

**FLAME FRONT QUENCHING AND HOMOGENIZATION OF A
NON-CONVEX AND NON-COERCIVE HAMILTON JACOBI
EQUATION**

YIFENG YU, UNIVERSITY OF CALIFORNIA IRVINE

I will talk about periodic homogenization of a non-coercive and non-convex HJ equation from the modeling of turbulent combustion in 2d cellular flow (G-equation with a flow strain rate term). Our main result says that when the turbulence is sufficiently high, the flame front ceases to propagate. Two-person differential game theory plays a key role in the proof. This is a joint work with Jack Xin.