

Equidistribution and counting points on orbits of geometrically finite hyperbolic groups

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In this joint work with Hee Oh, we consider various sphere packing configurations which are invariant under actions of geometrically finite hyperbolic groups, and estimate the cardinality of spheres of curvature at most $T \gg 0$ (with respect to euclidean, or spherical, or hyperbolic metric). This sphere counting problem is studied via proving ‘weighted equidistribution’ results for the evolution of certain co-dimension one submanifolds under the geodesic flow on the unit tangent bundle of a hyperbolic manifold H^n/Γ , where Γ is a geometrically finite discrete group of isometries of H^n .