JOINT INVERSE PROBLEMS AND DIFFERENTIAL GEOMETRY/PDE SEMINAR

Monday, March 6
Thomson 235
2:30 pm

Local uniqueness for the Dirichlet-to-Neumann map via the two-plane transform

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We consider the Dirichlet-to-Neumann map associated to the Schrodinger equation with a potential on a domain with boundary in three or more dimensions. By constructing a family of approximate solutions with certain concentration properties, we show that the integral of the potential over a two-plane meeting the boundary is determined by the D2N map on any neighborhood of the two-plane on the boundary. Combined with support theorems for the two-plane transform, this yields new local uniqueness results for both the Schrodinger and inverse conductivity problems.