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Challenges of Applying Discrete Element Method (DEM) to Industrial Applications

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Message from the Guest Editors

Dear Colleagues,

Granular materials are widely encountered in various industries such as pharmaceutical, chemical, mining and agriculture. The efficient handling of granular materials is an ongoing challenge due to the very complex nature of particles/powders. Due to the advances in computational facilities in the last few years, the use of the DEM approach has rapidly grown across a range of industries that use granular materials and powders. The popularity of this method stems from its ability to reveal a comprehensive, particle level of information, which is hard or even impossible to obtain through experiments.

This Special Issue aims to cover current research on the following topics:

- Novel developments in modelling complex interactions at a particle level such as cohesion;
- Innovative approaches regarding DEM model calibration for static and dynamic systems;
- The application of the coarse graining approach and GPU to reduce DEM simulation time;
- Novel validation techniques;
- Usefulness of DEM to provide answers to fundamental questions and innovative solutions to industrial problems.



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Message from the Editor-in-Chief

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