

Curriculum Vitae—Matthew Simpson

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Personal Information

Citizenship: USA Date of birth: October 24, 1980

Education

Rice University:

PhD in Mathematics, May 2008 (expected)

M.A. in Mathematics, 2007

Haverford College:

B.A. in Mathematics, *magna cum laude*, 2003

Awarded High Honors by Haverford Mathematics Department

Member of Haverford College chapter of Phi Beta Kappa

Research Interests

Primary: Algebraic Geometry

Secondary: Combinatorics, Commutative Algebra, Linear Algebra

Papers

On Log Canonical Models of the Moduli Space of Stable Pointed Curves,
math.AG/arXiv:0709.4037 (Preprint)

Moduli Spaces of Pointed Conics (in progress)

Teaching Experience

Instructor

- Calculus I, Rice University, Fall 2006

- Calculus II, Rice University, Summer 2006

-VIGRE Junior Seminar in Computational Algebraic Geometry, Spring 2006

Teaching Assistant

-Algebra I, Rice University, Fall 2007

-Algebra II, Rice University, Spring 2007

-Differential Equations, Rice University, Spring 2005

- Calculus II, Rice University, Fall 2004
- Differential Equations, Rice University, Spring 2004
- Calculus I, Rice University, Fall 2003

Course Organizer

- Reading course in Birational Geometry, Rice University, Spring 2007
- VIGRE Senior Seminar, Fall 2005

Misc

- Graduate student advisor for the Rice summer VIGRE REU in computational algebraic geometry, Spring 2006
- Attended Rice University "Teaching Seminar," 2003-2005
- Tutored and graded for a wide range of undergraduate classes

Talks

- Upcoming Talk*, University of Illinois at Chicago Algebraic Geometry Seminar, Fall 2007
- Algebraic families of pointed spheres and topological invariants*, University of Pennsylvania Pizza Seminar, Fall 2007
- Algebraic families of Riemann surfaces and topological invariants*, Rice Algebraic Geometry Seminar, Fall 2007
- Introduction to flips and flops*, Rice Algebraic Geometry Working Seminar, Spring 2007
- A-discriminants*, Arizona Winter School, Spring 2006
- Veronese Embedding of stable curves* (2 part series), Rice Algebraic Geometry Working Seminar, Spring 2006
- Algebraic methods in DNA topology*, Rice Current Math Seminar, Fall 2006
- The Moduli space of curves and computational methods* (4 part series), Rice VIGRE seminar in computational algebraic geometry, Fall 2005
- Toric geometry, and the non-negative part of the Grassmannian*, Rice Current Math Seminar, Fall 2005

Awards

- NSF VIGRE Fellowship, Rice University, 2005-2008
- Graduate Fellowship, Rice University, 2003-2008
- Travel Award- Summer School in Grenoble, "Geometry of Complex Projective Varieties and the Minimal Model Program," June 18-July 6th, 2007
- Travel Award- Clay Mathematics Institute, "Workshop on MMP", May 16-17, 2007

Travel Award- Arizona Winter School, "Computational and Algorithmic Aspects of Algebra and Arithmetic," March 11-15, 2006

Travel Award- Autumn School in Algebraic Geometry, "Equivariant Intersection Theory," September 11-17, 2005

Participated in Research Experience for Undergraduates, "Matrix Analysis and Applications," William and Mary, Summer 2002

Haverford Class of 1896 Prize in Mathematics, 2001

Undergraduate Research

Linear Algebraic Methods in Graph Theory (Undergraduate Thesis 2003)

Topics on Tournament Matrices, with Michael Stevens (REU 2002)

Conferences Attended

Summer School in Grenoble, "Geometry of Complex Projective Varieties and the Minimal Model Program," June and July 2007

Clay Mathematics Institute, "Workshop on MMP", May 2007

Clay Research Conference, May 2007

Texas Algebraic Geometry Seminar, March 2007

Texas Geometry and Topology Conference, October 2006

Texas Algebraic Geometry Seminar, May 2006

Arizona Winter School, "Computational and Algorithmic Aspects of Algebra and Arithmetic," March 2006

Autumn School in Algebraic Geometry, "Equivariant Intersection Theory," September 2005

Texas Algebraic Geometry Seminar, May 2005

Computer Skills

Have used such programs as Mathematica, Matlab, Maple, Singular, Porta, and Nefviz in my research.

References

Brendan Hassett (hassett@rice.edu) Rice University, (713) 348-5261	Angela Gibney (agibney@math.upenn.edu) University of Pennsylvania
Izzet Coskun (coskun@math.uic.edu) University of Illinois at Chicago	William Veech (veech@rice.edu) Rice University