

# CASEY GRIFFIN

## EDUCATION

---

<b>Ph.D. Education</b> , University of Delaware	Expected May 2024
<b>M.S. Mathematics</b> , Villanova University	May 2019
<b>B.A. Secondary Mathematics Education</b> , University of Delaware	May 2015

## HONORS AND AWARDS

---

<b>Recipient of Dissertation Fellowship for Excellence</b> University of Delaware, Graduate College	September 2023 – August 2024
<b>First Prize Graduate Student Paper</b> University of Delaware, College of Education and Human Development Steele Symposium	April 2021

## PUBLICATIONS

---

### *Peer-Reviewed Journal Articles*

**Griffin, C. R.** (2023). Women's sense of belonging in undergraduate calculus and the influence of (inter)active learning opportunities. *Journal of Research in Science, Mathematics and Technology Education*, 6(2), 65-82. DOI: <https://doi.org/10.31756/jrsmte.622>

### *Book Chapters*

Cirillo, M., Seiwel, A., **Griffin, C.** (In progress). Considering the structure and logic of definitions and their critical role in geometry courses for teachers. In Brown, A., Herbst, P., Miller, N., & Pyzdrowski, L. (Eds.). *GeT Courses: Resources and Objectives for the Geometry Courses for Teachers*. Mathematical Association of America.

**Griffin, C.** & Berk, D. (In progress). What women want: Pedagogical approaches for promoting female students' sense of belonging in undergraduate calculus. In Rueda, E. & Lowe-Swift, C. (Eds.). *Creating Academic Belonging for Underrepresented Students: Models and Strategies for Faculty Success*. Routledge.

## *Peer-reviewed Conference Proceedings*

**Griffin, C.** (2023). Longitudinal study of women’s sense of belonging in undergraduate calculus. In Karunakaran, S.S. & Higgins, A. (Eds.). (2023). *Proceedings of the 25<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education*. Omaha, NE.

**Griffin, C.** (2022). Female students’ increased belonging in active learning calculus. In Karunakaran, S.S. & Higgins, A. (Eds.). (2022). *Proceedings of the 24<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education* (p. 1001-1008). Boston, MA.  
<http://sigmaa.maa.org/rume/RUME24.pdf>

**Griffin, C.** (2021). Sense of belonging in two first-semester calculus pathways. In Karunakaran, S.S. & Higgins, A. (Eds.). (2021). *2021 Research in Undergraduate Mathematics Education Reports* (p. 72–80).  
[http://sigmaa.maa.org/rume/2021\\_RUME\\_Reports.pdf](http://sigmaa.maa.org/rume/2021_RUME_Reports.pdf)

**Griffin, C.** (2021). Calculus instruction and female sense of belonging. In Olanoff, D., Johnson, K., & Spitzer, S. M. (Eds.) *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 1331–1335). Philadelphia, PA.  
<http://www.pmena.org/pmenaproceedings/PMENA%2043%202021%20Proceedings.pdf>

Cirillo, M., **Griffin, C.**, Seiwel, A., & Hummer, J. (2021). “What do you believe is true?” A routine for proving theorems in secondary geometry. In Olanoff, D., Johnson, K., & Spitzer, S. M. (Eds.) *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 528–537). Philadelphia, PA. <http://www.pmena.org/pmenaproceedings/PMENA%2043%202021%20Proceedings.pdf>

## CONFERENCE PRESENTATIONS

---

**Griffin, C.** (2023). Longitudinal study of women’s sense of belonging in undergraduate calculus. In Karunakaran, S.S. & Higgins, A. (Eds.). (2023). *Proceedings of the 25<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education*. Omaha, NE.

**Griffin, C.**, Cirillo, M., Seiwel, A., Fitzhugh, J. (2022). *Igniting curiosity: Engaging students in the Cycle of Inquiry and Justification*. National Council of Teachers of Mathematics Regional Conference. Baltimore, MD.

**Griffin, C.** (2022). Female students’ increased belonging in active learning calculus. In Karunakaran, S.S. & Higgins, A. (Eds.). (2022). *Proceedings of the 24<sup>th</sup> Annual Conference on Research in Undergraduate Mathematics Education* (p. 1001-1008). Boston, MA.  
<http://sigmaa.maa.org/rume/RUME24.pdf>

**Griffin, C.** (2021). Calculus instruction and female sense of belonging. In Olanoff, D., Johnson, K., & Spitzer, S. M. (Eds.) *Proceedings of the forty-third annual meeting of the North*

*American Chapter of the International Group for the Psychology of Mathematics Education* (p. 1331–1335). Philadelphia, PA.

<http://www.pmena.org/pmenaproceedings/PMENA%2043%202021%20Proceedings.pdf>

Cirillo, M., **Griffin, C.**, Seiwel, A., & Hummer, J. (2021). “What do you believe is true?” A routine for proving theorems in secondary geometry. In Olanoff, D., Johnson, K., & Spitzer, S. M. (Eds.) *Proceedings of the forty-third annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (p. 528–537). Philadelphia, PA. <http://www.pmena.org/pmenaproceedings/PMENA%2043%202021%20Proceedings.pdf>

**Griffin, C.** (2021). *Investigating connections between active learning and female students’ sense of belonging in calculus*. Paper presented at the Northeastern Conference on Research in Undergraduate Mathematics Education.

