

Nonlocal to local phase-transition for the Dirichlet problem

PAUL VOIGT

Bielefeld University, Germany

In this talk variational solutions to nonlocal Dirichlet Problems, e.g. the fractional Laplacian $(-\Delta)^{\alpha/2}$, are considered. We prove convergence of a sequence of solutions (u_α) for $\alpha \nearrow 2^-$ to the solution of an appropriate local Dirichlet Problem. Main tools include Hilbert space techniques, Γ -convergence and new results on function spaces on bounded domains.