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**Michael E. Filippakis\*** (mfilip@unipi.gr), Department of Digital Systems, University of Piraeus, 80, Karaoli and Dimitriou Str, Piraeus, Greece, 18534, and **Nikolaos S Papageorgiou** (npapg@math.ntua.gr), Department of Mathematics, National Technical University, Zografou Campus, Athens, 15780. *Existence of Nodal Solutions for Neumann Problems*. Preliminary report.

We consider a nonlinear elliptic Neumann problem driven by a nonhomogeneous differential operator, which is strictly monotone and incorporates as special cases the  $p$ -Laplacian, the  $(p, q)$ -differential operator and the generalized  $p$ -mean curvature differential operator. Using variational methods coupled with suitable truncation and comparison techniques and Morse theory (critical groups), we show that the problem has at least three nontrivial smooth solutions, one positive, the second negative and the third nodal. Also we show that the problem has extremal nontrivial constant sign solutions. (Received September 07, 2014)