

# Juliette Bruce

Department of Mathematics  
University of Wisconsin  
480 Lincoln Dr.  
Madison, WI 53706

## Curriculum Vitae

608-263-7939  
juliette.bruce.wisc.edu  
[math.wisc.edu/~juliettebruce](http://math.wisc.edu/~juliettebruce)

### Education

- **University of Wisconsin** Madison, WI  
*Ph.D. Mathematics* 2014 – Present  
– Advisor: Daniel Erman
- **University of Wisconsin** Madison, WI  
*M.A. Mathematics* 2014 – 2016
- **University of Michigan** Ann Arbor, MI  
*B.S. in Mathematics & Political Science* 2010 – 2014  
– With High Honors and Distinction

### Publications

5. J. Bruce, D. Erman, S. Goldstein, and J. Yang. A distributed numerical approach to syzygies of  $\mathbb{P}^2$ . *In preparation*.
4. M. Brandt, J. Bruce, T. Brysiewicz, R. Krone, and E. Robeva. The degree of  $SO(n)$ . *Submitted*. E-print: [arXiv:1701.03200](https://arxiv.org/abs/1701.03200).
3. J. Bruce and D. Erman. A probabilistic approach to systems of parameters and Noether normalization. *Submitted*. E-print: [arXiv:1604.01704](https://arxiv.org/abs/1604.01704).
2. D. Bruce, M. Logue, and R. Walker. Monomial valuations, cusp singularities, and continued fractions. *Journal of Commutative Algebra*, **7** (2015) no. 4, 495-522. E-print: [arXiv:1311.6493](https://arxiv.org/abs/1311.6493).
1. D. Bruce, P. Kao, E. Nash, B. Perez, and P. Vermeire. Betti tables of reducible algebraic curves. *Proc. Amer. Math. Soc.* **142** (2014) 4039-4051. E-print: [arXiv:1210.3064](https://arxiv.org/abs/1210.3064).

### Awards, Grants & Honors

- **Graduate Research Fellowship** 2015 –  
*National Science Foundation*
- **Professional Development Grant - (\$1000)** December 2016  
*Graduate School – University of Wisconsin*

Updated July 13, 2017.

- **Outstanding Achievement in Mathematics** May 2014  
*Dept. of Mathematics – University of Michigan*
- **Phi Beta Kappa** April 2014  
*University of Michigan*
- **Chancellor's Opportunity Award** April 2014  
*University of Wisconsin*

## Research Presentations

- **A Probabilistic Approach to Noether Normalization (Poster)** Rice University  
*Lectures on Arithmetic Geometry* February 2017
- **A Probabilistic Approach to Noether Normalization (Poster)** Fields Institute  
*Introductory Workshop: Combinatorial Algebraic Geometry* August 2016
- **A Probabilistic Approach to Noether Normalization (Poster)** University of Michigan  
*Commutative Algebra and Its Interactions with Algebraic Geometry* July 2016
- **A Probabilistic Approach to Noether Normalization (Poster)** University of Notre Dame  
*Midwest Commutative Algebra and Algebraic Geometry Conference* May 2016
- **Noether Normalization in Families** University of Wisconsin  
*Algebraic Geometry Seminar* April 2016
- **Betti Tables of Graph Curves** University of Illinois - Chicago  
*Midwest Algebraic Geometry Graduate Conference* April 2015
- **Betti Diagrams of Graph Curves** University of Wisconsin  
*Algebraic Geometry Seminar* December 2014

## Teaching Experience

- **Math 132: Problem Solving in Algebra, Statistics, & Probability** University of Wisconsin  
*Instructor* Spring 2015
- **Math 221: Calculus and Analytic Geometry I** University of Wisconsin  
*Teaching Assistant* Fall 2014
- **Math 310: Explorations in Randomness** University of Michigan  
*Course Assistant* Winter 2014
- **Math 490: Introduction to Topology** University of Michigan  
*Course Assistant* Fall 2013
- **Math 351: Principals of Analysis** University of Michigan  
*Course Assistant* Winter 2013
- **Math 105: Data, Functions, and Graphs** University of Michigan  
*Course Assistant* Fall 2012

## Outreach Activities

- **Madison Math Circle**  
*Lead Organizer*
- **Madison Math Circle**  
*Student Volunteer*
- **Michigan Math Circle**  
*Organizer*

University of Wisconsin  
*January 2016 – Present*

University of Wisconsin  
*January 2015 – Present*

University of Michigan  
*January 2013 – June 2014*

## Service

- **Committee on Inclusivity and Diversity**  
*Member*
- **Committee on TA Pay and Performance**  
*Member*
- **AMS Graduate Student Blog**  
*Managing Editor*
- **Instructor Excellence Program**  
*Teaching Mentor*
- **Society of Undergraduate Math Students**  
*President and Founder*

UW Dept. of Mathematics  
*November 2016 – Present*

UW Dept. of Mathematics  
*September 2015 – Present*

American Mathematical Society  
*September 2015 – Present*

UW Dept. of Mathematics  
*September 2015 – May 2016*

University of Michigan  
*December 2012 – June 2014*

## Memberships

- **Society of Industrial and Applied Mathematics**
- **Association for Women in Mathematics**
- **American Mathematical Society**

January 2017 – Present

January 2016 – Present

September 2014 – Present