

Nonlocal perturbations of curvature energies

We consider a functional on sets in the plane or in three dimensional space, given by contributions from a surface area energy, a bending energy, and a Riesz self-interaction energy.

We present results for corresponding minimization problems in classes of fixed volume and in parts under constraints on the topology. (This is joint work with Michael Goldman, Paris, and Matteo Novaga, Pisa.)