Blake Farman

Curriculum Vitae

Mathematics and Statistics
Louisiana Tech University
bfarman@latech.edu
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

Doctor of Philosophy, Mathematics — May 12, 2018
University of South Carolina, Columbia, SC
Dissertation: Geometry of Derived Categories on Noncommutative Projective Schemes
Advisor: Matthew Ballard

Master of Science, Mathematics — May 22, 2011
University of Vermont, Burlington, VT
Major Concentration: Abstract Algebra
Minor Concentration: Algebraic Number Theory

Bachelor of Science, Computer Science — May 16, 2009
Rensselaer Polytechnic Institute, Troy, NY
Minors: Applied Mathematics and French

Appointments

Assistant Professor — September 2024 - Present
Louisiana Tech University, Ruston, LA

Assistant Professor — August 2020 - August 2024
University of Louisiana at Monroe, Monroe, LA

Capital One Endowed Professorship in Mathematics — August 2020 - May 2023
University of Louisiana at Monroe, Monroe, LA

Visiting Assistant Professor — July 2018 - July 2020
Lafayette College, Easton, PA

Graduate Teaching Assistant — August 2012 - May 2018
University of South Carolina, Columbia, SC

Graduate Teaching Assistant — August 2009 - May 2011
University of Vermont, Burlington, VT

Leadership and Governance

Communication Coordinator (Officer) — February 2025 - Present
Louisiana-Mississippi Section
Mathematical Association of America

Membership Outreach Director (Officer)   January 2025 - Present
Board of Directors
Friends of Black Bayou
Black Bayou National Wildlife Refuge
Monroe, LA

Director at Large   January 2024 - January 2025
Board of Directors
Friends of Black Bayou
Black Bayou National Wildlife Refuge
Monroe, LA

EMPLOYMENT

Associate   August 2011 - August 2012
Princeton Consultants, Inc, Princeton, NJ
Information Technology consultant.

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

Applied e**X**ploration **I**n **O**pen **M**athematics Lab [AXIOM Lab] $60,875
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.

Student Activity Enhancement Fee $2,000
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.

Capital One Endowed Professorship in Mathematics (2022 - 2023) $5370
Capital One Endowed Professorship in Mathematics (2021 - 2022) $5070
Capital One Endowed Professorship in Mathematics (2020 - 2021) $4790

SUBMITTED GRANTS

LEAPS-MPS: Building the Foundations of Formal (Declined) $165,753
Homotopy Theory through Model Categories (FY 25)
National Science Foundation

Fourier-Mukai Partners in Noncommutative Algebraic Geometry (Declined) DMS - Algebra and Number Theory National Science Foundation	$118,624
Fourier-Mukai Partners in Noncommutative Algebraic Geometry (Declined) Research Competitiveness Subprogram, FY 23 Louisiana Board of Regents Support Fund	$113,918
Fourier-Mukai Partners in Noncommutative Algebraic Geometry (Declined) Research Competitiveness Subprogram, FY 24 Louisiana Board of Regents Support Fund	$142,041
Derived Categories in Noncommutative Projective Algebraic Geometry (Declined) 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)	$210,000
Dean's Dissertation Fellowship Nominee (Declined) 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.	$25,000

Awards and Honors

Education Award College of Engineering and Science Louisiana Tech University	2025
Project NExT (New Experiences In Teaching) Fellow The Mathematical Association of America	Red '22
Rensselaer Medalist (2004) Scholarship to Rensselaer Polytechnic Institute.	$60,000

Graduate Mentoring and Research Supervision

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

Undergraduate Mentoring and Research Supervision

Riya Shrestha 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.	Spring 2024
The Entrepreneurship Pelican Cup Immerse AR Served as faculty advisor for one of six finalists in the Pelican Cup Entrepreneurship Pelican Cup business competition.	Spring 2023
Sagar Bhetuwal 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.	Spring 2021

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

Formal Methods in Modern Algebra	October 9, 2025
Computational Analysis and Modeling Seminar	
Louisiana Tech University, Ruston, LA	

