

# BLAKE FARMAN

## CURRICULUM VITAE

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MATHEMATICS AND STATISTICS  
LOUISIANA TECH UNIVERSITY  
BFARMAN@LATECH.EDU  
[HTTPS://WWW.BLAKEFARMAN.PHD](https://www.blakefarman.phd)

### CONTACT INFORMATION

Nethken Hall  
P.O. Box 10348  
Ruston, Louisiana 71272  
+1 318 257 2951

### CITIZENSHIP

Born October 11, 1987 in Burlington, Vermont, United States

### RESEARCH INTERESTS

Algebra, (Noncommutative) Algebraic Geometry, Derived Categories, and Category Theory

### EDUCATION

<i>Doctor of Philosophy</i> , Mathematics University of South Carolina, Columbia, SC Dissertation: Geometry of Derived Categories on Noncommutative Projective Schemes Advisor: Matthew Ballard	May 12, 2018
<i>Master of Science</i> , Mathematics University of Vermont, Burlington, VT Major Concentration: Abstract Algebra Minor Concentration: Algebraic Number Theory	May 22, 2011
<i>Bachelor of Science</i> , Computer Science Rensselaer Polytechnic Institute, Troy, NY Minors: Applied Mathematics and French	May 16, 2009

### APPOINTMENTS

<i>Assistant Professor</i> Louisiana Tech University, Ruston, LA	September 2024 - Present
<i>Assistant Professor</i> University of Louisiana at Monroe, Monroe, LA	August 2020 - August 2024
<i>Capital One Endowed Professorship in Mathematics</i> University of Louisiana at Monroe, Monroe, LA	August 2020 - May 2023
<i>Visiting Assistant Professor</i> Lafayette College, Easton, PA	July 2018 - July 2020
<i>Graduate Teaching Assistant</i> University of South Carolina, Columbia, SC	August 2012 - May 2018
<i>Graduate Teaching Assistant</i> University of Vermont, Burlington, VT	August 2009 - May 2011

### LEADERSHIP AND GOVERNANCE

<i>Communication Coordinator (Officer)</i> Louisiana-Mississippi Section Mathematical Association of America	February 2025 - Present
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<i>Membership Outreach Director (Officer)</i> Board of Directors Friends of Black Bayou Black Bayou National Wildlife Refuge Monroe, LA	January 2025 - Present
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<i>Director at Large</i> Board of Directors Friends of Black Bayou Black Bayou National Wildlife Refuge Monroe, LA	January 2024 - January 2025
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## EMPLOYMENT

<i>Associate</i> Princeton Consultants, Inc, Princeton, NJ Information Technology consultant.	August 2011 - August 2012
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## PUBLICATIONS

Ballard, M., Farman, B., 2021. Kernels for noncommutative projective schemes. *J. Noncommut. Geom.* 15, 1129–1180. <https://doi.org/10.4171/jncg/427>

Farman, B., Clifton, A., Long, W., Cruse, K., 2025. Fostering Growth Mindsets: Implementing Standards-Based Grading in College Algebra, in: 2025 ASEE Annual Conference & Exposition Proceedings. Presented at the 2025 ASEE Annual Conference & Exposition, ASEE Conferences, Montreal, Quebec, Canada, p. 56592. <https://doi.org/10.18260/1-2--56592>

Clifton, A., Fendley, M., Farman, B., Coriell, J., 2025. Work in Progress: First-Year Engineering Students' Confidence in Communicating Mathematical Content, in: 2025 ASEE Annual Conference & Exposition Proceedings. Presented at the 2025 ASEE Annual Conference & Exposition, ASEE Conferences, Montreal, Quebec, Canada, p. 57495. <https://doi.org/10.18260/1-2--57495>

