

Contact Information

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West Virginia University
 School of Mathematical and Data Sciences
 Armstrong Hall 411A
 Morgantown, WV 26506

Education

Clemson University; Clemson, SC	2014-2021
Ph.D., Mathematical Sciences (2017-2021)	
Research Advisor: Dr. Keri Ann Sather-Wagstaff	
Dissertation: <i>Minimal Differential Graded Resolutions of Fiber Products</i>	
M.S., Mathematical Sciences (2014-2016)	
Research Advisor: Dr. Jim Brown	
University of Oxford; Oxford, UK	2012-2013
Visiting Student Program	
Goucher College; Baltimore, MD	2010-2014
B.A. with honors, Mathematics, Magna Cum Laude	

Positions

West Virginia University; Morgantown, WV	2022 - Present
Postdoctoral Research Associate in Commutative Algebra	
Sewanee: The University of the South; Sewanee, TN	2021-2022
Visiting Assistant Professor of Mathematics	
George Mason University; Fairfax, VA	2020-2021
Affiliate Faculty (unpaid research affiliate)	
Queens College, City University of New York; Queens, NY	(Spring) 2016
Adjunct Lecturer	

Papers and Preprints

1. Jim Brown, Hugh Geller, Rico Vicente, and Alexandra Walsh, *Eigenform Product Identities for Degree-Two Siegel Modular Forms*, J. Number Theory **204** (2019), 25-40. MR3991412
2. Hugh Geller, *Minimal Free Resolutions of Fiber Products*, Proc. Amer. Math. Soc. **150** (2022), no. 10, 4159–4172 DOI 10.1090/proc/15963. MR4470165
3. Hugh Geller, Rebecca R.G., *Canonical Forms of Neural Ideals*, arXiv:2209.09948 (Submitted)
4. Ela Celikbas, Hugh Geller, Toshinori Kobayashi, *Semidualizing Modules over Numerical Semigroup Rings*, arXiv:2306.14989 (Submitted)
5. Ela Celikbas, Hugh Geller, Tony Se, *Classifying Betti Numbers of Fiber Products*, arXiv:2307.05715 (Submitted)

Undergraduate Mentoring

George Mason University/West Virginia University	
Mason Experimental Geometry Lab (MEGL)	Fall 2022
External collaborator/mentor	
Clemson University	
REU in Coding Theory, Cryptography, and Number Theory	Summer 2018
Graduate Research Assistant to Dr. Jim Brown	

Teaching Experience

West Virginia University

Math 375: Applied Modern Algebra	SP'23,'24, FA'23
Math 343: Introduction to Linear Algebra	SP'24
Math 156: Calculus 2	FA'22 (x2)
Math 154: Calculus 1b with Precalculus	SP'23
Math 150: Applied Calculus	FA'23

Sewanee: The University of the South

Math 215: Discrete Mathematical Structures	SP'22
Math 210: Linear Algebra	FA'21
Math 102: Calculus II	FA'21 (x2)
Math 101: Calculus I	SP'22 (x2)

Clemson University

Algebra Preliminary Exam Review	SU'19
Math 4190: Discrete Mathematical Structures I	SP'20
Math 1080: Calculus of One Variable II	SP'19
Math 1060: Calculus of One Variable I	FA'16,'18,'19,'20
Math 1040: Precalculus and Introductory Differential Calculus	FA'14 (TA), FA'15
Math 3190: Introduction to Proof	SP'17 (TA)
Math 1070: Differential and Integral Calculus	SP'15 (TA)

Queens College, City University of New York

MATH 110: Mathematical Literacy	SP'16 (x2)
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Talks and Conferences Attended

Invited Research Talks:

1. Algebra and Number Theory Seminar, Texas Tech University, October 2023
2. AMS Spring Central Sectional Meeting, University of Cincinnati, April 2023
3. AMS Spring Southeastern Sectional Meeting, Georgia Institute of Technology, March 2023
4. AMS Spring Eastern Sectional Meeting, Tufts University, March 2022
5. Joint Mathematics Meetings, Seattle, WA, January 2022 (Postponed to April 2022)
6. AMS Fall Southeastern Sectional Meeting, University of South Alabama, November 2021
7. AMS Spring Eastern Sectional Meeting, Brown University, March 2021
8. AMS Spring Southeastern Sectional Meeting, Georgia Institute of Technology, March 2021
9. Algebra Seminar, West Virginia University, February 2021
10. Joint Mathematics Meetings, Washington, DC, January 2021
11. Algebra and Number Theory Seminar, Texas Tech University, November 2020
12. Combinatorics, Algebra, and Geometry Seminar, George Mason University, October 2020
13. AMS Fall Eastern Sectional Meeting (online), Pennsylvania State University, October 2020
14. Commutative and Homological Algebra Market Presentations, Virtual Seminar, September 2020

