

Special Issue

Simulation of Particle Flow and Discrete Element

Message from the Guest Editors

This Special Issue on “Simulation of Particle Flow and Discrete Element” invites high-quality contributions that present novel methodologies, advanced simulations, and innovative applications related to particle flow and DEM-based techniques. We aim to bring together research that enhances understanding, modelling accuracy, and computational efficiency in particle-laden systems.

Topics of interest include, but are not limited to: Theoretical development and improvement of DEM and particle-based models; Coupled simulations of particle systems with fluid (CFD–DEM), structures (FEM–DEM, MBD–DEM), or thermal fields; Calibration, validation, and uncertainty quantification in particle flow simulations; Large-scale and high-performance computing for particle simulations; Novel applications of DEM in industrial processes, civil engineering, mining, agriculture, etc.; Particle flow behaviour under complex boundary conditions or external fields (e.g., magnetic, electric, thermal); Machine learning and data-driven approaches in particle simulation and analysis.

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