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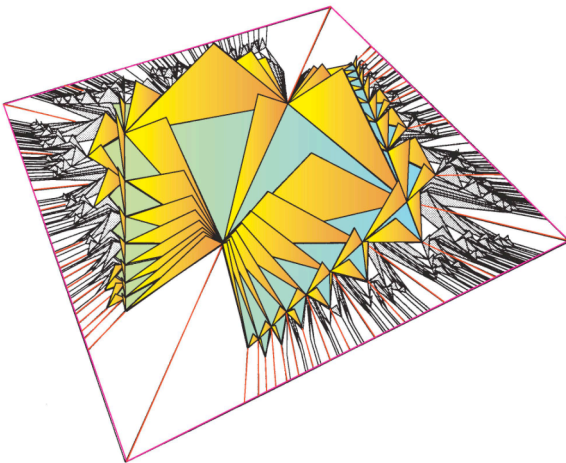

MSRI/Evans Talk
Monday, September 10, 2007
4:10pm
60 Evans Hall
University of California, Berkeley

"Outer spaces"
Dr. Karen Vogtmann
Cornell University

Outer space was introduced in the mid-1980's as a tool for studying the group Out (F^n) of outer automorphisms of a finitely-generated free group. The basic idea is to think of an automorphism of a free group topologically, either as a homotopy equivalence of a finite graph or as a diffeomorphism of a suitable three-manifold with free fundamental group. There are nice analogies between the action of Out (F^n) on Outer space and the action of an arithmetic group on a homogeneous space or the action of the mapping class group of a surface on the associated Teichmüller space.

In this talk I will describe Outer space and explain how it is used to obtain algebraic information about Out (F^n), and then indicate how ideas from Outer space are currently expanding in new directions.

Refreshments at a nearby establishment immediately following the talk!

*The purpose of these lectures is to introduce the present year's research programs at MSRI to the mathematical sciences community in Berkeley. The talks will be **expository and nontechnical**, providing some of the flavor of ongoing research at MSRI.*
Graduate students and Postdoctoral Fellows are particularly invited to attend these lectures.

Further information and links to the MSRI program and workshop web pages are available at:
http://www.msri.org