JOINT DIFFERENTIAL GEOMETRY/PDE AND PROBABILITY SEMINAR

Wednesday, January 12, 2005

Padelford C-36

3:50 pm

Robin problem and Ray-Knight theorem

Krzysztof Burdzy
(UW)

The "Robin problem" or the "third boundary problem" is a mathematical model for the flow of a substance (or heat) out of a domain through a semi-permeable membrane. I will address the question of when the concentration of the susbtance (or the temperature) is bounded below by a constant over the whole domain. The argument is based in part on a very non-trivial (although old) result known as "Ray-Knight theorem". It describes the distribution of the local time of Brownian motion as a function of the space variable.

Joint work with Rich Bass and Zhenqing Chen.

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**).