Εβδομαδιαίο Σεμινάριο

ANALYTICAL APPROACH OF THE SYMMETRY: SHARP SUPERCRITICAL HARDY-SOBOLEV TYPE INEQUALITIES AND APPLICATIONS

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In this presentation, the concept of the symmetry from the view point of Analysis is considered. In this framework, we present the most interesting aspects of some Hardy-Sobolev type inequalities on compact Riemannian manifolds with boundary, the data and the functions being invariant under the action of a compact subgroup of the isometry group. Using techniques that exploit the symmetry presented by the manifold, we can calculate the precise values of the best constants in the presented inequalities in the critical of supercritical case without any assumption concerning the "shape" of the boundary (i.e. some convexity) confirming that the symmetry of a domain is an intrinsic property characterizing both the domain itself and its boundary. We apply these results to solve nonlinear elliptic of scalar curvature of the generalized type, (under Dirichlet or Neumann conditions), PDEs of upper critical Sobolev exponent.

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Μετά την ομιλία ακολουθεί καφές και συζήτηση στο εντευκτήριο του Τμήματος