

# Rigidity, nonlinear flows and optimal symmetry for extremals of functional inequalities

*Tuesday, December 13, 2016 10:00 AM (50 minutes)*

The analysis of optimality and symmetry properties of extremals in functional inequalities has been performed recently by introducing nonlinear flows into the picture. These results solve conjectures about symmetry and symmetry breaking in functional inequalities which play an important role in various areas of analysis. Also, as a consequence we have obtained optimal estimates for the principal eigenvalues of linear operators and rigidity results of solutions of nonlinear elliptic PDEs for compact and noncompact in Riemannian manifolds.

This work has been done in collaboration with J. Dolbeault and M. Loss

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