

**Contacts:**

---

Jennifer Quinn <i>Executive Director</i> jqinn@awm-math.org 253- 879-3630	Barbara Keyfitz <i>President</i> bkeyfitz@fields.utoronto.ca	Jennifer Lewis <i>Managing Director</i> jennifer@awm-math.org 703-934-0163
--	--	---

---

11240 Waples Mill Road Suite 200, Fairfax VA, 22030

www.awm-math.org

May 2, 2006

## Karen Vogtmann named 2007 Noether Lecturer

The Association for Women in Mathematics (AWM) is pleased to announce that **Karen Vogtmann** will deliver the Noether Lecture at the 2007 Joint Mathematics Meetings. Vogtmann, a professor of mathematics at Cornell University, was selected for this honor because of her fundamental contributions to geometric group theory; in particular, to the study of the automorphism group of a free group.



Inspired to pursue mathematics by an NSF summer program for high school students at the University of California, Berkeley, Vogtmann received both her undergraduate and graduate degrees from Berkeley, investigating algebraic K-theory with Jack Wagoner. After wandering the academic world from Michigan to Brandeis, Columbia to the Institute for Advanced Studies, and back, she settled at Cornell University where she has been for the last twenty years. Over the course of her career she has authored numerous articles, mentored eight PhD students, and averaged ten invited talks a year. Vogtmann has served as Vice President of the American Mathematical Society and on scientific advisory boards of the American Institute of Mathematics, the Mathematical Sciences Research Institute, the arXiv advisory board, the National Academy of Sciences Delegation to the International Mathematical Union General Assembly, and the Vietnam Education Foundation Panel for mathematics.

Vogtmann's research views groups as symmetries of geometric objects. By understanding the

geometry and topology of suitably chosen objects, she deduces algebraic information about the groups acting on them. Her work investigates orthogonal and symplectic groups,  $SL(2)$  of rings of imaginary quadratic integers, groups of automorphisms of free groups, and mapping class groups of surfaces. Vogtmann's recent focus has been on the group of outer automorphisms of a free group where the appropriate geometric object is called *Outer Space*. This space turns

out to have surprising connections with other areas of mathematics, for example with certain infinite-dimensional Lie algebras and even with the study of phylogenetic trees in biology.

Barbara Keyfitz, president of AWM, declares "Karen is an absolutely delightful person. It's wonderful that she will give the 2007 lecture; besides her excellent research she is so lively and dynamic that I am very much looking forward to her talk." Irwin Kra, Executive Director of Math for America, adds, "The fact that she is also a wonderful lecturer and a conscientious member of the mathematics community makes her an ideal role model for younger colleagues."

In addition to the Noether Lecture, Vogtmann and colleague Ruth Charney from Brandeis University are organizing a special session on Geometric Group Theory. The session will cover topics of current interest in the field including automorphism groups, quasi-isometry groups, hyperbolic and relatively hyperbolic groups, Artin groups, and  $CAT(0)$  geometry.

*The 2007 Joint Mathematics Meetings will be held January 4-7 in New Orleans, LA. The lecture honors Emmy Noether (1882 - 1935), one of the great mathematicians of her time. She worked and struggled for what she loved and believed in. Her life and work remain a tremendous inspiration. Recent Noether lecturers include Ingrid Daubechies, Lai-Sang Young, Svetlana Katok, Jean Taylor, and Lenore Blum.*