A Little Algebraic Topology — April 11, 2025
Faculty Seminar
COES Graduate Student Council
Louisiana Tech University, Ruston, LA

Fostering Growth Mindsets: Implementing Standards-Based Grading in College Algebra — February 22, 2025
Annual Meeting of the Louisiana/Mississippi Section
Mathematical Association of America
Jackson, MS

Algebra, Geometry, and Categories, Oh My! — May 11, 2023
Louisiana Tech University
Ruston, LA

Implementing Standards Based Grading in STEM — March 28, 2023
University of Louisiana System For our Future Conference 2023
Lake Charles, LA

Algebra, Geometry, and Categories, Oh My! — March 11, 2020
Department Seminar, Lafayette College, Easton, PA

A Little Abstract Nonsense — May 21, 2018
Lafayette College, Easton, PA

Abstract Nonsense: Grokking Category Theory — May 17, 2018
Wilkes University, Wilkes-Barre, PA

Kernels for Noncommutative Projective Schemes — November 28, 2017
Graduate Colloquium
University of South Carolina, Columbia, SC

Kernels for Noncommutative Projective Schemes — October 12, 2017
Algebra Seminar
University of New Brunswick, Fredericton, NB, CA

Kernels for Noncommutative Projective Schemes — October 9, 2017
Algebra Seminar
Temple University, Philadelphia, PA

Kernels for Noncommutative Projective Schemes — August 28, 2017
Algebraic Geometry Seminar
University of South Carolina, Columbia, SC

Noncommutative Projective Schemes — May 13, 2016
Temple Graduate Student Conference in Algebra, Geometry, and Topology
Temple University, Philadelphia, PA

Noncommutative Projective Schemes — May 14, 2016
Student Algebra/Number Theory Seminar
University of South Carolina, Columbia, SC

Fully Faithful Abstract Nonsense: — November 2015
Representable Functors and The Yoneda Embedding
Graduate Colloquium
University of South Carolina, Columbia, SC

Fully Faithful Abstract Nonsense: July 2015
Representable Functors and The Yoneda Embedding
Graduate Student Algebraic Geometry, Commutative Algebra, and Number
Theory Seminar
University of South Carolina, Columbia, SC

Conferences and Workshops

LA/MS Sectional Meeting February 20 - February 22, 2025
Mathematical Association of America
Jackson, MS

Math Corequisite Academy Workshop October 15, 2024
Louisiana Board of Regents
Baton Rouge, LA

LA/MS Sectional Meeting February 29 - March 2, 2024
Mathematical Association of America
New Orleans, LA

High School Math Teacher and Faculty Collaboration November 30, 2023
Louisiana Department of Education
Baton Rouge, LA

Math Corequisite Academy Workshop Louisiana Board of Regents November 7, 2023
Baton Rouge, LA

Mathematical Association of America MathFest August 1 - 6, 2023
Tampa, FL

Mathematics Research Community June 4 - 10, 2023
Derived Categories, Arithmetic and Geometry, Bridgeland Stability Group
Beaver Hollow Conference Center, Java, NY

Joint Mathematics Meetings January 3 - 7, 2023
Boston, MA

Mathematical Association of America MathFest August 3 - 6, 2022
Philadelphia, PA

Mathematical Association of America Project NExT (New Experiences in August 1 - 3, 2022
Teaching)
Philadelphia, PA

Series on Exploring Combinatorics and Number Theory (SECANT) IV January 15 - 16, 2022
Cedar Crest College, Allentown, PA (Online)

Derived, Birational, and Categorical Algebraic Geometry November 14 - 19, 2021
Invited Participant
Banff International Research Station, Banff, Alberta, CA

Series on Exploring Combinatorics and Number Theory (SECANT) III January 15 - 16, 2021
Cedar Crest College, Allentown, PA (Online)

Derived, Birational, and Categorical Algebraic Geometry Invited Partici- November 2 - 6, 2020
pant
Banff International Research Station, Banff, Alberta, CA (Online)

Joint Mathematics Meetings January 15-17, 2020
Denver, CO

Series on Exploring Combinatorics and Number Theory (SECANT) II October 12-13, 2019
Cedar Crest College, Allentown, PA

