1092-35-190   **Hiroyoshi Mitake*** (`mitake@math.sci.fukuoka-u.ac.jp`), Fukuoka, 814-0180, Japan.
Homogenization of weakly coupled systems of Hamilton-Jacobi equations with fast switching rates.

This talk is based on a joint work with Hung V. Tran (The University of Chicago). We consider homogenization for weakly coupled systems of Hamilton–Jacobi equations with fast switching rates. The fast switching rate terms force the solutions to converge to the same limit, which is a solution of the effective equation. We discover the appearance of the initial layer and the boundary layer, which naturally appear when we consider the systems with the different initial or boundary data. In the talk, we first consider the initial layers in a heuristic mode by finding inner and outer solutions, and using the matching asymptotic expansion method to identify matched solutions and show the rigorous result on the rate of convergence. Then, we discuss the effective initial data and the effective boundary data from the optimal control point of view. (Received August 09, 2013)