## FUNDING

<i>Applied eXploration In Open Mathematics Lab [AXIOM Lab]</i> Louisiana Board of Regents Support Fund Targeted Departmental Enhancement Grant to establish a dedicated research collaboration lab within the Mathematics and Statistics program at Louisiana Tech University.	\$60,875
<i>Student Activity Enhancement Fee</i> Student Development, University of Louisiana at Monroe SAEF Grant to take mathematics students to the annual meeting of the Louisiana-Mississippi section of the Mathematical Association of America in New Orleans, LA.	\$2,000
<i>Capital One Endowed Professorship in Mathematics (2022 - 2023)</i>	\$5370
<i>Capital One Endowed Professorship in Mathematics (2021 - 2022)</i>	\$5070
<i>Capital One Endowed Professorship in Mathematics (2020 - 2021)</i>	\$4790

## SUBMITTED GRANTS

<i>LEAPS-MPS: Building the Foundations of Formal (Declined)</i> <i>Homotopy Theory through Model Categories (FY 25)</i> National Science Foundation	\$165,753
<i>Fourier-Mukai Partners in Noncommutative Algebraic Geometry (Declined)</i> DMS - Algebra and Number Theory National Science Foundation	\$118,624

<i>Fourier-Mukai Partners in Noncommutative Algebraic Geometry (Declined)</i>	\$113,918
Research Competitiveness Subprogram, FY 23	
Louisiana Board of Regents Support Fund	
<i>Fourier-Mukai Partners in Noncommutative Algebraic Geometry (Declined)</i>	\$142,041
Research Competitiveness Subprogram, FY 24	
Louisiana Board of Regents Support Fund	
<i>Derived Categories in Noncommutative Projective Algebraic Geometry (Declined)</i>	\$210,000
Proposed NSF Mathematical Sciences Post Doctoral Research Fellowship to work with Ragnar Buchweitz (University of Toronto). Later revised to work with Michael Weems (University of Glasgow)	
<i>Dean's Dissertation Fellowship Nominee (Declined)</i>	\$25,000
Nominated by the Department of Mathematics at the University of South Carolina for a fellowship from the College of Arts and Sciences to spend a year in residence at the Institute of Advanced Study in Princeton, NJ.	

## AWARDS AND HONORS

<i>College of Engineering and Science Education Award</i>	2025
<i>Project NExT (New <b>E</b>xperiences In <b>T</b>eaching) Fellow</i>	Red '22
The Mathematical Association of America's (MAA) Project NExT aims to build a cohort amongst early career faculty, providing guidance on building a successful academic career and positioning fellows to become leaders within the mathematics community. The fellowship consists of three week-long meetings at MathFest in August 2022, the Joint Math Meetings (JMM) in January 2023, and the MathFest in August 2023.	
<i>Rensselaer Medalist (2004)</i>	\$60,000
Scholarship to Rensselaer Polytechnic Institute.	

## GRADUATE MENTORING AND RESEARCH SUPERVISION

Joshua Bush	2025 - Present
Ph.D. Student, Computational Analysis and Modeling	
Louisiana Tech University	

## UNDERGRADUATE MENTORING AND RESEARCH SUPERVISION

Riya Shrestha	Spring 2024
Emerging Scholars Program, University of Louisiana at Monroe	
Knot Theory research project focused on identifying a family of knots for which there is a winning strategy in the Region Unknot Game.	
<i>The Entrepreneurship Pelican Cup</i>	Spring 2023
Immerse AR	
Served as faculty advisor for one of six finalists in the Pelican Cup Entrepreneurship Pelican Cup business competition.	
Sagar Bhetuwal	Spring 2021
Emerging Scholars Program, University of Louisiana at Monroe	
Number Theory research project focused on providing a formal verification of the proof of the Prime Number Theorem using the Lean proof assistant.	

