

Contact Information

University of South Carolina
Department of Mathematics
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Columbia, SC 29208-4014

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Citizenship

Born October 11, 1987 in Burlington, Vermont, United States

Research Interests

(Noncommutative) Algebraic geometry, derived categories, and category theory.

Education

Doctor of Philosophy, Mathematics Expected May 2018
University of South Carolina, Columbia, SC
Dissertation Title: Geometry of derived categories on noncommutative projective schemes
Advisor: Matthew Ballard

Master of Science, Mathematics May 2011
University of Vermont, Burlington, VT
Major Concentration: Abstract Algebra
Minor Concentration: Algebraic Number Theory

Bachelor of Science, Computer Science May 2009
Rensselaer Polytechnic Institute, Troy, NY
Minors: Applied Mathematics and French

Employment

Graduate Teaching Assistant August 2012 - Present
University of South Carolina, Columbia, SC

- Teach undergraduate level mathematics courses while working towards a Ph.D in Mathematics.
- Help run a math department sponsored tutoring center for undergraduates.

Graduate Teaching Assistant August 2009 - May 2011
University of Vermont, Burlington, VT

- Taught undergraduate level introductory calculus and discrete mathematics courses while working towards an M.S. in Mathematics.
- Helped run a math department sponsored Help Session for undergraduates.

Undergraduate Research/Teaching Assistant
Rensselaer Polytechnic Institute, Troy, NY

May 2008 - May 2009

- Assisted Professor Jeffrey C. Trinkle and his student, Steven Berard, with development of the Qt interface for the daVinci Code (DVC) physical simulator (<http://www.robotics.cs.rpi.edu/dvc>).
- Served as Teaching Assistant for Professor Trinkle's Robotics Course, which used DVC. Responsibilities included teaching students how to use the software and designing/grading homework assignments that used DVC.

Papers/Preprints

with Matthew Ballard. *Kernels for Noncommutative Projective Schemes*. arXiv:1709.06470

Presentations

Kernels for Noncommutative Projective Schemes November 28, 2017
Graduate Colloquium
University of South Carolina, Columbia, SC

Kernels for Noncommutative Projective Schemes October 12, 2017
Algebra Seminar
University of New Brunswick, Fredericton, NB, CA

Kernels for Noncommutative Projective Schemes October 9, 2017
Algebra Seminar
Temple University, Philadelphia, PA

Kernels for Noncommutative Projective Schemes August 28, 2017
Algebraic Geometry Seminar
University of South Carolina, Columbia, SC

Noncommutative Projective Schemes May 13, 2016
Temple Graduate Student Conference in Algebra, Geometry, and Topology
Temple University, Philadelphia, PA

Noncommutative Projective Schemes May 14, 2016
Student Algebra/Number Theory Seminar
University of South Carolina, Columbia, SC

Fully Faithful Abstract Nonsense: November 2015
Representable Functors and The Yoneda Embedding
Graduate Colloquium
University of South Carolina, Columbia, SC

Fully Faithful Abstract Nonsense: July 2015
Representable Functors and The Yoneda Embedding
Graduate Student Algebraic Geometry, Commutative Algebra, and Number Theory Seminar
University of South Carolina, Columbia, SC

Organizer

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| <i>Student Algebra/Number Theory Seminar</i> University of South Carolina | Summer 2016 |
| <i>Student Algebraic Geometry, Commutative Algebra, and Number Theory Seminar</i> University of South Carolina | Summer 2015 |
| <i>Student Algebraic Geometry Seminar</i> University of South Carolina | Spring 2015 |
| <i>Student Algebraic Geometry Seminar</i> University of South Carolina | Fall 2014 |

