

Metastability of reversible random walks in potential fields

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Abstract:

We analyze random walks on discretizations of subsets of \mathbb{R}^d to which we associate a energy profile F with many local minima. Our main result states that, in appropriate time-scales, the evolution of the random walk can be described by a random walk in a weighted graph, in which the vertices represent the wells of the force field F and the edges represent the saddle points. Joint work with Claudio Landim and Kenkichi Tsunoda.