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Eigenvalue Asymptotics for Dirichlet-to-Neumann Operator

Abstract:

Let $X$ be a compact manifold with the boundary $\partial X$ and $R (\lambda)$ be a Dirichlet-to-Neumann operator: $R (\lambda): f \mapsto u |_{\partial X}$ where $u$ solves \[ \Delta u + \lambda u = 0 \text{ in } X \quad \text{and} \quad u = 0 \text{ on } \partial X. \]
+ 1s^2 \ u = 0, \ u|_{\partial X} = f. \ We \ establish \ asymptotics \ as \ \lambda \to + \infty \ of \ the \ number \ of \ eigenvalues \ of \ \lambda^{-1} R(\lambda) \ between \ s_1 \ and \ s_2.

This is a joint work with Andrew Hassell, Australian National University.