

Ryan Eberhart

001 McAllister Building
Pennsylvania State University
University Park, PA 16802
✉ rde3@psu.edu
📁 personal.psu.edu/rde3

Personal Information

Birthplace Fargo, ND
Citizenship United States

Employment

2013–Present **Lecturer**, *Pennsylvania State University*.
Summer 2015 **Visiting Summer Faculty**, *SPAWAR Atlantic (Department of Defense research lab)*.

Education

2008–2013 **Ph.D. in Mathematics**, *University of Pennsylvania*, Philadelphia, PA.
Graduation: August 2013
Thesis title: Branched covers of curves with fixed ramification locus
Advisor: Professor David Harbater
Research interests: Algebraic geometry, arithmetic geometry, Galois theory
2004–2008 **B.S. in Mathematics**, *Rochester Institute of Technology*, Rochester, NY.
Graduated with highest honors

Papers

- 2016 **Analogues of the Shapiro conjecture in positive characteristic**, Preprint available at [arXiv:1605.06090](https://arxiv.org/abs/1605.06090) [math.AG].
- 2015 **Galois branched covers with fixed ramification locus**, *J. Pure Appl. Algebra* 219 (2015), no. 5 1592–1603.
- 2014 **Families and moduli of covers of curves with fixed ramification**, Preprint available at [arXiv:1312.7144](https://arxiv.org/abs/1312.7144) [math.AG] (submitted).
- 2014 **Arithmetic descent of specializations of Galois covers**, *Joint with Hilaf Hasson*, Preprint available at [arXiv:1412.1682](https://arxiv.org/abs/1412.1682) [math.AG] (accepted pending minor revisions).

Honors

- April 2013 **Kudos Penn Teaching Assistant Award**, *University of Pennsylvania*.
- 2008–2013 **Benjamin Franklin Fellowship**, *University of Pennsylvania*.
- 2007 **Outstanding Undergraduate Scholar**, *Rochester Institute of Technology*.
Awarded to two undergraduates in each department for research and coursework

2003 **National Merit Scholarship**, *Rochester Institute of Technology*.

Talks

- July 2015 **Implementation of Secure Cryptography**, *S&T Colloquium*, SPAWAR Atlantic, North Charleston, SC.
- January 2015 **Descent for specializations of Galois branched covers**, *Algebra and Number Theory Seminar*, Pennsylvania State University, University Park, PA.
- October 2013 **On Belyi's theorem**, *Graduate Student Number Theory Seminar*, Pennsylvania State University, University Park, PA.
- October 2013 **Branched covers and linear series**, *Algebra and Number Theory Seminar*, Pennsylvania State University, University Park, PA.
- November 2012 **Branched covers and linear series**, *Algebra Seminar*, University of Pennsylvania, Philadelphia, PA.
- July 2012 **Counting the number of maps with fixed ramification**, *Summer Graduate Student Algebra Seminar*, University of Pennsylvania, Philadelphia, PA.
- March 2012 **Patching over $k((s, t))$** , *Arizona Winter School 2012*, University of Arizona, Tucson, AZ.
- February 2012 **Differential equations in characteristic p** , *Graduate Student Seminar*, University of Pennsylvania, Philadelphia, PA.
- August 2007 **Partition regularity of nonlinear systems**, *Summer Meeting of the MAA*, San Jose, CA.

Teaching

- Spring 2016 **Math 141 (Calculus II)**, *Pennsylvania State University*.
- Fall 2015 **Math 141 (Calculus II)**, *Pennsylvania State University*.
- Spring 2015 **Math 141 (Calculus II)**, *Pennsylvania State University*.
- Fall 2014 **Math 141 (Calculus II)**, *Pennsylvania State University*.
- Spring 2014 **Math 141 (Calculus II)**, *Pennsylvania State University*.
- Fall 2013 **Math 140 (Calculus I)**, *Pennsylvania State University*.
- Summer 2013 **Math 104 (Calculus I) Online**, *University of Pennsylvania*.
Teaching Assistant responsible for online recitations, quizzes, exams, and questions during lecture
- Spring 2013 **Math 240 (Calculus III)**, *University of Pennsylvania*.
Teaching Assistant
- Fall 2012 **Math 240 (Calculus III)**, *University of Pennsylvania*.
Teaching Assistant
- Summer 2012 **Math 103 (Intro. to Calculus)**, *University of Pennsylvania*.
Instructor
- Summer 2011 **Math 114 (Calculus II) Online**, *University of Pennsylvania*.
Teaching Assistant responsible for online recitations, quizzes, and questions during lecture

Spring 2011 **Math 240 (Calculus III)**, *University of Pennsylvania*.
Teaching Assistant

Fall 2010 **Math 114 (Calculus II)**, *University of Pennsylvania*.
Teaching Assistant

Spring 2010 **Math 114 (Calculus II)**, *University of Pennsylvania*.
Teaching Assistant

Fall 2009 **Math 104 (Calculus I)**, *University of Pennsylvania*.
Teaching Assistant

Spring 2007 **Math 283 (Calculus III)**, *Rochester Institute of Technology*.
Teaching Assistant

Winter 2006 **Math 361 (Honors Codes and Ciphers)**, *Rochester Institute of Technology*.
Grader

Spring 2006 **Math 283 (Calculus III)**, *Rochester Institute of Technology*.
Teaching Assistant

Winter 2005 **Math 265 (Discrete Math I)**, *Rochester Institute of Technology*.
Grader

Other Information

Programming **C, C++, MAGMA, Sage, Java, Python**.
Languages:

Software **Maple, Mathematica, Eclipse, Excel**.
Packages: