

## NUMERICAL MODELING AND SIMULATION ON MICRO AND NANOSCALE MATERIALS AND DEVICES

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### ABSTRACT

*Understanding the behavior of materials at the nano/micron scale furnishes the basis required to develop theoretical and numerical models to predict the structural behavior of micro-devices with a broad impact in communications, biology and medicine.*

*The goal of this symposium is to bring together researchers to discuss various aspects of computational methods and problems, especially in simulating and designing novel materials and devices at sub micron and nanometer scales.*

*Topics of interest include (but are not limited to):*

- Simulation of nanostructured materials.*
- Advanced multiscale methods for bridging, atomistic simulations and continuum mechanics.*
- Dislocation dynamics and coarse-graining of dislocations for continuum mechanics.*
- Dynamics of defects, grain boundary mechanisms and size effects in plasticity.*
- Modeling the mechanical properties bulk materials at the nanoscale.*
- Fracture, failure and damage mechanics for thin films, microelectromechanical systems (MEMS) and electronic interconnects.*