Preface


Each collection presents early findings from experimental and computational investigations on an important area within Experimental Mechanics. The current volume on the Symposium on Time Dependent Constitutive Behavior and Failure/Fracture Processes includes studies on:

Characterization and modeling of behavior at multiple scales; viscoelasticity, viscoplasticity; transport, chemically and electronically active processes; multiphase and biomaterial systems; thermodynamics; shape memory; mechanics of testing; dynamic rate-dependent behaviors; large deformations; residual stresses; time (rate)-dependent damage and failure; time (rate)-dependent polycrystalline, single crystal and nanocrystalline behaviors; multifunctional materials; mechanics of processing; design methods; environmental interactions; experimental methods and techniques; linear and non-linear time-dependent behavior; time (rate)-dependent composite materials of all types; numerical analysis; physical aging; rheological properties; temperature, pressure, and moisture effects on time dependence; damping.

The papers in the Symposium address constitutive, time (rate)-dependent constitutive and fracture/failure behavior of a broad range of materials systems, including prominent researchers in both applied and experimental mechanics. Solicited papers involve non-negligible time-dependent mechanical response in cases incorporating non-mechanical fields. Papers address modeling and experimental aspects of the subject areas.

The organizers thank the presenters, authors and session chairs for their participation in this symposium.

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