Suppressed dispersion for a randomly kicked quantum particle in a Dirac comb

Jeremey Clark

(Michigan State)

I will discuss the long-term spatial behavior of a model for a quantum particle moving in one dimension. The particle's movement is influenced by a periodic force and random momentum kicks that simulate the effect of the particle colliding with members of a background gas. The results that I will present amount to central limit theorems that contrast the spatial behavior of the particle between the cases in which the periodic force is smooth or has singular peaks.

January 9, 2014
4:00 p.m.
MATH 350