

Finite elements for soft interfaces

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ABSTRACT

The growing interest in the modeling of biological systems brings with it several challenges, some of which arise from the great deformability of most biological interfaces. In recent years, our group has implemented and tested several algorithms for soft interfaces such as capillary flows, elastic membranes, viscous sheets and lipid bilayers. The talk will try to summarize this recent experience, with focus on methods for two-dimensional interfaces with geometry-dependent energy.