An Abstract Linking Theorem Applied to Indefinite Problems Via Spectral Properties

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An abstract linking result for Cerami sequences is proved without the Cerami condition. It is applied directly in order to prove the existence of critical points for a class of indefinite problems in infinite-dimensional Hilbert Spaces. The applications are given to Schrödinger equations. Here spectral properties inherited by the potential features are exploited in order to establish a linking structure, and hence hypotheses of monotonicity on the nonlinearities are discarded.
Keywords: Linking Structure, Variational Methods, Spectral Theory, Schrödinger Equation, Asymptotically Linear.

References

[1] Maia, L. de A. and Soares, M., *An Abstract Linking Theorem Applied to Indefinite Problems via Spectral Properties* , Advanced Nonlinear Studies