

# LINDA CHEN

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## EDUCATION

- Ph.D. in Mathematics, The University of Chicago, June 2000, advised by William Fulton. Dissertation: *Hyperquot schemes and the quantum cohomology of flag manifolds*.
- A.B. in Mathematics, *magna cum laude*, Harvard College, June 1996.

## RESEARCH INTERESTS

- Algebraic Geometry and Algebraic Combinatorics. Specifically, enumerative and combinatorial geometry, Schubert calculus, the moduli space of curves and its generalizations, quantum cohomology, toric varieties, quot schemes, Fulton-MacPherson spaces, Hilbert schemes of points on surfaces, equivariant cohomology and GKM spaces, orbifold cohomology and Gromov-Witten theory of stacks.

## EMPLOYMENT AND EXPERIENCE

**Ohio State University**, Assistant Professor, 2004-present.

**Columbia University**, Ritt Assistant Professor, 2000-2004.

## PUBLICATIONS

- *The equivariant Chow rings of quot schemes* (with T. Braden and F. Sottile), math.AG/0602161, submitted.
- *Enumeration of rational plane curves tangent to a smooth cubic* (with C. Cadman), math.AG/0701406, to appear in Adv. Math.
- *A Pieri formula for universal Schubert polynomials*, in preparation.
- *Pointed trees of projective spaces* (with A. Gibney and D. Krashen), math.AG/0505296, to appear in J. Algebr. Geom.
- *The orbifold Chow ring of toric Deligne-Mumford stacks* (with L. Borisov and G. Smith), J. Amer. Math. Soc. **18** (2005), 193-215.
- *Discriminative topological features reveal biological network mechanisms* (with M. Middendorf, E. Ziv, C. Adams, J. Hom, R. Koytcheff, C. Levovitz, G. Woods, and C. Wiggins), BMC Bioinformatics 2004, 5:181.
- *The nef cone of the moduli space of curves and of a Fulton-MacPherson space*, preprint.
- *Quantum cohomology of flag manifolds*, Adv. Math. **174** (2003), 1-34.
- *Poincaré polynomials of hyperquot schemes*, Math. Ann. **321** (2001) 2, 235-251.
- *Hyperquot schemes and the quantum cohomology of flag manifolds*, Ph.D. Thesis, University of Chicago, 2000.

## HONORS and AWARDS

National Science Foundation, Principal Investigator for grant DMS-0701057, 2007-2010.

National Science Foundation, Principal Investigator for grant DMS-0432701, 2004-2008.

Clay Mathematics Institute, Liftoff Mathematician, Summer 2000.

Recipient of the *Lawrence and Josephine Graves Prize* for excellence in undergraduate teaching, Department of Mathematics, University of Chicago, 2000.

GAANN fellow, Department of Mathematics, University of Chicago, 1997–2000.

## NATIONAL SERVICE

**Mathematical Sciences Research Institute**, *Workshop on Combinatorial, Enumerative, and Toric Geometry*, Berkeley, California, Organizing Committee Member (with Michel Brion, Anders Buch, William Fulton, Sándor Kovács, Frank Sottile, Harry Tamvakis, Burt Totaro), Spring 2009.

**NSF Summer School**, *Examples of Groups*, Ohio State University, Organizing Committee Member (with Ruth Charney, Indira Chatterji, Mike Davis, Aditi Kar, Karen Vogtmann), June 2008.

**AMS Sectional Meeting**, *Special Session on Algebraic Combinatorial Geometry*, Courant Institute, NYU, Organizer (with Julianna Tymoczko), March 2008.

**AMS Summer Institute in Algebraic Geometry**, *Graduate Student Warm-Up Workshop*, Seattle, Washington, Lecturer and Working Group Leader, July 2005.

**AMS-IMS-SIAM Joint Summer Research Conferences**, *Algebraic Geometry: Presentations by Young Researchers*, Snowbird, Utah, Senior Mentor for recent Ph.D.'s, July 2004.

**Institute for Advanced Study**, Mentoring Program for Women in Mathematics, Mentor and Organizer of the Research Seminar, May 2001, May 2002, May 2007.

**Canada/USA Mathcamp**, Mentor, Organizing Committee Member, Guest Lecturer, and Visitor, Summers 1997, 1998, 1999, 2003, 2005.

## OTHER SERVICE

**University of Michigan/Ohio State University Algebraic Geometry Workshop**, Organizing Committee, April 2005, April 2006, March 2007.

**Ohio State University**, Co-Organizer of Algebraic Geometry Seminar, Organizer of Algebraic Statistics Seminar, Organizer of Tropical Geometry Seminar. Graduate Algebra Qualifying Exam writer and grader, Candidacy Exam Committee member for three graduate students, Graduate Advising Committee, Undergraduate Advising Committee, Diversity Committee.

