1044-35-196 **M. N. Nkashama*** (`nkashama@math.uab.edu`), Department of Mathematics, University of Alabama at Birmingham, Birmingham, AL 35294-1170. *On Elliptic Equations with Nonlinear Boundary Conditions.*

We will present existence and non-existence results for second order elliptic partial differential equations with nonlinear boundary conditions. The nonlinearity on the boundary interacts in some sense with the eigenvalues of the Steklov spectrum. Our approach is based on a priori estimates, a variational approach and topological degree arguments. This is a joint work with Dr. Nsoki Mavinga of the University of Rochester, NY. (Received September 01, 2008)

1