

Why can't I make the title look nice

Mujie Wang

October 26, 2021

Abstract

Future me will put some abstract here

1 Introduction

2 Chabauty topology

3 Two convergences of subgroups in $\mathrm{PSL}_2\mathbb{R}$

4 The plot thickens (from \mathbb{H}^2 to \mathbb{H}^3)

Jorgenson first discovered the following interesting phenomenon.

Fact 4.1. *There exists a sequence of infinite cyclic groups $\langle H_n \rangle$, where H_n is an isometry of hyperbolic type, such that the sequence converges to a subgroup isomorphic to \mathbb{Z}^2 , whose generators are both parabolic isometries.*

In this section, we will construct one such sequence explicitly. We will use the upper half-plane model $\mathbb{C} \times \mathbb{R}^+$ for \mathbb{H}^3 . The isometry group $\mathcal{I}^+(\mathbb{H}^3) \cong \mathrm{PSL}_2(\mathbb{C})$ acts on the boundary $\overline{\mathbb{C}}$ by fractional linear transformation. This sequence of subgroups will combine the two subgroups we mentioned in Section 3.

References

[BC] Baik, Clavier Article Titles. *Journal Title*, ??? some mysterious numbers.