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**Low- and high-energy solutions
of nonlinear elliptic oscillatory problems**

Abstract

In this talk, we report on some recent results obtained in collaboration with G. Molica Bisci and R. Servadei. We are concerned with various competition effects for a class of Dirichlet problems containing a power-type term, a nonlinearity oscillating near the origin or at infinity, and an indefinite potential. By means of variational and topological methods, we establish several existence and nonexistence results. These properties extend some recent contributions, obtained for equations driven by the Laplace operator or more general differential operators.