

COLLOQUIUM

Bifurcation from Infinity for Elliptic Problems with Nonlinear Boundary Conditions

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Neckers 156 - Time: 3:30-4:30 pm

Abstract: We consider a semilinear elliptic equation on a bounded smooth domain complemented with a nonlinear boundary condition involving a bifurcation parameter and a superlinear subcritical nonlinearity. Using a re-scaling argument together with Leray-Schauder degree theory, we prove the existence of a connected branch of positive solutions that bifurcates from infinity as the parameter approaches zero. A priori estimate is a necessary tool in our degree theoretic approach.