

Department of Mathematics and Statistics Colloquium^{*} Tuesday April 24 AMB 163^{\dagger} 4:00 - 5:00 pm

Visualizing hyperbolic geometry

Evelyn Lamb

University of Utah

Abstract

Abstract: For two thousand years, mathematicians tried to prove that Euclidean geometry, the geometry you probably learned in high school, was all there was. But it's not! In the early nineteenth century, Jnos Bolyai and Nikolai Lobachevsky independently discovered that by tweaking one of Euclid's postulates, geometry can look totally different. We will explore the rich world of hyperbolic geometry, one of the new and beautiful systems of geometry that results from this tweak. Our guides on the adventure will be mathematically inspired artists and artistically inspired mathematicians, including M.C. Escher, Daina Taimina, and Henry Segerman.

^{*}This is the 2018 Department Honors Lecture, to be followed by the scholarships and awards presentation and reception. † nonstandard location