

Multiplicity of positive solutions for a gradient type, cooperative/competitive elliptic system

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Abstract. We study the existence of positive solutions for gradient type cooperative, competitive elliptic systems, which depends on real parameters λ, μ . Our analysis is purely variational and depends on finer estimates with respect to the Nehari sets, in fact, we determine the extreme parameter $\lambda^*(\mu)$ for which the Nehari set is a manifold and hence standard variational techniques can be applied. We also discuss the case where the Nehari set is not a manifold.

References

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