Special Issue

Multiscale Numerical Simulation of Multiphase Flow and Heat and Mass Transfer

Message from the Guest Editors

This Special Issue focusing on multiscale numerical methods and computational strategies for the simulation of coupled multiphase transport. Topics of interest include, but are not limited to, novel discretization techniques, adaptive multiscale algorithms, interface-capturing and front-tracking methods, pore-scale to continuum-scale upscaling, and data-driven or machine learning-enhanced modeling approaches. Contributions addressing uncertainty quantification, long-term simulation efficiency, or multiscale coupling in heterogeneous media are particularly welcome. Studies that demonstrate rigorous validation with experiments or field data, or that provide new insights into the governing physical mechanisms of multiphase interactions, are especially encouraged.

Guest Editors

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Editor-in-Chief

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