

# Brittany Riggs

Elon University

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## EDUCATION

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<b>North Carolina State University</b> PhD, Mathematics, Advisor: Hoon Hong	Raleigh, NC May 2020
<b>American University</b> MA, Ethics, Peace and Global Affairs	Washington, DC December 2007
<b>Butler University</b> BA, Mathematics and Spanish, <i>summa cum laude</i>	Indianapolis, IN May 2005

## TEACHING EXPERIENCE

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<b>Elon University</b> <i>Lecturer of Mathematics &amp; Statistics</i> <i>Pure Math Coordinator</i> Create lecture notes, projects and exams, grade assignments, and determine final grades.	Elon, NC Fall 2020 - present Fall 2021 - present
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- MTH 1160: Applied Calculus, 4 sections
- MTH 1510: Calculus 1, 2 sections
- MTH 2090: Geometry & Data for K-8 Teachers, 1 section
- MTH 2510: Calculus 2, 2 sections
- MTH 2520: Multivariable Calculus, 1 section
- ELN 1010: Elon 101, 1 section

<b>North Carolina State University</b> <i>Graduate Teaching Assistant</i> Created syllabi, prepared class notes, wrote exams, supervised TAs and determined final grades.	Raleigh, NC Summer 2017 - Spring 2020
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- MA141: Calculus 1, 4 sections
- MA121: Elements of Calculus, 2 sections
- MA114: Introduction to Finite Mathematics, 1 section
- MA111: Precalculus, 2 sections  
– (Fall 2019 - Spring 2020) Piloted redesigned course utilizing flipped classroom.

### *Special Projects: 2 semesters*

- MA111: Precalculus – (Summer 2019) Assisted with building course site for flipped classroom. Produced worksheets and solutions, edited lecture videos and populated Moodle template.
- MA141: Calculus 1 – (Fall 2018) Created recitation materials and exam study guides with a fellow grad student. Available to department for Fall 2019.

<b>Wake Technical Community College</b> <i>Adjunct Instructor</i> Delivered lecture notes, lead in-class projects, graded projects and exams, and determined final grades.	Raleigh, NC Fall 2017 - Spring 2019
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- MAT110: Math Measurement & Literacy, 5 sections

<b>Northern Virginia Community College</b> <i>Adjunct Instructor</i> Taught self-paced, hybrid, developmental math course and determined final grades.	Manassas, VA Fall 2012 - Fall 2014
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- MTT4: Developmental Math, 4 sections

## RESEARCH EXPERIENCE

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**Research Interest:** Real Algebraic Geometry

**Research Advisor:** Dr. Hoon Hong

**Butler Summer Institute:** Thesis preparation program for Butler University undergraduate students, Summer 2004

**Clemson University Research Experience for Undergraduates:** Combinatorics and Number Theory, Summer 2003 (attended as Brittany Brown)

## PUBLICATIONS

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B. Brown, N. Calkin, T. Flowers, K. James, E. Smith and A. Stout. “Elliptic curves, modular forms, and sums of Hurwitz class numbers.” **J. of Number Theory** 128 (6) (2008) 1847-1863. arXiv: 1208.4769.

## TALKS

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“Optimality of an Improved Bound on Pólya’s Positivity Theorem (Univariate Case)” January 2020  
Joint Mathematics Meetings, Denver, CO

“Improved Bound on Pólya’s Positivity Theorem (Univariate Case)” November 2018  
TAGMaC, Duke University

## SERVICE AND ACTIVITIES

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### Elon University

- Elon 101 instructor/advisor Fall 2021
- Participated in Lecturer Focus Group April 2021
- Conducted 4 Elon College Fellows interviews February 2021

### Elon University Department of Mathematics

- Serving as Pure Math Coordinator 2021 - present
- Advising two mathematics majors and one minor 2020 - present
- Member of Accessible Calculus Committee 2021 - 2022
- Completed portfolio evaluation for graduating mathematics major March 2021
- Member of Mathematics & Statistics Department Diversity Committee 2020 - 2021

