

Berkely Directed Reading Program

Ankit Agarwal

Fall UC Berkeley 2017

Abstract

Two of the most interesting aspects of mathematics are groups and vector spaces. However, some interesting things happen when the two are combined. That is the purpose of this talk, to explore a specific type of group known as a Finite Reflection Groups that manifest themselves directly in vector spaces. These Finite Reflection Groups will then lead us to talking about a more general type of group: a Coxeter Group/System. We will discuss the most interesting properties of Finite and Infinite Coxeter Systems.

Topic: Coxeter Group Theory and Finite Reflection Groups

Text: Reflection Groups and Coxeter Groups (James E. Humphreys)