

Helmut Abels

On sharp interface limits of diffuse interface models

We present recent results on the sharp interface limits of a new diffuse interface model for two viscous incompressible fluids with different densities. We will discuss how the sharp interface limit depends on the choice of the mobility. The sharp interface limit is determined with the aid of the method of formally matched asymptotics. Moreover, in some cases we can perform the limit on the level of so-called varifold solutions rigorously.