Closure of the set of diffusion functionals with respect to the Mosco-convergence.

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Abstract

This talk will focus on the characterization of the functionals which are Mosco-limits, in the $L^2(\Omega)$ topology, of some sequence of functionals of the kind

$$F_n(u) := \int_\Omega \alpha_n(x)|\nabla u(x)|^2 \, dx,$$

where $\Omega$ is a bounded domain of $\mathbb{R}^N$ ($N \geq 3$). It is known that this family of functionals is included in the closed set of Dirichlet forms. Here, I prove that the set of Dirichlet forms is actually the closure of the set of diffusion functionals.