Department of Mathematical Sciences
Faculty and Graduate Research Colloquium

Thursday, April 18, 2024
1:00-1:50 PM
RB 450

“Stochastic Embeddings of Hyperbolic Metric Spaces”
Chris Gartland (University of California, San Diego)

Abstract:

This talk is based on ongoing work of the speaker. We will review Wasserstein metrics on probability measures over a ground metric space and survey the problem of biLipschitz embeddability into L^1. Then we introduce stochastic embeddings as a means to study this problem when the ground space is Gromov hyperbolic. The main result we present is that a uniformly discrete hyperbolic metric space stochastically embeds into a tree whenever its Gromov boundary stochastically embeds into an ultrametric space, and that this condition is satisfied for finitely generated Gromov hyperbolic groups.