

Experimental Micromechanics and Nanomechanics

Micro and Nanomechanical testing methods have become extremely important to characterize the mechanical behavior of materials. There has been a rapid expansion of available testing strategies in recent years to examine elastic, plastic, and fracture properties of materials at small scales, with control of loading mode, temperature and atmosphere, including imaging in real-time. This symposium aims to bring together the rapidly growing micro- and nanomechanical testing research community, particularly in the areas of:

1. Nanoindentation
2. Testing of nanostructures, thin-films and coatings
3. Interface and grain boundary phenomena
4. FIB/lithography based nano- and micromechanical testing
5. Time-resolved in situ SEM, EBSD, AFM, X-Ray/synchrotron and TEM mechanical testing
6. Size effects in mechanical properties
7. Deformation mechanisms in small volumes
8. Fracture at small length scales
9. Testing under extreme conditions (high and low temperature, high strain rates, hydrogen environments, radiation,...)