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Michael E. Filippakis* (mfilip@math.ntua.gr), National Technical University of Athens, Department of Mathematics, Zografou Campus, 15780 Athens, Ravi P. Agarwal, Department of Mathematical Sciences, Florida Institute of Technology, Melbourne, FL 32901-6975, Donal O'Regan, Department of Mathematics, National University of Ireland, Galway, and Nikolaos S. Papageorgiou, National Technical University of Athens, Department of Mathematics, Zografou Campus, 15780 Athens. Nodal and multiple constant sign solutions for the p-Laplacian Preliminary report.

We consider nonlinear elliptic equations driven by the *p*-Laplacian with a nonsmooth potential (hemivariational inequalities). We obtain the existence of multiple nontrivial solutions and we determine their sign (one positive, one negative and the third nodal). Our approach uses nonsmooth critical point theory coupled with the method of upper-lower solutions. Research supported by a grant of the National Scholarship Foundation of Greece (I.K.Y.). (Received September 26, 2008)