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PARTICLE MECHANICS AND METHODS IN ENGINEERING SCIENCE

EDUARDO M. B. CAMPELLO[*], TAREK I. ZOHDI[†]

[*] Dept. Structural and Geotechnical Engineering, University of São Paulo, Brazil
campello@usp.br

[†] Dept. Mechanical Engineering, University of California at Berkeley, USA
zohdi@berkeley.edu

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ABSTRACT

Particle-based materials and numerical methods have become wide-spread in the natural and applied sciences, engineering and biology. The term “particle methods/mechanics" has now come to imply several different things to researchers in the 21st century, including:

(a) Particles as a physical unit in granular media, particulate flows, plasmas, swarms, etc.,

(b) Particles representing material phases in continua at the meso-, micro- and nano-scale and

(c) Particles as a discretization unit in continua and discontinua in numerical methods such as Discrete Element Methods (DEM), Particle Finite Element Methods (PFEM), Molecular Dynamics (MD), and Smoothed Particle Hydrodynamics (SPH), to name just a few.

This minisymposium welcomes presentations in the above general areas and all related computational subfields.