Joint Mathematics Meetings January 16-19, 2019
Baltimore, MD

Series on Exploring Combinatorics and Number Theory (SECANT)   November 17-18, 2018
Cedar Crest College, Allentown, PA

Georgia Algebraic Geometry Symposium   February 23-25, 2018
Georgia Institute of Technology, Atlanta, GA

Workshop on Topics in Algebraic Geometry   November 3-5, 2017
The University of North Carolina at Chapel Hill, Chapel Hill, NC

Palmetto Number Theory Series (PANTS) XXVIII   September 16-17, 2017
University of Tennessee, Knoxville, TN

Georgia Algebraic Geometry Symposium   March 3-5, 2017
University of Georgia, Athens, GA

Workshop on Symplectic Varieties and Geometric Representation Theory   October 28-30, 2016
The University of North Carolina at Chapel Hill, Chapel Hill, NC

UGA-SWAG: Summer Workshop in Algebraic Geometry   August 26-29, 2016
University of Georgia, Athens, GA

Temple Graduate Student Conference in Algebra, Geometry, and Topology   May 14-15, 2016
Temple University, Philadelphia, PA

Georgia Algebraic Geometry Symposium   October 2015
Emory University, Atlanta, GA

AMS Summer Institute on Algebraic Geometry   July 27 - 31, 2015
University of Utah, Salt Lake City, UT

Georgia Algebraic Geometry Symposium   October 2014
University of Georgia, Athens, GA

Arizona Winter School   March 2014
University of Arizona, Tucson, AZ

Palmetto Number Theory Series (PANTS) XXI   December 2013
Clemson University, Clemson, SC

Palmetto Number Theory Series (PANTS) XX   September 2013
Davidson College, Davidson, NC

Algebraic Geometry Northeastern Series (AGNES)   April 2013
Yale University, New Haven, CT

AMS Spring Western Sectional Meeting   April 2013
University of Colorado, Boulder, CO

Palmetto Number Theory Series (PANTS) XIX   December 2012
University of South Carolina, Columbia, SC

Palmetto Number Theory Series (PANTS) XVIII   September 2012
Wake Forest University, Winston-Salem, NC

PROFESSIONAL MEMBERSHIP

Mathematical Association of America   Member
American Mathematical Society   Member

SERVICE

TO THE PROFESSION

Section NExT Committee Member   February 2025 - Present
Louisiana-Mississippi Section
Mathematical Association of America

To the State

Mindset Meauxtivator	Fall 2024 - Spring 2025
Louisiana Board of Regents	

To the University

Louisiana Tech University

Faculty Senate	2025-2026
Literary Rally	March 15, 2025
Proctor	
Undergraduate Research & Service-Learning Symposium	March 14, 2025
Judge	
Professors on the Plaza	October 16, 2024

University of Louisiana at Monroe

Browse on the Bayou	September 30, 2022
Mathematics program representative for ULM's Fall on-campus recruiting event	
Mathematics Hiring Committee Chair	Fall 2023
Mathematics Hiring Committee Member	Fall 2022 - Spring 2023
Co-Requisite Course Design	Spring 2022
Contemporary Mathematics	
Browse on the Bayou	March 21, 2022
Mathematics program representative for ULM's Spring on-campus recruiting event	
Investiture Ceremony Marshal	October 1, 2021
University Curriculum Committee Member	2021-2024
Louisiana Math Forward Committee Member	2021
Mathematics Hiring Committee Member	Spring 2021

University of South Carolina

High School Math Contest Proctor	2013-2015

To the Community

National Hunting and Fishing Day	September 27, 2025
Represented Friends of Black Bayou at the Louisiana Department of Wildlife and Fisheries event for National Hunting and Fishing day.	
Black Bayou Lake National Wildlife Refuge	
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   Summer 2015
Seminar
University of South Carolina

Student Algebraic Geometry Seminar   Spring 2015
University of South Carolina

Student Algebraic Geometry Seminar   Fall 2014
University of South Carolina