Eigenvalue Asymptotics for Dirichlet-to-Neumann Operator

Abstract:

Let $X$ be a compact manifold with the boundary $\partial X$ and $R\left(i\right)$ be a Dirichlet-to-Neumann operator: $R\left(i\right): f \mapsto u|_{\partial X}$ where $u$ solves $(\Delta + i)^{2} u = 0$, $u|_{\partial X} = f$. We establish asymptotics as $i \rightarrow \pm \infty$ of the number of eigenvalues of $i^{2} R\left(i\right)$ between $s_1$ and $s_2$.

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