Computational Particle Mechanics

Editors-in-Chief: T.I. Zohdi; E. Oñate; P. Wriggers

- Covers modeling and simulation of systems involving particles and particle methods
- Spans real-world applications in manufacturing, marine engineering and biomedical engineering

GENERAL OBJECTIVES: Computational Particle Mechanics (CPM) is a quarterly journal with the goal of publishing full-length original articles addressing the modeling and simulation of systems involving particles and particle methods. The goal is to enhance communication among researchers in the applied sciences who use “particles” in one form or another in their research.

SPECIFIC OBJECTIVES: Particle-based materials and numerical methods have become wide-spread in the natural and applied sciences, engineering, 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 a few.

CPM will focus on the above topics. We welcome works in a variety of applications including, but not limited to:

(a) Particulate and granular flow problems motivated by high-tech industrial processes such as those stemming from spray, deposition and printing processes

(b) Fluid-structure interaction problems accounting for free surface flow effects in civil and marine engineering (water jets, wave loads, ship hydrodynamics, debris flows, etc.

On the homepage of Computational Particle Mechanics at springer.com you can

- Sign up for our Table of Contents Alerts
- Get to know the complete Editorial Board
- Find submission information