1092-35-147 **Adina Ciomaga*** (adina@math.uchicago.edu), **Panagiotis Souganidis** and **Hung Tran**.

Stochastic homogenization of interfaces moving by oscillatory normal velocity.

In this talk I will present some recent results concerning the behavior of moving interfaces in random environments, driven by oscillatory normal velocity

$$\begin{cases} u_t^\varepsilon + a\left(\frac{x}{\varepsilon}, \omega\right) |Du^\varepsilon| = 0 & \text{in } (0,\infty) \times \mathbb{R}^n \times \Omega, \\ u^\varepsilon(0,x,\omega) = u_0(x) & \text{on } \mathbb{R}^n \times \Omega. \end{cases}$$

The problem has been studied in great detail in the case when the Hamiltonian is coercive, i.e. $a(\cdot) \geq a_0 > 0$. However, the non-coercive case remained an open problem for a long time. Recently (2009) Cardaliaguet, Lions, and Souganidis provided new results in the periodic setting, when $a(\cdot)$ changes sign. We extend their results to the stationary ergodic environment and we show that under sharp assumptions, fronts homogenize, i.e. as $\varepsilon \to 0$ the equation averages to a deterministic Hamilton Jacobi equation. (Received August 07, 2013)