



6th Symposium on Analysis and PDEs

Purdue University, June 1–4, 2015

Hung Tran, University of Chicago

June 4, 11:30–12:20pm

Some Inverse Problems in Periodic Homogenization of Hamilton-Jacobi Equations.

We look at the effective Hamiltonian \bar{H} associated with the Hamiltonian $H(p, x) = H(p) + V(x)$ in the periodic homogenization theory. Our central goal is to understand the relation between V and \bar{H} . We formulate some inverse problems concerning this relation. Such type of inverse problems are in general very challenging. I will discuss some interesting cases in both convex and nonconvex settings. Joint work with Songting Luo and Yifeng Yu.