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Tracking rates of random walks

Examples of relatively hyperbolic groups include fundamental groups of finite volume negatively curved manifolds, many fundamental groups of 3-manifolds, limit groups and many others. I will discuss the result that simple random walks on nontrivial relatively hyperbolic groups stay $O(\log(n))$ close to geodesics with high probability, where n is the number of steps of the walk. Similarities between the geometry of relatively hyperbolic groups and that of mapping class groups allow to show a similar result for mapping class groups, with rate $O(\sqrt{n\log(n)})$.