

Anello, Giovanni; Cordaro, Guiseppe

An existence theorem for the Neumann problem involving the p -Laplacian. (English)

Zbl 1091.35026

J. Convex Anal. 10, No. 1, 185-198 (2003).

Summary: We deal with the existence of weak solutions for a Neumann problem involving the p -Laplacian with asymmetric nonlinearity. We show that our result gives new conditions on the right hand side which assure the existence and localization of at least one weak solution. In particular, we make a comparison with a result obtained in a recent paper by *S. Villegas* [J. Differ. Equations 145, No. 1, 145–155 (1998; Zbl 0910.34035)] where he studies the same problem using a different approach.

MSC:

35J60 Nonlinear elliptic equations

35D05 Existence of generalized solutions of PDE (MSC2000)

35J25 Boundary value problems for second-order elliptic equations

Cited in **1** Review
Cited in **9** Documents

Keywords:

Variational principle; critical point; weak solution; Neumann problem; p -Laplacian.

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