

# Amanda L. Knecht

Rice University Mathematics–MS136, 6100 Main St., Houston, TX 77005

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## Personal Information

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Citizenship: USA

Date of Birth: August 13, 1980

## Research Interests

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Algebraic Geometry, Arithmetic Geometry

## Education

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Ph.D. Mathematics, Rice University, May 2007 (expected)

Advisor: Brendan Hassett

Dissertation title: Approximation at Places of Bad Reduction for Degree Two del Pezzo Surfaces

B.S. in Mathematics, *summa cum laude*, Texas Christian University, 2002

## Invited Addresses

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*Weak Approximation for Degree Two del Pezzo Surfaces Surfaces*, FRG: Rationally Connected Varieties, Spring 2007.

*Interpolation on Rational Surfaces*, University of Michigan, Spring 2007.

*Interpolation on Rational Surfaces*, Tulane University Colloquium, Fall 2006.

*The Chinese Remainder Theorem in Algebraic Geometry*, Texas Christian University Colloquium, Fall 2006.

*Interpolation on Rational Surfaces*, Northern Illinois University Colloquium, Fall 2006.

## Awards

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NSF VIGRE Fellowship, Rice University, 2004–2006

Graduate Fellowship, Rice University, 2002–2007

Selected as one of 55 attendees from a group of over 730 applicants to attend the NSF ADVANCE Workshop on Negotiating the Ideal Faculty Position at Rice University, October, 2006

Travel Award– Clay Mathematics Institute Summer School in Arithmetic Geometry, July 17–August 11, 2006

Travel Award– Arizona Winter School, “Computational and algorithmic aspects of algebra and arithmetic,” March 11–15, 2006

Travel Award– AMS Summer Institute in Algebraic Geometry and Graduate Student Warm-Up Workshop for AMS Summer Institute in Algebraic Geometry, July 18–August 14, 2005

Travel Award– Arizona Winter School, “Fundamental groups in arithmetic,” March 12–16, 2005

Participant in Research Experience for Undergraduates, (studied Restricted Partition Functions), Rose-Hulman Institute of Technology, Summer 2001

Graduated with Honors from the Texas Christian University Mathematics Department, 2002

### **Additional Talks**

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*Interpolation on Rational Surfaces*, Rice Algebraic Geometry Seminar, Fall 2006.

*On Log Del Pezzo Surfaces with Rational Double Points* (4 part series), Rice Algebraic Geometry Working Seminar, Spring 2006.

*On the Graber-Harris-Starr Theorem* (4 part series), Rice Algebraic Geometry Working Seminar, Fall 2005.

*Counting Rational Points on Varieties*, Rice Current Math Seminar, Fall 2005.

*Special Primes*, Rice High School Math Competition, Spring 2005.

*Anabelian Phenomena in Arithmetic and Geometry*, Arizona Winter School, Spring 2005.

*Connectedness of the Hurwitz Scheme*, Rice Current Math Seminar, Fall 2004.

*Introduction to Algebraic Geometry*, Rice Current Math Seminar, Spring 2004.

*Restricted Partition Functions*, Rice Current Math Seminar, Spring 2003.

### **Conferences Attended**

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Clay Mathematics Institute Summer School in Arithmetic Geometry, July and August 2006

Texas Algebraic Geometry Seminar, May 2006

Arizona Winter School, “Computational and algorithmic aspects of algebra and arithmetic” March 2006

Introductory Workshop in Rational and Integral Points on Higher-Dimensional Varieties, MSRI, January 2006

Miami Winter School, “Algebraic, Symplectic and Arithmetic Geometry,” December 2005

AMS Summer Institute in Algebraic Geometry, July and August 2005

Graduate Student Warm-Up Workshop for AMS Summer Institute in Algebraic Geometry, July 2005

Texas Algebraic Geometry Seminar, May 2005

Arizona Winter School, "Fundamental groups in arithmetic," March 2005

Texas Geometry and Topology Conference, February 2004

## Papers

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*Approximation at Places of Bad Reduction for Degree Two del Pezzo Surfaces*, Ph.D. Thesis: Rice University (in progress).

*Investigating Zeta Functions*, (Undergraduate Thesis 2002)

*Congruences of Restricted Partition Functions*, with Matt Culek (REU 2001)

## Teaching Experience

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*Instructor:*

- Calculus II, Rice University, Fall 2005
- Linear Algebra, Rice University, Summer 2005
- VIGRE Junior Seminar in Computational Algebraic Geometry, Rice University, Fall 2004 and Spring 2005

*Teaching Assistant:*

- Elliptic Curves & Modular Forms, Rice University, Fall 2006
- Elementary Number Theory, Rice University, Spring 2004
- Linear Algebra, Rice University, Fall 2003
- Calculus II, Rice University, Fall 2002 and Spring 2003

*Mentoring:*

- Graduate Student Advisor for the Rice University VIGRE Computational Algebraic Geometry REU, summer 2005

*Course Organizer:*

- Local Fields Reading Course, Rice University, Fall 2006
- Intersection Theory Reading Course, Rice University, Spring 2005

## References

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Brendan Hassett (hassett@math.rice.edu)  
Rice University, (713) 348-5261

Yuri Tschinkel (tschinkel@cims.nyu.edu)  
New York University/Göttingen, (212) 998-3145

Tim Cochran (teaching) (cochran@math.rice.edu)  
Rice University, (713) 348-5265

Mike Wolf (mwolf@math.rice.edu)  
Rice University, (713) 348-6293