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Section:

10. Partial Differential Equations

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Asymptotic behavior of eigenvalues of nonlinear elliptic two-parameter problems

We consider nonlinear two-parameter problem $-\Delta u+\lambda g(u) = \mu f(u)$ in $\Omega \subset R^N (N \geq 3)$, $u = 0$ on $\partial\Omega$, where Ω is a bounded domain, and $\lambda, \mu > 0$ are parameters. By variational methods, the variational eigenvalues $\mu = \mu(\lambda)$ are defined. We establish asymptotic formulas for $\mu(\lambda)$ as $\lambda \to \infty$.