

# The World of Mathematics and Statistics

SWARTHMORE COLLEGE • DEPARTMENT OF MATHEMATICS AND STATISTICS • COLLOQUIUM SERIES 2022-2023

## MATH/STAT COLLOQUIUM

### Groups, Graphs and Trees

Group theory is the study of symmetries of objects -- you can consider the symmetries of a triangle, a polyhedron, or more complex, multi-dimensional objects. Groups are ubiquitous in mathematics; by studying groups both concretely and abstractly, we learn some fundamental tools which provide strategies for abstract problem solving in many fields. And it's amazing how many different types of groups there are!



**Jennifer Taback**  
Bowdoin College

I will show you how to take a group, a very abstract object, and give it a geometry, which allows you to visualize it. Pictures make all kinds of math better! This will be an introduction to the field of geometric group theory; I will assume some calculus background, and perhaps a high school geometry course.

**Tuesday, September 27**

**4:15pm Refreshments, 4:30pm Lecture**

**SC 199**