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Abstracts of Short Communications and Posters

Section:

5. Differential Geometry and Global Analysis

1991 MS Classification: 58, 53, 35
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Stable critical point Theory in perturbation problems
We discuss the stable critical point theory for small perturbations of an elliptic variational functional, which is defined on a Hilbert-Riemannian manifold of functions on a finite dimensional reimannian manifold and invariant under a (non-compact) Lie group action. We use the Lyapunov-Schmidt process to reduce the problem into a finite dimensional one and give some natural conditions such that the standard bifurcation or Thom-Mather theory can be used. Our result is a complement of R. Palais's principle of symmetrical criticality.