Seminar/Talk

On a non-isothermal Cahn-Hilliard model based on a microforce balance

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Host: Julian Fischer

We consider a non-isothermal Cahn-Hilliard model based on a microforce balance. The model was derived by A. Miranville and G. Schimperna starting from the two fundamental laws of Thermodynamics, following M. Gurtin's two-scale approach. The main working assumptions are on the choice of the Ginzburg-Landau free energy, and on the behaviour of the heat flux as the absolute temperature tends to zero and to infinity. By deriving suitable a priori estimates and by showing weak sequential stability of families of approximating solutions, we prove global-in-time existence for the initial-boundary value problem associated to the entropy formulation and, in a subcase, also to the weak formulation of the model. (Joint work with G. Schimperna)

Thursday, April 29, 2021 04:15pm - 05:15pm
Online via Zoom

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