterization of Metals -- Chapter 17. Toughening Mechanism of Recycled Rubber Based Composites Reinforced with Glass Fibers + Alumina Fibers for Military Applications -- Chapter 18. Sensitivity Analysis of a Concrete Structure Subjected to Cyclic Loading Using a Polynomial Chaos Expansion Method.

Sommario/riassunto

Mechanics of Composite, Hybrid, and Multifunctional Materials, Fracture, Fatigue, Failure and Damage Evolution, Volume 3 of the Proceedings of the 2021 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the third volume of four 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: Recycled Constituent Composites Damage Detection Advanced Imaging of Composites Multifunctional Materials Composite Interfaces Tunable Composites Novel Experimental Methods Extreme Environments Interfacial Fracture Integration of Models & Experiments Mechanics of Energy & Energetic Materials Integration of Models & Experiments In Situ Techniques for Fatigue & Fracture Microscale & Microstructural Effects on Mechanical Behavior.
