

# Random walk on the simple symmetric exclusion process

Augusto Teixeira<sup>1</sup>

<sup>1</sup> IMPA

In this talk we will discuss some of the history of random walks on dynamical random environments and we will present a recent result where the environment is given by a simple symmetric exclusion process. For this model, we are able to prove a law of large numbers for the displacement of the walk (for all but two densities of the underlying particle system) as well as a central limit theorem throughout its ballistic regimes. The main technique that we employ is a renormalization scheme that brings its inspiration from percolation theory.