
Uniqueness of sign-changing radial solutions for scalar field equations in some ball and annulus

Satoshi Tanaka*¹

¹Okayama University of Science – Japan

Abstract

The following Dirichlet problem is considered: $\Delta u - u + |u|^{p-1}u = 0$ in Ω ; $u = 0$ on $\partial\Omega$. Here, Ω is either an annulus or a ball in \mathbf{R}^N and $p > 1$. The uniqueness of radial solutions having exactly $k - 1$ nodes is shown in some cases.

*Speaker