

1086-49-543

Dumitru Motreanu* (motreanu@univ-perp.fr), University of Perpignan, Department of Mathematics, 66680 Perpignan, France. *Minimizers related to nonlinear Neumann boundary value problems.*

In this work we study the minimizers and, generally, the critical points of the energy functional corresponding to a quasilinear elliptic equation with Neumann boundary condition on a bounded domain. The principal part of the equation is driven by a nonlinear operator in divergence form which is more general than the p-Laplacian. In particular, no homogeneity condition is required. Among the results that are presented here, we mention the basic property regarding the smooth and Sobolev local minimizers in our setting of Neumann problems. Nonlinear eigenvalues problems associated with the stated equation are also discussed. (Received September 06, 2012)