



SEMINÁRIO DE EQUAÇÕES DIFERENCIAIS

Nonlinear flows and optimality for functional inequalities

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Resumo: In this talk I will present some recent results about optimal qualitative (symmetry and symmetry breaking) properties of extremal functions for functional inequalities, obtained in collaboration with J. Dolbeault and M. Loss. I will show that linear and nonlinear flows are a very good tool to do this in an optimal way. The main subject of my talk will be to discuss the symmetry of extremals for critical and subcritical Caffarelli-Kohn-Nirenberg inequalities on the Euclidean space. But I will also explain how this method can be used to derive similar inequalities and results on Riemannian manifolds.