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Michael E Filippakis\* (mfilip@unipi.gr), University of Piraeus, Department of Digital, Systems, 80 Karaoli and dimitriou Str.Piraeus, 18534, 18534 Piraeus, Greece, and Nikolaos S Papageorgiou (npapg@math.ntua.gr), Department of Mathematics, NTUA, Zografou Campus, Athens, Greece, 15780, 15780 athens, Greece. Existence of Nodal solutions for Neumann nonlinear differential equations driven by p-Laplacian equations. Preliminary report.

We consider Neumann nonliner differential equations driven by the p-Laplacian with a nonsmooth potential and we use techniques from Morse Theory and nonlinear analysis in order to proof the existence of nodal solutions. Our approach uses nonsmooth critical point thicky, Morse Theory coupled with the method of upper and lower sloutions (Received September 25, 2012)