Speaker: Sascha Weitkamp (universit di Verona)

Convergence of minimizers with local energy bounds for the Ginzburg-Landau functionals.

abstract We study the asymptotic bahaviour, as $\epsilon \to 0$, of a sequence $\{u_\epsilon\}$ of minimizers for the Ginzburg-Landau functional which satisfies local energy bounds of order $|\log \epsilon|$. The jacobians Ju_ϵ are shown to converge, in a suitable sense and up to subsequences, to an area minimizing minimal surface of codimension 2. This is achieved without assumptions on the global energy of the sequence or on the boundary data, and holds even for unbounded domains. The proof is based on an improved version of the Γ-convergence results from a work of Alberti, Baldo & Orlandi on a wide class of Ginzburg-Landau functionals (Variational convergence for functionals of Ginzburg-Landau type, 2005).