Joint DIFFERENTIAL GEOMETRY/PDE and INVERSE PROBLEM SEMINAR

Wednesday, October 12, 2005
Padelford C-36
3:50-5pm

Dirichlet to Neumann Map on Differential Forms

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For a compact Riemannian manifold (M, g) with boundary, we define the Dirichlet to Neumann (DN) operator on exterior differential form of arbitrary degree. It coincides with the classical DN map on forms of zero degree. How far are the topology and geometry of the manifold determined by the DN operator? We prove that all Betti numbers can be recovered and present an explicit formula expressing Betti numbers in terms of the DN map.

For more information about this seminar, visit the DG/PDE Seminar Web page (from the Math Department home page, `www.math.washington.edu`, follow the link **Seminars, Colloquia, and Conferences**).

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