

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, April 13
2:00 – 3:00 PM
Maria Sanford, Room 101

SYMMETRY, GEOMETRY, AND GROUPS

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Abstract

In mathematics, a group is a formalization of the notion of symmetry. Geometric Group Theory seeks to leverage the relationship between groups and symmetry in a geometric context in order to better understand the structure of groups. In this talk I will begin by introducing groups, and show how the notion of a "group action" formalizes the relationship between groups and symmetry. I will then show how every group can be viewed as a collection of symmetries of a geometric object, called a Cayley graph. Time permitting, I will show how Cayley graphs may be used to determine whether certain infinite groups can be "generated" by a finite number of elements.

For further information:

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