

1108-60-463

Ivan Matic* (ivan.matic@baruch.cuny.edu), One Bernard Baruch Way, New York, NY 10010.

Large deviations for deterministic walks in excited random environments.

The walk occurs on an integer lattice whose each site contains the direction that the walker must follow upon visiting that site. The initial distribution of these directions is IID, but the directions do not change once the walk begins.

If the first M visits (for some fixed M) to a particular site in the lattice are followed by random jumps, but the visits after the M -th are deterministic, the process is called deterministic walk in an excited random environment.

These two models do not possess Markov property and are related to the class of random walks in random environments. We will outline the reason why the laws of large numbers and central limit theorems are degenerate for these two models, and present some large deviations results.

The talk is based on joint work with David Sivakoff. (Received January 19, 2015)