Published in: Communications in Contemporary Mathematics 12 (2010), 475-486

NONTRIVIAL SOLUTIONS OF *p*-SUPERLINEAR *p*-LAPLACIAN PROBLEMS VIA A COHOMOLOGICAL LOCAL SPLITTING

MARCO DEGIOVANNI, SERGIO LANCELOTTI AND KANISHKA PERERA

ABSTRACT. We consider a quasilinear equation, involving the p-Laplace operator, with a p-superlinear nonlinearity. We prove the existence of a nontrivial solution, also when there is no mountain pass geometry, without imposing a global sign condition. Techniques of Morse theory are employed.