Conferences Attended

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| <i>Workshop on Topics in Algebraic Geometry</i> The University of North Carolina at Chapel Hill, Chapel Hill, NC | November 3-5, 2017 |
| <i>Palmetto Number Theory Series (PANTS) XXI</i> University of Tennessee, Knoxville, TN | September 16-17, 2017 |
| <i>Georgia Algebraic Geometry Symposium</i> University of Georgia, Athens, GA | March 3-5, 2017 |
| <i>Workshop on Symplectic Varieties and Geometric Representation Theory</i> The University of North Carolina at Chapel Hill, Chapel Hill, NC | October 28-30, 2016 |
| <i>UGA-SWAG: Summer Workshop in Algebraic Geometry</i> University of Georgia, Athens, GA | August 26-29, 2016 |
| <i>Temple Graduate Student Conference in Algebra, Geometry, and Topology</i> Temple University, Philadelphia, PA | May 14-15, 2016 |
| <i>Georgia Algebraic Geometry Symposium</i> Emory University, Atlanta, GA | October 2015 |
| <i>AMS Summer Institute on Algebraic Geometry</i> University of Utah, Salt Lake City, UT | July 27 - 31, 2015 |
| <i>Georgia Algebraic Geometry Symposium</i> University of Georgia, Athens, GA | October 2014 |
| <i>Arizona Winter School</i> University of Arizona, Tucson, AZ | March 2014 |
| <i>Palmetto Number Theory Series (PANTS) XXI</i> Clemson University, Clemson, SC | December 2013 |
| <i>Palmetto Number Theory Series (PANTS) XX</i> Davidson College, Davidson, NC | September 2013 |

Algebraic Geometry Northeastern Series (AGNES)
Yale University, New Haven, CT

April 2013

AMS Spring Western Sectional Meeting
University of Colorado, Boulder, CO

April 2013

Palmetto Number Theory Series (PANTS) XIX
University of South Carolina, Columbia, SC

December 2012

Palmetto Number Theory Series (PANTS) XVIII
Wake Forest University, Winston-Salem, NC

September 2012

Teaching Experience

University of South Carolina
Columbia, SC

Instructor of Record

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| <i>Math 111 - Basic College Mathematics</i> | Fall 2017 |
| <i>Math 122 - Calculus for Business Administration and Social Sciences</i> | Spring 2017 |
| <i>Math 116 - Brief Precalculus Mathematics</i> | Fall 2016 |
| <i>Math 170 - Finite Mathematics</i> | Spring 2016 |
| <i>Math 116 - Brief Precalculus Mathematics</i> | Fall 2015 |
| <i>Math 111 - Basic College Mathematics</i> | Spring 2015 |
| <i>Math 115 - Precalculus Mathematics</i> | Fall 2014 |
| <i>Math 142 - Calculus II</i> | July 2014 |
| <i>Math 170 - Finite Mathematics</i> | Spring 2014 |
| <i>Math 116 - Brief Precalculus Mathematics</i> | Fall 2013 |
| <i>Math 111 - Basic College Mathematics</i> | May - June 2013 |

Teaching Assistant

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| <i>Math 141 - Calculus I</i> | Spring 2013 |
| <i>Math 142 - Calculus II</i> | Fall 2012 |

University of Vermont
Burlington, VT

Instructor of Record

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| <i>Math 019 - Fundamentals of Calculus I</i> | Fall 2010 |
| <i>Math 017 - Applications of Finite Math</i> | Summer 2010 |
| <i>Math 017 - Applications of Finite Math</i> | Spring 2010 |
| <i>Math 017 - Applications of Finite Math</i> | Fall 2009 |

Rensselaer Polytechnic Institute
Troy, NY

Teaching Assistant

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| <i>CSCI 4940 - Robotics II</i> | Spring 2009 |
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Professional Membership

Member of the American Mathematical Society

Service

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| <i>University of South Carolina High School Math Contest Proctor</i> | January 2015 |
| <i>University of South Carolina High School Math Contest Proctor</i> | February 2014 |
| <i>University of South Carolina High School Math Contest Proctor</i> | January 2013 |

Honors

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| <i>Rensselaer Medalist</i> | 2004 |
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\$60,000 scholarship to Rensselaer Polytechnic Institute.

Non-Academic Employment

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| <i>Associate</i> | August 2011 - August 2012 |
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Princeton Consultants, Inc, Princeton, NJ
Information Technology consultant.

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| <i>Mountain Ambassador</i> | Winters 2004-2008 |
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Killington, Ltd., Killington, VT
The Killington Ambassador Program is an on-slope volunteer program designed to improve the experience of guests by providing local knowledge, information, directions, safety tips, and just about any other help a guest might need.