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Nonhomogeneous Dirichlet Problems for the $p-$Laplacian

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SUMMARY

This talk is mainly concerned with the existence, nonexistence and multiplicity of positive solutions for the problem

$$\begin{aligned} -\Delta_p u &= \lambda u^{q-1} \text{ in } \Omega, \\ u &= \varphi \text{ on } \partial\Omega. \end{aligned}$$

For $p = 2, q = p^*$ and $\varphi = 0$, this is the well-known Pohozaev equation, which has lead to a very large number of works dealing with criticality. Our purpose here is to study problem (1) in the case of the $p-$Laplacian with a nonzero boundary data φ.

(Joint work with D. de Figueiredo and P. Ubilla)

Keywords: Nonhomogeneous Dirichlet Problems

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