

Analysis and Applied Mathematics Seminar

Moderate Deviations for Sticky Brownian Motions

Sayan Das (University of Chicago)

Abstract: Sticky Brownian Motions are a family of correlated Brownian motions that have a tendency to stick together. They can be realized as the scaling limit of random walks in random environments and can also be viewed as random motions in a continuum-random environment. In this talk, I will present some results related to the quenched density of the motion of a particle in this continuum-random environment. In particular, I will show that under moderate deviation regime (a particular regime in between large deviation regime and diffusive regime), this quenched density after rescaling weakly converges to the solution of the stochastic heat equation with multiplicative space-time white noise. I will explain how our results shed light on the extreme behavior of Sticky Brownian Motions. This is a joint work with Hindy Drillick and Shalin Parekh.

Monday, October 16 at 4:00 PM in 636 SEO