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*A diffuse-interface approximation of Willmore-flow for colliding interfaces*

This talk is concerned with diffuse-interface approximations for Willmore flow. We present numerical results of standard diffuse-interface models for colliding one dimensional interfaces. In such a scenario evolutions towards interfaces with corners can occur contradicting the corresponding sharp-interface model.

We propose a modified diffuse-interface energy which blows up in the above situation but still yields the correct asymptotic behaviour for vanishing diffuse-interface width otherwise. Furthermore, we consider the corresponding flow of this diffuse-interface energy.