## TEACHING EXPERIENCE

### LOUISIANA TECH UNIVERSITY

Course Number	Course Name	Section
Math 5083	Intro to Abstract Algebra	(F25)
Math 4083	Intro to Abstract Algebra	(F25)
Math 587	Interactive Theorem Proving with Lean	(S25)
Math 490	Interactive Theorem Proving with Lean	(S25)
Math 308	Introduction to Linear Algebra	001 (W25)
Math 243	Calculus III	004 (F24)

### UNIVERSITY OF LOUISIANA AT MONROE

Course Number	Course Name	Section
Math 4007	History of Mathematics	44692 (F22)
Math 3086	Modern Algebra	44367 (F21), 63395 (S23)
Math 3080	Real Analysis	64863 (S22), 44174 (F23)
Math 3073	Numerical Methods	45407 (F23)
Math 3040	Introduction to Algebra and Analysis	64086 (S24)
Math 2040	Foundations of Mathematics	65041 (S23)
Math 2032	Calculus III	44879 (F22), 44879 (F24)
Math 2002	Applied Linear Algebra	41001 (S21), 64042 (F21), 64042 (S23)
Math 1032	Calculus II	40999 (F24)
Math 1031	Calculus I	63789 (S24), 40997 (F24)
Math 1018	Contemporary Mathematics	40992, 40994 (F21), 60847, 62225 (S22)
Math 1011	College Algebra	42181, 43002, 43013 (F20), 62690, 62691 (S21), 63057, 63167 (S24)
Math 1007	Contemporary Mathematics	45282, 45288 (F22), 64979 (S23), 45282, 45288 (F23)

### LAFAYETTE COLLEGE

Course Number	Course Name	Sections
Math 272	Linear Algebra with Applications	01 (S20)
Math 162	Calculus II	06, 07 (S19), 01, 03 (F19)
Math 161	Calculus I	01, 04 (F18), 04 (F19), 01, 02 (S20)
Math 161	Summer Program to Advance Leadership	SPAL (Su19)

### UNIVERSITY OF SOUTH CAROLINA

Course Number	Course Name	Sections
Math 170	Finite Mathematics	007 (S14), 007 (S16)
Math 142	Calculus II	004 (Su14), 020 (S18)
Math 122	Calculus for Business Administration and Social Sciences	E01 (S17)
Math 116	Brief Precalculus Mathematics	E1B, E2B (F13), E1B, E2B (F15), E1B, E2B (F16)
Math 115	Precalculus Mathematics	011 (F14)
Math 111	Basic College Mathematics	M13 (Su13), 006 (S15), 006 (F17)

### UNIVERSITY OF VERMONT

Course Number	Course Name	Sections
Math 019	Fundamentals of Calculus I	S, W(F10)
Math 017	Applications of Finite Math	G (F09), A (S10), Z2 (Su10)

## PRESENTATIONS

<i>Fostering Growth Mindsets:</i> <i>Implementing Standards-Based Grading in College Algebra</i> Annual Meeting of the Louisiana/Mississippi Section Mathematical Association of America Jackson, MS	February 22, 2025
<i>Algebra, Geometry, and Categories, Oh My!</i> Louisiana Tech University Ruston, LA	May 11, 2023
<i>Implementing Standards Based Grading in STEM</i> University of Louisiana System For our Future Conference 2023 Lake Charles, LA	March 28, 2023
<i>Algebra, Geometry, and Categories, Oh My!</i> Department Seminar, Lafayette College, Easton, PA	March 11, 2020
<i>A Little Abstract Nonsense</i> Lafayette College, Easton, PA	May 21, 2018
<i>Abstract Nonsense: Grokking Category Theory</i> Wilkes University, Wilkes-Barre, PA	May 17, 2018
<i>Kernels for Noncommutative Projective Schemes</i> Graduate Colloquium University of South Carolina, Columbia, SC	November 28, 2017
<i>Kernels for Noncommutative Projective Schemes</i> Algebra Seminar University of New Brunswick, Fredericton, NB, CA	October 12, 2017
<i>Kernels for Noncommutative Projective Schemes</i> Algebra Seminar Temple University, Philadelphia, PA	October 9, 2017
<i>Kernels for Noncommutative Projective Schemes</i> Algebraic Geometry Seminar University of South Carolina, Columbia, SC	August 28, 2017
<i>Noncommutative Projective Schemes</i> Temple Graduate Student Conference in Algebra, Geometry, and Topology Temple University, Philadelphia, PA	May 13, 2016
<i>Noncommutative Projective Schemes</i> Student Algebra/Number Theory Seminar University of South Carolina, Columbia, SC	May 14, 2016
<i>Fully Faithful Abstract Nonsense:</i> <i>Representable Functors and The Yoneda Embedding</i> Graduate Colloquium University of South Carolina, Columbia, SC	November 2015
<i>Fully Faithful Abstract Nonsense:</i> <i>Representable Functors and The Yoneda Embedding</i> Graduate Student Algebraic Geometry, Commutative Algebra, and Number Theory Seminar University of South Carolina, Columbia, SC	July 2015

