

Meeting: 1002, Pittsburgh, Pennsylvania, zeitouni,

1002-60-2 **Ofer Zetouni***, University of Minnesota, Minneapolis. *Homogenization in asymmetrical random media: Recent results and challenges.*

The simple to describe model of random walk in a random environment has revealed over the years a large array of surprising behavior. I will describe the model and some of the results, and focus on recent progress. In particular:

- 1) A zero averaged drift does not ensure zero speed for the walk.
- 2) There are mixing environments such that the walk does not satisfy a 0 – 1 law.
- 3) For $d \geq 3$ and rotationally-invariant law on the environment, the closely related model of diffusion in random environment exhibits a Central Limit Theorem. (Received November 19, 2003)