DG/PDE/IP SEMINAR

Wednesday, February 27, 2008
Padelford C-36
3:50–5PM

Reconstruction of a Riemannian metric and magnetic field on a surface from the scattering relation

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For a compact Riemannian manifold with boundary, endowed with a magnetic force, we consider the problem of restoring the metric and theforce from the scattering relation on the boundary which maps a starting point and a direction of a magnetic geodesic into its end point and direction.

The uniqueness of the metric and magnetic force (up to gauge) was established in many cases in the paper "The boundary rigidity problem in the presence of a magnetic field" by N.Dairbekov, G.Paternain, P.Stefanov, and G.Uhlmann.

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