

Rigidity of manifolds admitting a local minimum of an Energy Functional

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In this talk, we will consider Riemannian manifolds admitting non-trivial solutions of a PDE obtained from a variational problem. In this setting, it is well known that there is a notion of stability and this allows us to use some ideas of Schoen and Yau to handling the stability operator and so, under suitable hypotheses, get a necessary condition for a Riemannian manifold to admit a stable solution. Furthermore, under the non-negativity of the Ricci curvature, we also obtain information about stable solutions. This is joint work with J. I. Santos.