

Local energies as Gamma-Limits of nonlocal ones and applications.

In this talk we will present a Gamma-convergence result for a sequence of nonlocal energies depending on a parameter δ . The Gamma-limit is a local energy that is explicitly computed. Our result also covers the nonlinear vectorial case, for which the Gamma-limit is the quasiconvexification of certain density. The functionals considered are inspired by Peridynamics, a nowadays well-known nonlocal model in Solid Mechanics. Applications of this result to the contexts of the p-laplacian and hiperelasticity will be given.