1163-35-105   **Shalmali Bandyopadhyay*** (`s_bandyo@uncg.edu`), 116 Petty Science Building, Greensboro, NC 27408, and **M Chhetri**, **B Delgado**, **N Mavinga** and **R Pardo**. *Bifurcation results for Elliptic problems with subcritical nonlinearity on the boundary.* Preliminary report.

We consider an Elliptic equation coupled with a nonlinear boundary condition on a bounded domain. We discuss the existence of positive solutions with respect to a bifurcation parameter when the nonlinearity is superlinear and subcritical. We will show that positive solutions bifurcate from infinity when the bifurcation parameter is zero. Under additional conditions on the nonlinearity that guarantees bifurcation from the branch of trivial solutions, we make connection between the set of solutions bifurcating from infinity and from the branch of trivial solutions.We use degree theory and bifurcation theory to establish the results.This is joint work of S Bandyopadhyay, M Chhetri, B. Delgado, N. Mavinga, R. Pardo. (Received August 15, 2020)