

DIFFERENTIAL GEOMETRY/PDE SEMINAR

FRIDAY, SEPTEMBER 21, 2012

PDL C-401

11AM–NOON

The generalized Jang equation and asymptotic behaviors

Yifeng YU

(UC IRVINE)

Predicting turbulent flame speed (s_T) is a fundamental problem in turbulent combustion theory. Several simplified models have been proposed to study s_T . The G-equation (A Hamilton-Jacobi level set equation) is a very popular model in turbulent combustion. Two important projects are (1) establish the theoretical existence of s_T and (2) determine the dependence of turbulent flame speeds on the turbulence intensity (think of the relation between the spreading velocity of wild fire and strength of the wind). In this talk, I will present some theoretical results under the G-equation model. These are joint works with Jack Xin.

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