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: $R(\lambda): f \rightarrow u|_{\partial X}$ where $u$ solves $(\Delta + \lambda^2) u = 0$, $u|_{\partial X} = f$. We establish asymptotics as $\lambda \rightarrow +\infty$ 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.