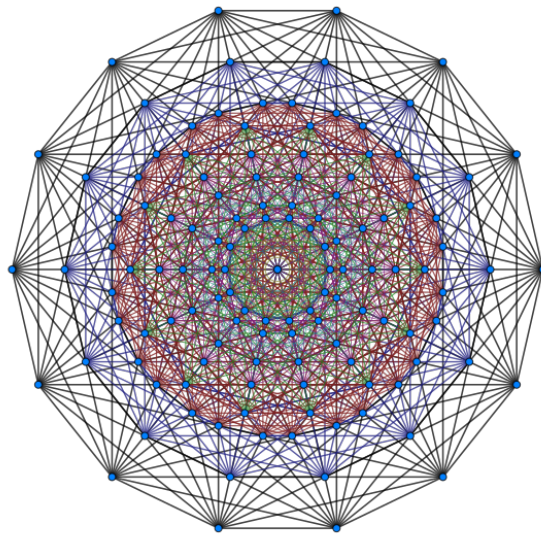# Introduction to Coxeter Groups

Instructor: Alice Mark

MAT 598, Spring 2017, T Th, Time TBA

This course will be an introduction to Coxeter groups, which are groups generated by real reflections in spherical, euclidean, or hyperbolic spaces. The intended audience is graduate students and advanced undergraduates. Students in this class should be comfortable working with groups.

Topics include: The classification of finite and affine Coxeter groups, root systems, hyperbolic lattices, Vinberg's algorithm, cool examples like E_8 and the Leech lattice, and some connections to algebraic geometry.