

Special Issue

Visualization and Simulation of Microstructural Dynamics of Complex Fluid–Particle Systems: Process Industry Applications

Message from the Guest Editors

Process industries worldwide are undergoing a deep and wide-ranging transformation from automated mechanical manufacturing facilities to multicomponent, digital-platform-enabled and multiplex-server-supported fast production enterprises. An innovative scientific and engineering drive comprising dynamic computer simulations coupled with the advances achieved in process applications of nondestructive imaging and process tomography provides the basis for further advancement of the digital transformation of the process industries. We particularly invite papers in remote imaging and tomography of complex flows such as fiber flows, immiscible flows, aerated solid–liquid flows, bubble flows, and emulsion flows that require complex rheological characterization as well as the modeling of fluid–particle interactions in both dilute and dense-phase applications involving particles of varying sizes, aspect ratios, and internal and external surface features that can be tailor-made for targeted functionality using for instance 3D printing and other fabrication techniques.

Guest Editors

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Deadline for manuscript submissions

closed (31 December 2020)



Applied Sciences

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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