15. AMS Fall Central Sectional Meeting (online), University of Texas at El Paso, September 2020
16. Virtual Session on DG-Methods, May 2020
17. A Zoom Special Session on Commutative Algebra, March 2020
18. AMS Fall Southeastern Sectional Meeting, University of Florida, November 2019
19. Commutative Algebra Seminar, University of Utah, October 2019
20. AMS Spring Southeastern Sectional Meeting, Auburn University, March 2019

Conferences Organized

1. Fairfax Algebra Days (FAD), Spring 2024, co-organizing with Ela Celikbas, Olgur Celikbas, Neil Epstein, and Rebecca R.G.
2. Morgantown Algebra Days (MAD), Spring 2023, co-organized with Ela Celikbas, and Olgur Celikbas

Seminars and Special Sessions Organized

1. Special Session on Commutative Algebra and its Applications, AMS Eastern Sectional Meeting at Howard University, April 2024, co-organized with Rebecca R.G.
2. WVU Algebra Seminar, Spring 2023, co-organizing with Ela Celikbas and Olgur Celikbas
3. Special Session on Combinatorial Commutative Algebra, AMS Southeastern Sectional Meeting at the University of Tennessee at Chattanooga, October 2022, co-organized with Keri Ann Sather-Wagstaff
4. Special Session on Homological Commutative Algebra, AMS Southeastern Sectional Meeting held Online, October 2020, co-organized with James Gossell and Keri Ann Sather-Wagstaff

Other Conferences and Workshops Attended

1. Commutative Algebra Market Preparation workshop (Summer CAMP), University of Nebraska - Lincoln, August 2023
2. Macaulay2 Workshop in Minnesota, University of Minnesota - Twin Cities, June 2023

External Funding

NSF Conference Grant for Fairfax Algebra Days in Spring 2024 (\$24991)	Fall 2023
AMS Graduate Student Travel Grant (\$250, unpsent due to COVID-19 cancellations)	Spring 2020

Professional Development

Clemson Graduate Student Teaching Institute (GSTI)	December 2019
Seminar on critical thinking strategies for the classroom and course development.	

Honors and Awards

Spring 2021

Clemson Doctoral Dissertation Completion Grant (\$12,000 stipend and a tuition waiver)
Drennon/Gabot Memorial Fund: Outstanding Graduate in Research,
Clemson School of Mathematical and Statistical Sciences (\$1000)

Spring 2020

Graduate Travel Grant, Clemson Graduate Student Government (\$750)

Fall 2019

Phi Kappa Phi, inducted into Chapter 49
Graduate Travel Grant, Clemson Graduate Student Government (\$750)
GSTI Honorarium (\$800 for professional development)

Summer 2019

Graduate Travel Grant, Clemson Graduate Student Government (\$750)

Spring 2019

Graduate Travel Grant, Clemson Graduate Student Government (\$448)

Spring 2017

Drennon/Gabet Endowed Memorial Fund: Excellence in Graduate Teaching,
Clemson School of Mathematical and Statistical Sciences (\$700)

Spring 2014

Phi Beta Kappa, inducted into the Chapter: Beta of Maryland

Fall 2013

Landmark Conference Senior Scholar Athlete, Cross Country

Leadership and Service

Clemson University

SMSS Graduate Student Advisory Council, Establishing Committee	2020 - 2021
Graduate Student Senator, Finance Committee Member	2017 - 2019
Graduate Student Academic Grievance Committee	2018 - 2019
Panel Member, Clemson Mathematics Teacher Training Seminar	January 2019
Interim Department Chair Search Committee	Spring 2018
Panel Member, Clemson Mathematics Teacher Training Seminar	April 2017

Goucher College

President, Pi Mu Epsilon	2013 - 2014
Captain, Track and Field	Spring 2014
Captain, Cross Country	Fall 2013

Additional Math Training

Analysis

Preliminary Exam, PhD/Strong Pass	Summer 2017
Math 8220: Measure and Integration	Spring 2017
Math 8210: Linear Analysis	Fall 2014

Stochastics

Preliminary Exam, PhD/Strong Pass	Winter 2017
Math 8170: Stochastic Models in Operations Research I	Fall 2016
Math 8030: Stochastic Processes	Summer 2016
Math 8000: Probability	Fall 2015