Limit theorems for multi-dimensional diffusions in random environments

Daehong Kim
Department of Mathematics,
Kumamoto University,
Kumamoto, Japan
Email:daehong@gpo.kumamoto-u.ac.jp

Abstract

Diffusion processes (or random walks) in random environments have been the subject of numerous works up to recent contributions in statistical mechanics. In this talk, I will consider a multi-dimensional diffusion process in a random self-similar potential and introduce a limit theorem for the shape of the full trajectory of the diffusion by using its localization phenomenon.