

## VALIDATION OF NUMERICAL MODELING IN GEOMECHANICS

TRACK NUMBER (1600)

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### ABSTRACT

Over the past three decades, increasingly powerful computational methods have become available for analysis of a variety of geomechanics problems including soil liquefaction and its effects on civil infrastructure systems, soil-structure interaction in multi-hazard environment, seismic response of underground repository, and response of partially saturated soils to the changing environmental conditions. Various theoretical and computational techniques ranging from macroscopic constitutive modeling combined with continuum-based numerical solution of the equations governing dynamics of nonlinear saturated porous media to microscopic models of granular materials using discrete element method integrated with computational fluid dynamics have been developed and evaluated in a variety of boundary value problems in geomechanics.

This mini-symposium provides a forum for presentation and discussion of the latest developments in computational and theoretical methods for analysis of geomechanics problems. Since establishing the range of applicability and limitations of these numerical techniques will be a critical factor in their use in engineering practice, contributions on validation of the state-of-the-art modeling techniques using available laboratory experiments are particularly welcome.

For any further request, please contact the mini-symposium organizers.