## CONFERENCES AND WORKSHOPS

Funding for PANTS, GAGS, and regional workshops provided by federal funding agencies supporting the meetings. Funding from the Capital One Endowed Professorship in Mathematics provided for travel to BIRS

and participation in Project NExT (MathFest 2022, JMM 2023, and MathFest 2023).  
Funding for participation in the Mathematics Research Community provided by the American Mathematical Society.

<i>LA/MS Sectional Meeting</i> Mathematical Association of America Jackson, MS	February 20 - February 22, 2025
<i>Math Corequisite Academy Workshop</i> Louisiana Board of Regents Baton Rouge, LA	October 15, 2024
<i>LA/MS Sectional Meeting</i> Mathematical Association of America New Orleans, LA	February 29 - March 2, 2024
<i>High School Math Teacher and Faculty Collaboration</i> Louisiana Department of Education Baton Rouge, LA	November 30, 2023
<i>Math Corequisite Academy Workshop</i> Louisiana Board of Regents Baton Rouge, LA	November 7, 2023
<i>Mathematical Association of America MathFest</i> Tampa, FL	August 1 - 6, 2023
<i>Mathematics Research Community</i> Derived Categories, Arithmetic and Geometry, Bridgeland Stability Group Beaver Hollow Conference Center, Java, NY	June 4 - 10, 2023
<i>Joint Mathematics Meetings</i> Boston, MA	January 3 - 7, 2023
<i>Mathematical Association of America MathFest</i> Philadelphia, PA	August 3 - 6, 2022
<i>Mathematical Association of America Project NExT (New Experiences in Teaching)</i> Philadelphia, PA	August 1 - 3, 2022
<i>Series on Exploring Combinatorics and Number Theory (SECANT) IV</i> Cedar Crest College, Allentown, PA (Online)	January 15 - 16, 2022
<i>Derived, Birational, and Categorical Algebraic Geometry</i> Invited Participant Banff International Research Station, Banff, Alberta, CA	November 14 - 19, 2021
<i>Series on Exploring Combinatorics and Number Theory (SECANT) III</i> Cedar Crest College, Allentown, PA (Online)	January 15 - 16, 2021
<i>Derived, Birational, and Categorical Algebraic Geometry</i> Invited Participant Banff International Research Station, Banff, Alberta, CA (Online)	November 2 - 6, 2020
<i>Joint Mathematics Meetings</i> Denver, CO	January 15-17, 2020
<i>Series on Exploring Combinatorics and Number Theory (SECANT) II</i> Cedar Crest College, Allentown, PA	October 12-13, 2019
<i>Joint Mathematics Meetings</i> Baltimore, MD	January 16-19, 2019
<i>Series on Exploring Combinatorics and Number Theory (SECANT)</i> Cedar Crest College, Allentown, PA	November 17-18, 2018
<i>Georgia Algebraic Geometry Symposium</i> Georgia Institute of Technology, Atlanta, GA	February 23-25, 2018

