

First Joint Meeting Brazil Italy of Mathematics Special Session: Geometric Topology and Dynamics

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Title: A Central Limit Theorem for acylindrically hyperbolic groups

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Abstract: Acylindrically hyperbolic groups form a very large class of groups that includes non-elementary (relatively) hyperbolic groups, mapping class groups, $Out(F_n)$, many groups acting on CAT(0) spaces, etc. I will discuss the behaviour of random walks on such groups, in particular illustrating the fact that random paths tend to stay close to geodesics, and I will explain how this can be used to get a central limit theorem for the distance from the identity of the random walk.