

# Brady J Rocks

CURRICULUM VITÆ

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## EMPLOYMENT

- 2018–Present** Temporary Assistant Professor, University of Delaware  
**2016–2018** Visiting Assistant Professor, Lawrence University  
**2015–2016** Full-time Evening Instructor, University of South Carolina

## EDUCATION

- 2015** Ph.D. in Mathematics, Washington University in Saint Louis  
**2007** M.S. in Mathematics, New Mexico State University  
**2006** B.S. in Mathematics, New Mexico State University.

## RESEARCH INTERESTS

Commutative Algebra, Affine Algebraic Geometry, and Polynomial Automorphisms

## TEACHING

### University of Delaware

Math 114, College Mathematics and Statistics  
Math 241–243, Calculus A–C  
Math 349, Elementary Linear Algebra

### Lawrence University

Math 107, Elementary Statistics  
Math 140, Calculus I  
Math 150, Calculus II  
Math 410, Linear Algebra  
Math 300, Foundations of Algebra  
Math 310, Foundations of Analysis  
Directed Study, Ordinary Differential Equations  
Directed Study, Linear Algebra  
Independent Study, Biomathematics (Winter 2018)  
Independent Study, Differential Geometry (Spring 2018)

## University of South Carolina

Math 122, Business Calculus

Math 141, Calculus I

Math 142, Calculus II

Math 241, Calculus III

## Washington University in St. Louis

### Instructor

Precalculus,

Matrix Algebra

Introduction to Statistics (2 times)

### Teaching Assistant

Calculus III (3 times)

Calculus I

Calculus II (3 times)

## PUBLICATIONS

*On the Incompatibility of Diophantine Equations Arising from the Strong Factorial Conjecture*,  
J. of Algebra, **478** (2017), 341-352

*On the irreducibility of a polynomial associated with the Strong Factorial Conjecture* (with M.  
Filaseta), Colloq. Math., **145**, No. 2 (2016), 307-314.

## HONORS AND AWARDS

**Robert McDowell Teaching Award**, Washington University in St. Louis, Spring 2012

## PRESENTATIONS

### **An Introduction to the Jacobian Conjecture**

Lawrence University, May 2016

### **The Strong Factorial Conjecture**

Number Theory Seminar, University of South Carolina, October 2015

### **Code Breaking**

Math Circle, Washington University in St. Louis, April 2011

### **Mathematical Auction**

Math Circle, Washington University in St. Louis, April 2011

### **Embedded Associated Primes and the Conforti-Cornjuelos Conjecture**

Combinatorics Seminar, Washington University in St. Louis, February 2012

**Square-free Endomorphisms and the Jacobian Conjecture**

Major Oral, Washington University in St. Louis, December 2011

**Alexander Duality and Linear Resolutions**

Combinatorics Seminar, Washington University, April 2011

**The Equivalence between the Vanishing Conjecture and the Jacobian Conjecture**

Minor Oral, Washington University in Saint Louis, December 2010

## OTHER ACTIVITIES

**Peer Mentor (2011-2012)** Provided support, encouragement, and information for first and second year graduate students at Washington University in Saint Louis. Organized several social events so that new and old students could connect.

**TA Training Orientation, Discussion Leader (Summer 2012)** Led a group of new teaching assistants in the mathematics department in a discussion about teaching recitation sections, student expectations, as well as good and bad teaching habits.

**Coordinator for Large Multisection Courses** Coordinated Math 114 at the University of Delaware for five semesters. As coordinator, it was my job to write a common syllabus, schedule and exams that would be used in all sections. I also assisted the other instructors in any way I could.