**Columbia University**, Co-Organizer of Algebraic Geometry Seminar. Faculty Advisor for the VIGRE Research Experience for Undergraduates Program, Library Committee, Junior Colloquium Speaker, Senior Thesis Advisor for Barnard College.

## INVITED LECTURES

### 2007:

Boston University, *Geometry Seminar*, November 2007.

University of Iowa, *Algebraic Geometry Seminar*, October 2007.

University of Iowa, *Colloquium*, October 2007.

The Ohio State University, *Algebraic Geometry Seminar*, October 2007.  
Humboldt University, Berlin, *Algebraic Geometry Seminar*, July 2007.  
Institut Henri Poincaré, Paris, *Gromov-Witten Theory of Stacks and Groupoids*, February 2007.  
IMPA, Rio de Janeiro, Brazil, Mini-Cursos (five lectures), *Enumerative Geometry and Gromov-Witten Theory*, January 2007.

**2006:**

Osaka City University, *International Conference on Toric Topology*, June 2006.  
Banff International Research Station, *Recent trends in higher dimensional geometry*, April 2006.  
The Ohio State University, *Graduate Student Seminar on Algebraic Geometry*, February 2006.  
University of Miami, *Combinatorics Seminar*, February 2006.

**2005:**

University of Minnesota, *Algebraic Geometry Seminar*, December 2005.  
The Ohio State University, *Graduate Student Seminar on Algebraic Geometry*, October 2005.  
AMS Summer Institute in Algebraic Geometry, Seattle, Washington, July 2005.  
Graduate Student Warm-Up Workshop for AMS Summer Institute in Algebraic Geometry, Seattle, Washington, July 2005.  
The Fields Institute and the Perimeter Institute, Toronto, Thematic Program on the Geometry of String Theory, *Workshop on Schubert Varieties and Schubert Calculus*, June 2005.  
Harvard University/MIT, *Algebraic Geometry Seminar*, April 2005.  
University of Michigan/Ohio State University, *Algebraic Geometry Workshop*, April 2005.

**2004:**

University of Pennsylvania, *Algebra Seminar*, November 2004.  
The Ohio State University, *Algebraic Geometry Seminar*, September 2004, October 2004.  
Brown University, *Algebraic Geometry Seminar*, September 2004.  
Northeastern University, *Geometry-Algebra-Singularities-Combinatorics Seminar*, September 2004.  
Research Program on Geometric Combinatorics, Park City Mathematics Institute, *Research Seminar*, July 2004.  
Institut de Mathématiques de Jussieu, Paris, France, *Journées solstice d'été*, June 2004.  
Special Session on Algebraic Geometry and Mirror Symmetry, Rider University, AMS Regional Meeting, April 2004.  
Colorado State University, *Algebra Seminar*, April 2004.  
The Ohio State University, *Special Seminar*, February 2004.  
Michigan State University, *Colloquium*, February 2004.  
Columbia University, *Special Seminar*, February 2004.  
Syracuse University, *Colloquium*, January 2004.  
University of Connecticut, *Colloquium*, January 2004.  
University of Southern California, *Special Seminar*, January 2004.

**2003:**

The Ohio State University, *Algebraic Geometry Seminar*, December 2003.  
Princeton University, *Algebraic Geometry Seminar*, November 2003.  
University of Utah, *Algebraic Geometry Seminar*, August 2003.  
Université de Montréal, CRM, *Workshop on Algebraic Structures and Moduli Spaces*, July 2003.  
University of Pennsylvania, *Algebra Seminar*, April 2003.

Duke University, *Geometry/Topology Seminar*, April 2003.

Harvard University, *Algebraic Geometry Seminar*, April 2003.

SUNY at Stony Brook, *Algebra, Geometry, and Physics Seminar*, February 2003.

Colgate University, *Colloquium*, February 2003.

**1999-2002:**

Princeton University, *Noetherian Ring Seminar*, November 2002.

Special Session on Modern Schubert Calculus, AMS Sectional Meeting, Northeastern University, October 2002.

Institute for Advanced Study, Mentoring Program, *Research Seminar*, May 2002.

University of Massachusetts at Amherst, *Valley Geometry Seminar*, December 2001.

Columbia University, *Junior Colloquium*, November 2001.

University of California at Berkeley, *Special Seminar*, May 2001.

Rutgers University, *Topology/Geometry Seminar*, November 2000.

Special Session on Algebraic Geometry, AMS Sectional Meeting, Columbia University, November 2000.

Columbia University, *Algebraic Geometry Seminar*, October 2000.

Special Session on Modern Schubert Calculus, AMS Sectional Meeting, University of Toronto, September 2000.

University of Chicago, *Algebraic Geometry Seminar*, May 2000.

The Ohio State University, *Algebraic Geometry Seminar*, April 2000.

University of Michigan, *Algebraic Geometry Seminar*, November 1999.