Outer Space for Right-Angled Artin Groups

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L01 Carson Hall, 4:00 pm

(Tea 3:30 pm Math Lounge)

Abstract

In geometric group theory one studies groups by looking at their actions on topological spaces. Some particularly interesting examples of groups arise as automorphism groups of some other group G. We discuss how to construct a topological space ("outer space") on which an automorphism group, $\mathrm{Aut}(G)$, acts. In the case of $G = \mathbb{Z}^n$ or $G = F_n$ (the free group on n generators), these spaces are well known. Right-angled Artin groups may be said to interpolate between free groups and free abelain groups, and have become increasingly important in recent years. We ask what "outer space" should look like for this more general class of groups. This is joint work with John Crisp and Karen Vogtmann.

This talk should be accessible to graduate students.