Local and nonlocal methods in geometric analysis



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Gamma-convergence of the p-Dirichlet energy for manifold-valued maps

Wednesday, 5 November 2025 14:00 (1 hour)

In this talk, we will consider the p-Dirichlet energy of maps with values in a closed manifold. We will discuss a Gamma-convergence result in the limit as the exponent p approaches a certain critical value k, which is defined in terms of the topology of the target manifold. This particular limit is associated with the emergence of topological singularities of codimension k, which can be described in measure-theoretic terms using the language of flat chains with coefficients in normed Abelian groups. This presentation is meant to serve as an introduction to the topic; I will try to avoid technicalities as much as possible. The talk is based on joint work with Van Phu Cuong Le (Universität Heidelberg), Ramon Oliver-Bonafoux (Università di Verona), and Giandomenico Orlandi (Università di Verona).

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