LI BO, University of California, San Diego
Variational Modeling and Analysis of Phase Separation with Elasticity

We construct phase-field and sharp-interface free-energy functionals for phase separation with elasticity and prove the consistency of these models. Motivated by our numerical simulations, we study the boundary force using a variational method and discuss the role of such force in the droplet morphology and the kinetics of phase boundary movement. This is joint work with Shibin Dai of University of Alabama.