The World of Mathematics and Statistics

SWARTHMORE COLLEGE • DEPARTMENT OF MATHEMATICS AND STATISTICS • COLLOQUIUM SERIES 2020-2021

Kaori Kitao Lecture

Kathryn Mann Cornell



Groups and transformations

What I find most exciting about mathematics is how tools and ideas from one area can inform, and sometimes even transform, another area. This talk will illustrate one such connection between different areas: algebra (group theory) and dynamics, the study of how spaces change under transformations. As a concrete example, and one that I've explored in my own research, I'll introduce you to "orderable groups" and show you how this very algebraic definition secretly means that your group is a set of transformations of the real line. Time permitting, we'll then delve a little deeper into how to think of groups visually in terms of geometric spaces and their transformations. No background in group theory is required, but even those who have taken three semesters of it should expect to find something new in this talk.

Tuesday, November 10, 3:45-5PM EDT Join Zoom:

https://swarthmore.zoom.us/j/92417771543