

DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, FEBRUARY 13, 2008

PADELFORD C-36

3:50-5 PM

Time Reversal and Elliptic Boundary Value Problems

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In this talk, I will present a new probabilistic way to solve Dirichlet boundary value problem on bounded Euclidean domains for a class of second order elliptic operators that contain the $div(cu)$ term (dual to the first order term $c\nabla u$). The novelty of our approach is the use of time-reversal of a Girsanov transform. We will derive probabilistic representation for solutions to the elliptic boundary problem. Such a representation also enable us to obtain some new results in PDE.

Joint work with Tusheng Zhang.

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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