

About phi-Laplacian operator

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In this talk, some results on the existence and nonexistence of radial solutions of partial differential equations with the ϕ -Laplacian operator are presented. More exactly, we consider problems of the type

$$\begin{cases} -\Delta_\phi(u) = W(x)f(u), & x \in B_1(0), \\ u(x) = 0, & x \in \partial B_1(0), \end{cases}$$

where $B_1(0) \subset \mathbb{R}^N$ ($N > 2$) is the unit ball, Δ_ϕ denotes the ϕ -Laplacian operator, which is defined by

$$\Delta_\phi(u) = \operatorname{div}(\phi(|\nabla u|)\nabla u),$$

ϕ , is in general, a suitable function and $W > 0$ is a weight.

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