

Enrico Valdinoci

Weierstrass Institute for Applied Analysis and Stochastic

Long-range phase transitions and minimal surfaces

We discuss some phase transition model with particle interactions modeled by a kernel with polynomial decay. At a large scale, we relate the interfaces of this model with either classical minimal surfaces or nonlocal ones, depending on the decay of the interaction. We give rigidity, symmetry and regularity results about these objects and present related geometric flows.