On a splitting of the Nehari manifold via the generalized Rayleigh quotients

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Abstract. In this work we deal with equations that have variational structure and their Nahari manifolds may contain more than two different types of critical points. We propose a method of separating critical points on the Nehari manifold based on using of nonlinear generalized Rayleigh quotients. We illustrate our approach by establishing existence of positive solutions, ground states and multiplicity results for a two-parameter nonlinear elliptic boundary problem with polynomial nonlinearities.

References

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