

Random walks driven by interacting particle systems in one dimension

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In this talk, we review some recent developments in the study of random walks in dynamic random environments via multiscale renormalization techniques. We consider the case when the environment is given by interaction particle systems such as the simple symmetric exclusion process and the zero-range process. Our main results are laws of large numbers for the displacements of the walk and, in some ballistic cases, central limits theorems.