**Griffin, C.** (2020). *Opportunities for active learning and student sense of belonging in undergraduate calculus*. Paper presented at the Northeastern Conference on Research in Undergraduate Mathematics Education.

#### COLLEGE/DEPARTMENT PRESENTATIONS

---

**Griffin, C.** (2023). *Longitudinal study of women’s sense of belonging in undergraduate calculus*. Poster presented at the Steele Research Symposium, College of Education and Human Development, University of Delaware.

**Griffin, C.** (2022). *Women’s increased sense of belonging in active learning calculus*. Paper presented at the Steele Research Symposium, College of Education and Human Development, University of Delaware.

**Griffin, C.** (2021). *Female sense of belonging and active learning in calculus*. Paper presented at the Steele Research Symposium, College of Education and Human Development, University of Delaware. [First Prize graduate student paper]

**Griffin, C.** (2020). *Opportunities for active learning and student sense of belonging in Calculus*. Paper presented at the Research Colloquium, School of Education, University of Delaware.

#### RESEARCH EXPERIENCE

---

##### **Principal Investigator, Women’s Sense of Belonging in Active Learning Calculus**

- Designed and conducting a longitudinal study to investigate women’s sense of belonging over one year in an active learning Calculus class and the relationships between sense of belonging, social connectedness, perceived competence, and the classroom learning opportunities they experience.
- May 2022 to present

- Advisor: Dr. Dawn Berk
- Department of Mathematical Sciences, University of Delaware

**Graduate Research Assistant, Transforming and Understanding Professional Learning**

- Contributing to data collection, analyses, and reporting results in a study that investigates how teachers apply what they learn during professional development to their own practice and how this impacts student performance outcomes.
- September 2022 to present
- Advisors: Dr. James Hiebert, Dr. Erica Litke, Dr. Lynsey Gibbons
- School of Education, University of Delaware

**Principal Investigator, Student Sense of Belonging in Two Calculus Pathways**

- Designed and conducted a study to investigate students’ sense of belonging in two different Calculus courses and the relationship between their sense of belonging and the types of instructional strategies employed by the instructor during class.
- May 2020 to May 2021
- Advisor: Dr. Dawn Berk
- Department of Mathematical Sciences, University of Delaware

**Graduate Research Assistant, Proof in Secondary Classrooms**

- Assisted with data analysis and reporting results of a study that aimed to produce a set of lessons to support the teaching and learning of proof in the context of geometry.
- June 2020 to June 2022
- Advisor: Dr. Michelle Cirillo
- Department of Mathematical Sciences, University of Delaware

**Undergraduate Research Assistant, Peer Mentor, NSF TUES – Learning Mathematics with Technology**

- Worked with professors at the University of Delaware to introduce more technology into the education of Secondary Mathematics Education majors to familiarize them with programs and software that can be used in secondary math classrooms.
- January 2013 to December 2014
- Advisor: Dr. Alfinio Flores
- Department of Mathematical Sciences, University of Delaware

**TEACHING EXPERIENCE**

---

**Instructor of Record**

**MATH 252**

Spring 2022

**Mathematics for K-8 Teachers: Rational Numbers and Probability**

School of Education

University of Delaware

**MATH 115**

Fall 2021

**Pre-Calculus**

Department of Mathematical Sciences  
University of Delaware

**Teaching Assistant**

Fall 2019 to Spring 2021

Department of Mathematical Sciences  
University of Delaware

MATH 115: Pre-Calculus (Fall 2019-Spring 2021)

MATH 231: Integrated Calculus IA (Fall 2019, Fall 2020)

MATH 232: Integrated Calculus IB (Spring 2020, Spring 2021)

**High School Mathematics Teacher**

September 2015 to June 2017

Long Branch High School

Long Branch, NJ

Algebra I (Fall 2015-Spring 2017)

Geometry (Fall 2016-Spring 2017)

Statistics (Fall 2015-Spring 2017)

Honors Statistics (Fall 2015-Spring 2017)

**PROFESSIONAL SERVICE**

---

**Graduate Student Representative**

November 2022 – October 2023

North American Chapter of the International Group for the Psychology of Mathematics  
Education Steering Committee

**Graduate Student Mentor and Organizing Committee Member**

Fall 2022

University of Delaware's Mathematics Department Directed Reading Program

**Teaching Assistant Orientation Panel Moderator**

Fall 2023

University of Delaware's New Graduate Student Orientation

**PROFESSIONAL ASSOCIATION MEMBERSHIPS**

---

American Education Research Association (AERA)

2021-present

Association of Mathematics Teacher Educators (AMTE)

2021-present

Mathematical Association of America (MAA)

2021-present

Special Interest Group of the MAA on the

2021-present

Research in Undergraduate Mathematics Education (RUME)