1145-35-656   **Janak R Joshi*** (`janak.joshi@oswego.edu`), 198 E Albany Street, Apt 16D, Oswego, NY 13126, and **Joseph Iaia**. *Infinitely many solutions for a semilinear problem on exterior domains with nonlinear boundary condition.*

In this article we prove the existence of an infinite number of radial solutions to $\Delta u + K(r)f(u) = 0$ with a nonlinear boundary condition on the exterior of the ball of radius R centered at the origin in $\mathbb{R}^N$ such that $\lim_{r\to\infty} u(r) = 0$ with any given number of zeros where $f : \mathbb{R} \to \mathbb{R}$ is odd and there exists a $\beta > 0$ with $f0$ on (β, ∞) with f superlinear for large u, and $K(r) \sim r^{-\alpha}$ with $0 < \alpha < 2(N-1)$. (Received September 12, 2018)