JOHANNES KEPLER UNIVERSITY LINZ

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Talk announcement

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Defense Talk: Parameter identification in the Cahn-Hilliard equation

We consider the parameter identification of multiple parameters in the Cahn-Hilliard model for phase separation processes. Spatially resolved measurements of the phase fraction are assumed to be accessible, with which the identifiability of single and multiple parameters up to certain scaling invariances is established. For the stable numerical solution of the parameter identification problems we propose a linear approach (by means of an equation error method), and a nonlinear approach (by an output least squares approach). The viability of the proposed methods is demonstrated in numerical tests and we compare the two approaches.