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Challenges In Mechanics of Time-Dependent Materials and Processes in Conventional and Multifunctional Materials, Volume 2

Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics

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Description:

Challenges in Mechanics of Time-Dependent Materials and Processes in Conventional and Multifunctional Materials, Volume 2: Proceedings of the 2013 SEM Annual Conference& Exposition on Experimental and Applied Mechanics, the second volume of eight 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 in the following general technical research areas:

- Metallic, Polymeric and Composite Materials
- Effects of Extreme Environments including Radiation Resistance, Damage, and Aging
- Challenges in Time-dependent Behavior Modeling of Low, Moderate and High Strain Rates
- Effects of Frequency and Hysteretic Heating
- Effects of Inhomogeneities on the Time-Dependent Behavior
- Composite, Hybrid and Multifunctional Materials
- Challenges in Time-dependent Behavior Modeling Viscoelastoplasticity and Damage
- Effects of Interfaces and Interphases on the Time-Dependent Behavior
- Environmental and Reactive Property Change Effects on Thermomechanical and Multifunctional Behaviors
- Modeling and Characterization of Fabrication Processes of Conventional and Multifunctional Materials
- Time-dependent and Small-scale Effects in Micro/Nano-scale Testing
- Time-dependent Processes in Biomaterials

Keywords: Devices & Fabrication Measurement Challenges Optical Methods Residual Stress Single Molecule/single Atom Mechanical Testing Size Effects in Metals Tribology nanoindentation

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