Einladung zum Vortrag

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Thema: Well-posedness of incompressible models  
of two- and three-phase flow

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Abstract

In this work the Hadamard well-posedness of incompressible multiphase flow systems is addressed. We determine the hydrodynamic conditions under which these systems are hyperbolic, stable and possess a unique short time solution provided the initial data is in an appropriate Sobolev space and the source terms in a class of sufficiently differentiable functions. An accurate and efficient numerical method coupled with an adaptive mesh strategy, for predicting the evolution of flow phenomena, is presented. Numerical predictions of transient and steady flow problems in pipelines are compared to available experimental data.