Study of a model for reference-free plasticity

Jens Wohlgemuth, MPI Leipzig, Germany Dezember 12, 2012

We study a Kac-type many particle model that allows a reference-free description of plastic deformation.

We calculate an upper bound for the energy barrier of plastic relaxation. Furthermore, we construct local Lagrangian coordinates and use them to identify topological defects and to bound the energy-density from below.