RECENT ADVANCES IN NUMERICAL METHODS FOR INTERFACE PROBLEMS

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MINISYMPOSIUM

Interface problems are widespread in multiphysics models in science and engineering. Applications include, for example, modeling the interaction of blood flow and blood vessels, the spread of contaminants in multiple subsurface structures, ground/ocean/atmosphere dynamics, and wing fluttering problems.
The computation of these interface problems, that couple different physical models across interfaces, present many mathematical and algorithmic challenges. The focus of this minisymposium will be recent advancements in topics including, but not limited to,
monolithic and partitioned discretization and solution methods, stability and error analysis, and high-order timestepping schemes.