

DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, FEBRUARY 7, 2007

PADELDFORD C-36

3:50-5PM

A free boundary problem for fully nonlinear parabolic
equations

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We study a nonlinear two phase Stefan-type free boundary problem in a Lipschitz domain. Such problems arise when a state variable v diffuses in any of two given states (solid-liquid, burnt-unburnt etc.) but suffers a discontinuity in its behaviour across some value (for example $v = 0$) that indicates phase transition. We will discuss the optimal regularity of the viscosity solution and that Lipschitz free boundaries are C^1 .

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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