Special Issue

Research on Dispersion and Transport of Non-spherical Particles in Turbulent Flows

Message from the Guest Editor

Transport and dispersion phenomena of non-spherical, anisotropic particles in turbulent flows are ubiquitous in industrial and natural processes, ranging from wastewater treatment to plankton transport in water bodies, micro-plastic pollution and sediment re-suspension. Within such multi-phase flows, and to an extent which depends on particle concentration, complex interactions between fluid phase and dispersed particles can take place with the onset of phenomena such as preferential particle transport and orientation and turbulence modulation effects. This Special Issue aims to provide an overview of the current research on non-spherical (solid, liquid or gaseous) particles transport, dispersion, orientation and deformation in turbulent flows. Contributions are encouraged on the following subjects: Dynamics of non-spherical particles in free-shear flows; Dynamics of non-spherical particles in confined flows (channel, pipe flows); Accumulation, orientation and deformation of non-spherical particles in turbulent flows; Turbulence modulation by non-spherical particles; Sediment resuspension; Experimental methods for research on non-spherical particles.

Guest Editor

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Deadline for manuscript submissions

closed (25 November 2022)

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Message from the Editor-in-Chief

The *Journal of Marine Science and Engineering* (*JMSE*; ISSN 2077-1312) is an international peer-reviewed open access journal which provides an advanced forum for studies related to marine science and engineering. The journal aims to provide scholarly research on a range of topics, including ocean engineering, chemical oceanography, physical oceanography, marine biology and marine geosciences. We invite you to publish in our journal sharing your important research findings with the global ocean community.

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