<i>Workshop on Topics in Algebraic Geometry</i> The University of North Carolina at Chapel Hill, Chapel Hill, NC	November 3-5, 2017
<i>Palmetto Number Theory Series (PANTS) XXVIII</i> University of Tennessee, Knoxville, TN	September 16-17, 2017
<i>Georgia Algebraic Geometry Symposium</i> University of Georgia, Athens, GA	March 3-5, 2017
<i>Workshop on Symplectic Varieties and Geometric Representation Theory</i> The University of North Carolina at Chapel Hill, Chapel Hill, NC	October 28-30, 2016
<i>UGA-SWAG: Summer Workshop in Algebraic Geometry</i> University of Georgia, Athens, GA	August 26-29, 2016
<i>Temple Graduate Student Conference in Algebra, Geometry, and Topology</i> Temple University, Philadelphia, PA	May 14-15, 2016
<i>Georgia Algebraic Geometry Symposium</i> Emory University, Atlanta, GA	October 2015
<i>AMS Summer Institute on Algebraic Geometry</i> University of Utah, Salt Lake City, UT	July 27 - 31, 2015
<i>Georgia Algebraic Geometry Symposium</i> University of Georgia, Athens, GA	October 2014
<i>Arizona Winter School</i> University of Arizona, Tucson, AZ	March 2014
<i>Palmetto Number Theory Series (PANTS) XXI</i> Clemson University, Clemson, SC	December 2013
<i>Palmetto Number Theory Series (PANTS) XX</i> Davidson College, Davidson, NC	September 2013
<i>Algebraic Geometry Northeastern Series (AGNES)</i> Yale University, New Haven, CT	April 2013
<i>AMS Spring Western Sectional Meeting</i> University of Colorado, Boulder, CO	April 2013
<i>Palmetto Number Theory Series (PANTS) XIX</i> University of South Carolina, Columbia, SC	December 2012
<i>Palmetto Number Theory Series (PANTS) XVIII</i> Wake Forest University, Winston-Salem, NC	September 2012

## PROFESSIONAL MEMBERSHIP

<i>Mathematical Association of America</i>	Member
<i>American Mathematical Society</i>	Member

## SERVICE

### TO THE PROFESSION

<i>Section NExT Committee Member</i> Louisiana-Mississippi Section Mathematical Association of America	February 2025 - Present
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### TO THE STATE

<i>Mindset Meauxtivor</i> Louisiana Board of Regents	Fall 2024 - Spring 2025
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## TO THE UNIVERSITY

### LOUISIANA TECH UNIVERSITY

*Literary Rally* March 15, 2025

Proctor

*Undergraduate Research & Service-Learning Symposium* March 14, 2025

Judge

*Professors on the Plaza* October 16, 2024

Louisiana Tech University

### UNIVERSITY OF LOUISIANA AT MONROE

*Browse on the Bayou* September 30, 2022

Mathematics program representative for ULM's Fall on-campus recruiting event

University of Louisiana at Monroe

*Mathematics Hiring Committee Chair* Fall 2023

University of Louisiana at Monroe

*Mathematics Hiring Committee Member* Fall 2022 - Spring 2023

University of Louisiana at Monroe

*Co-Requisite Course Design* Spring 2022

Contemporary Mathematics

University of Louisiana at Monroe

*Browse on the Bayou* March 21, 2022

Mathematics program representative for ULM's Spring on-campus recruiting event

University of Louisiana at Monroe

*Investiture Ceremony Marshal* October 1, 2021

University of Louisiana at Monroe

*University Curriculum Committee Member* 2021-2024

University of Louisiana at Monroe

*Louisiana Math Forward Committee Member* 2021

University of Louisiana at Monroe

*Mathematics Hiring Committee Member* Spring 2021

University of Louisiana at Monroe

### UNIVERSITY OF SOUTH CAROLINA

*High School Math Contest Proctor* 2013-2015

University of South Carolina

## TO THE COMMUNITY

*Fall Celebration* October 19, 2024

Setup, Operated Canoe/Kayak Rental, Breakdown

Black Bayou Lake National Wildlife Refuge

*Water Sweep* September 14, 2024

Waterway cleanup at Black Bayou Lake National Wildlife Refuge

Ouachita Green

## ORGANIZER

*Student Algebra/Number Theory Seminar* Summer 2016

University of South Carolina



*Student Algebraic Geometry, Commutative Algebra, and Number Theory Seminar*

Summer 2015

University of South Carolina

*Student Algebraic Geometry Seminar*

Spring 2015

University of South Carolina

*Student Algebraic Geometry Seminar*

Fall 2014

University of South Carolina