

1112-35-177

Songting Luo, Hung Tran* (hung@math.uchicago.edu) and **Yifeng Yu**. *Some Inverse Problems in Periodic Homogenization of Hamilton-Jacobi Equations.*

We look at the effective Hamiltonian \overline{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 \overline{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. (Received August 02, 2015)