

Symposium on Time Dependent Constitutive Behavior and Failure/ Fracture Processes

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Organized by:

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49 papers 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. The sessions are as follows:

- 3 Time-Dependent Behaviors of Inorganic Materials I, (Monday Morning)
- 10 Time-Dependent Behaviors of Inorganic Materials II, (Monday Early Afternoon)
- 17 Time-Dependent Behaviors of Materials Under High Strain Rate or Impact Conditions, (Monday Late Afternoon)
- 24 Indentation of Time Dependent Materials (Tuesday Morning)
- 31 Time-Dependent Behaviors of Polymer Composites I, (Tuesday early afternoon)
- 38 Time-Dependent Behaviors of Polymer Composites II, (Tuesday late afternoon)
- 45 Time-Dependent Behaviors of Polymers I, (Wednesday early morning)
- 52 Time-Dependent Behaviors of Polymers II, (Wednesday late morning)
- 59 Time-Dependent Behaviors of Polymers III, (Wednesday early afternoon)
- 66 Time-Dependent Behaviors of Polymers IV, (Wednesday late afternoon)

Papers address modeling and experimental aspects of the subject areas. Representative topics include, but are not limited to: 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; related topics.

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