

Furstenberg formulas for Lyapunov exponents and the speed of hyperbolic Poisson-Delaunay random walks

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Resumo/Abstract:

We consider the simple random walk on the Voronoi tiling associated to a random discrete set of points in hyperbolic space. We will obtain a positive lower bound for the speed of the random walk under certain conditions. One of the main techniques is a generalization of Furstenberg's formula for the largest Lyapunov exponent of an i.i.d. product of random matrices.