

## NUMERICAL METHODS AND MODELS FOR MULTIPHASE FLOWS

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### ABSTRACT

Multiphase systems, whether separated (e.g., water-oil) or dispersed (e.g., ash-air), arise in many natural and industrial processes. Simulating such flows is both economically and environmentally important, yet often complex and costly. This mini-symposium aims to bring together researchers working in multiphase flow simulation, from various angles ranging from model development to algorithm design. Models of interest include the broad multiphase spectrum: Euler-Euler, Euler-Lagrange, phase fields, sharp interfaces, etc. Similarly, all numerical methods are welcome, from finite elements to finite volumes, from SPH to MPM. The main goal is to present recent developments with the potential to improve accuracy, efficiency, robustness, or even user-friendliness in multiphase CFD—be it in industrial, biomedical or environmental scenarios. Notable applications of interest are fluid-fluid systems, particle-fluid interaction, granular flows and reacting gases. Models including complex rheologies are especially welcome.

### REFERENCES

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