### Association for Women in Math, NCSU Chapter

Vice President August 2018 - August 2019

Secretary August 2017 - August 2018

- Sonia Kovalevsky Day
  - Hosted activity on combinations April 2019
  - Co-hosted activity on Eulerian circuits April 2018
- Created WordPress website for AWM NCSU Chapter
- Co-organized panel discussions with other student groups in department
  - (March 2019) Math in Industry panel
  - (September 2017) Finding an Advisor panel

### NCSU Department of Mathematics panel member

- Discussion on experience of attending JMM January 2020
- Discussion on grad student life for 1st and 2nd year grad students September 2018
- Discussion on finding an advisor for 1st and 2nd year grad students September 2017

<b>NCSU Engineers' Council invited speaker</b> "Grad School 101" discussion with undergraduate engineering students	February 2018
<b>Undergrads Union Grads mentoring</b> Mentored 2 undergraduate math students	August 2018 - May 2020
<b>George Washington University Summer Program for Women in Math</b>	Summer 2004

## CONFERENCES AND WORKSHOPS

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<b>MAA MathFest</b> Participated in Project NExT activities and teacher training, completed MAA minicourse on utilizing CalcPlot3D	Virtual March 2021
<b>Elon Teaching and Learning Conference</b> Attended various teaching workshops related to adapting post-pandemic	Virtual June 2021
<b>MAA Southeastern Sectional Meeting</b> Attended teaching workshops	Virtual March 2021
<b>Joint Mathematics Meetings</b> Attended Project NExT teaching workshops	Virtual January 2021
<b>Project NExT</b> Participated in various teacher training activities, completed MAA minicourse on teaching introductory statistics	Virtual July 2020
<b>Joint Mathematics Meetings</b> Presented research, completed MAA minicourse on inquiry-based learning, and attended various teaching workshops	Denver, CO January 2020
<b>Elon Teaching and Learning Conference</b> Attended various teaching workshops related to fostering engagement	Elon University August 2019
<b>Summer Institute on College Teaching</b> Week-long training in active learning techniques	UNC - Chapel Hill August 2019
<b>Joint Mathematics Meetings</b> Attended various teaching workshops	Baltimore, MD January 2019
<b>TAGMaC</b> Presented research, attended various research talks	Duke University November 2018
<b>Elon Teaching and Learning Conference</b> Attended various teaching workshops related to diversity	Elon University August 2018
<b>TAGMaC</b> Attended various research talks	UNC - Chapel Hill April 2018
<b>AWM Triangle Conference</b> Attended various research and teaching talks	UNC - Chapel Hill February 2018

## HONORS AND AWARDS

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<b>Elon University</b> Project NExT Fellow	Elon, NC 2020 - 2021
<b>North Carolina State University</b> Travel support from NSF grant via Dr. Cynthia Vinzant Math Department Travel Grant to attend JMM DELTA grant support for course redesign project	Raleigh, NC January 2020 January 2019, January 2020 Summer 2019

Thank a Teacher letter recipient	April 2019
STEM Fellowship	August 2015 - May 2016
<b>Northern Virginia Community College</b>	Manassas, VA
Superior Campus Support Award	May 2015
<b>American University</b>	Washington, DC
School of International Service Dean's Award Scholarship	August 2006 - December 2007
<b>Butler University</b>	Indianapolis, IN
Math Department Outstanding Senior	May 2005
Founders' Scholarship	August 2001 - May 2005
National Merit Scholarship	August 2001 - May 2005

**OTHER EXPERIENCE**

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<b>Northern Virginia Community College</b>	Manassas, VA
<i>MASTER Math Lab Manager</i>	January 2011 - July 2015

- Scheduled and supervised student tutors.
- Managed seat allocation between sections to maximize enrollment.
- Advised students on program progress and completion.
- Tutored students in group setting for developmental math.

<b>American Public University System</b>	Manassas, VA
<i>Academic Advisor</i>	March 2010 - January 2011

- Advised students on program requirements and university policies.
- Processed change of major requests and advised on transfer of credits.