

Special Issue

Towards More Realism in the Simulation of Granular Materials

Message from the Guest Editor

Despite its technical relevance, the methodology of granular particle simulations has not developed as fast as other fields of computer simulation and is still stuck with rather historical approaches of round particle modeling. This volume will serve as a cross-disciplinary forum to share ideas for modernizing the methodology. This Special Issue is aimed at an audience that is writing, verifying or developing code, is in need of improved methodologies and interested in further studies of a range of topics from modeling over computational geometry to numerical analysis. Accordingly, not only computational studies, but also experimental studies which provide reference cases and input data are welcome. A list of suitable categories is:

- Realistic particle modeling
- Reliable modeling in Granular Fluid Dynamics
- Verified simulations
- Numerical analysis for discrete element simulations
- Experiments which are suitable as test cases
- Experimental data for granular particle simulation
- Continuum approaches
- Programming techniques
- Unconventional approaches

Guest Editor

Prof. Dr. Hans-Georg Matuttis

Department of Mechanical and Control Engineering, University of Electro-Communications, Tokyo 182-8585, Japan

Deadline for manuscript submissions

20 July 2026



ChemEngineering

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 4.9



mdpi.com/si/264477

ChemEngineering
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
chemengineering@mdpi.com

[mdpi.com/journal/
ChemEngineering](https://mdpi.com/journal/ChemEngineering)





ChemEngineering

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 4.9



[mdpi.com/journal/
ChemEngineering](https://mdpi.com/journal/ChemEngineering)



About the Journal

Message from the Editor-in-Chief

ChemEngineering is to consolidate its position as a high-quality, open access journal that not only disseminates excellent research but also sets the agenda for future directions in chemical engineering. We will continue to highlight core areas such as catalysis, process intensification, and the circular economy, while also opening the door to emerging topics such as multi-energy systems that integrate light, heat, and electricity, etc., as well as digital tools, modelling, and artificial intelligence applied to chemical engineering.

Editor-in-Chief

Prof. Dr. Mario J. Muñoz Batista

Department of Chemical Engineering, Faculty of Sciences, University of Granada, Avda. Fuentenueva, s/n, 18071 Granada, Spain

Author Benefits

High Visibility:

indexed within Scopus, ESCI (Web of Science), Inspec, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Chemical) / CiteScore - Q1 (General Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 32.8 days after submission; acceptance to publication is undertaken in 6.6 days (median values for papers published in this journal in the second half of 2025).