
TRANSMISSION EIGENVALUE PROBLEMS WITH NEUMANN–ROBIN BOUNDARY CONDITIONS INVOLVING THE P- AND Q-LAPLACIAN

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ABSTRACT

This work investigates a transmission eigenvalue problem with Neumann–Robin boundary conditions. The existence of an infinite sequence of eigenvalues is established using Lusternik–Schnirelmann theory, applied in the setting of C^1 -Banach manifolds and based on the Krasnoselskii genus. This variational approach enables us to prove the existence of an unbounded sequence of eigenvalues associated with the problem.

Keywords Nonlinear transmission problem · p -Laplacian · Sobolev spaces · Krasnoselskii genus · Lusternik–Schnirelmann theory.

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