Geometric Group Theory

— · —
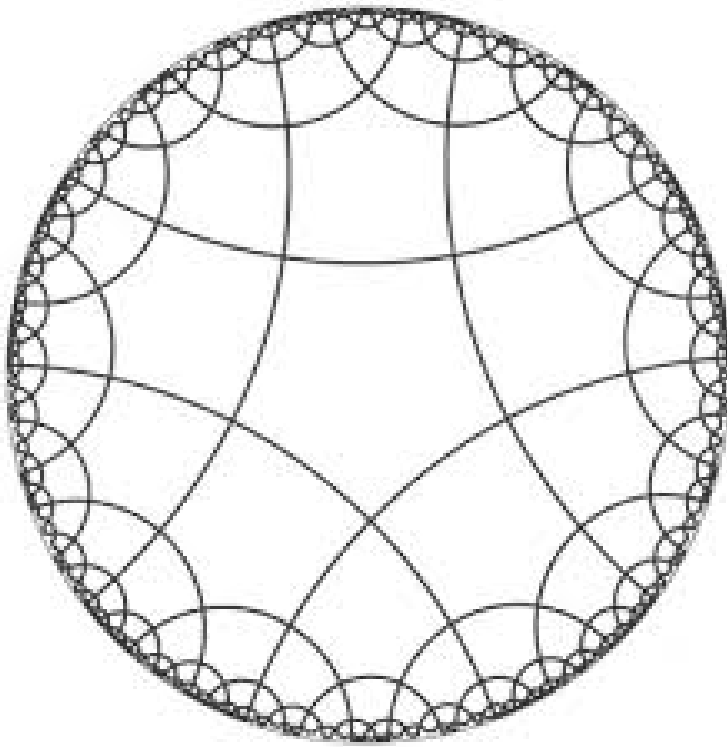
Undergraduate Math Club
CORNELL UNIVERSITY

SPEAKER

Ian Montague

ABSTRACT

Geometric group theory is the study of finitely generated groups considered as geometric objects. For example, the Cayley graph of a group can be given a metric space structure via the word metric. Geometric group theory is a relatively new subfield of mathematics, started by Gromov in the 1980s. It has important applications to a number of subfields, including low-dimensional topology, hyperbolic geometry, algebraic topology, and dynamical systems. I'll introduce standard terminology, develop some fundamental geometric group theoretic tools, and apply them to a number of important examples. I'll define the Baumslag-Solitar Groups, and if time permits I'll give an introduction to Bass-Serre theory. Familiarity with groups will be assumed, as well as some basic geometry and topology.

APR 18 · 4:30

— · —

Malott 5th floor lounge · refreshments served