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On the asymptotic behavior of certain solutions of the Dirichlet problem for the equation $-\Delta_p u = \lambda|u|^{q-2}u$. (English) Zbl 1281.35013
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Summary: Let $p > 1$. We study the behavior of certain positive and nodal solutions of the problem

$$\begin{cases} -\Delta_p u = \lambda|u|^{q-2} & \text{in } \Omega, \\ u = 0 & \text{on } \partial\Omega, \end{cases}$$

on varying of the parameters $\lambda > 0$ and $q > 1$.

MSC:

- 35J20 Variational methods for second-order elliptic equations
- 35J25 Boundary value problems for second-order elliptic equations
- 35B40 Asymptotic behavior of solutions to PDEs
- 35B09 Positive solutions to PDEs

Cited in 1 Document

Keywords:

elliptic boundary value problems; positive solutions; nodal solutions; minimal energy; asymptotic behavior; variational methods

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