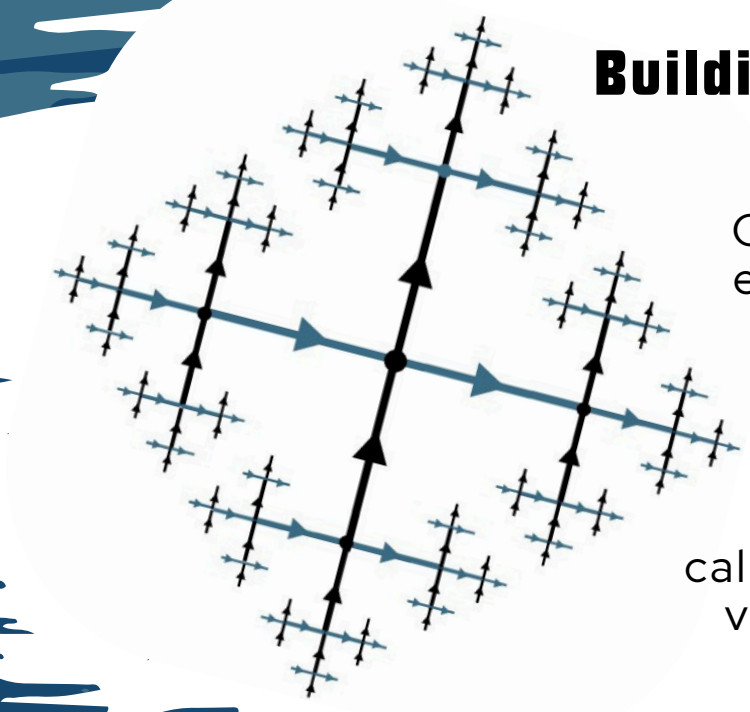
SWiM

March 29-30th, 2025

at Wesleyan University

Student Workshop in Mathematics for Undergraduates



Building Blocks of Geometric Group Theory

Eleanor Rhoads

Groups are prolific in math, but infinite groups evaded understanding until the modern era. In this course, we'll introduce the foundational tools that allow us to study infinite groups, through the lens of geometry. We will first define groups via presentations, and then construct a geometric space for each group, called a Cayley graph. We will see how these two viewpoints are connected, and how interesting information can transfer between them.

A Crash Course in Cryptology: Securing Electronic Communications

Zachary Porat

Mathematical cryptology is the study of techniques that allow us to safely communicate. The goal of the mini-course is to understand the underlying math that keeps our electronic conversations and transactions secure. First, we will learn how communications are translated into a mathematical framework. Then, we will discuss common cryptosystems and the math techniques used to ensure their security.

Plenary Talk: The Surreal Numbers

Suzanne O'Hara

Funded by the Wesleyan University American Mathematical Society Graduate Student Chapter and the Department of Mathematics and Computer Science

For more details and registration:

Register by 3/1