Blake Farman
Curriculum Vitae

Mathematics and Statistics
Louisiana Tech University
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Contact Information

Nethken Hall
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Ruston, Louisiana 71272
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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

Employment

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

Publications

(with Chris Dare, Emanuele Macrì, Lisa Marquand, Tina Peng, Laura Pertusi, Xuqiang Qin, Nick Rekuski, and Franco Rota) *Compactifications of Stability Conditions*, In Progress.

(with Matthew Ballard) *Kernels for Noncommutative Projective Schemes.*
J. Noncommut. Geom. 15 (2021), 1129-1180. doi: 10.4171/JNCG/427

Funding

Applied e**X**ploration **I**n **O**pen **M**athematics Lab [AXIOM Lab]   In Review
Targeted Departmental Enhancement Grant $60,875
Louisiana Board of Regents Support Fund

Fourier-Mukai Partners in Noncommutative Algebraic Geometry (FY 24)   In Review
DMS - Algebra and Number Theory $118,624
National Science Foundation

Student Activity Enhancement Fee   Funded
Student Development $2,000
University of Louisiana at Monroe

Fourier-Mukai Partners in Noncommutative Algebraic Geometry (FY 24)   Not Funded
Research Competitiveness Subprogram $113,918.
Louisiana Board of Regents Support Fund

Fourier-Mukai Partners in Noncommutative Algebraic Geometry (FY 23)   Not Funded
Research Competitiveness Subprogram $142,041.
Louisiana Board of Regents Support Fund

Derived Categories in Noncommutative Projective Algebraic Geometry (2018)   Not Funded
Proposed NSF Mathematical Sciences Post Doctoral Research Fellowship originally with Ragnar Buchweitz
(University of Toronto), later revised to work with Michael Weems (University of Glasgow) $210,000.

Dean's Dissertation Fellowship Nominee (2016)   Not Funded
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

*Project NExT (**N**ew **Ex**periences In **T**eaching) Fellow*   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.

Rensselaer Medalist   2004
Scholarship to Rensselaer Polytechnic Institute. $60,000.

Undergraduate Mentoring and Research Supervision

Emerging Scholars Program (ULM)   Spring 2024
Riya Shrestha
Knot Theory research project focused on identifying a family of knots for which there is a winning strategy in the Region Unknot Game.

The Entrepreneurship Pelican Cup   Spring 2023
Immerse AR
Served as faculty advisor for one of six finalists in the Pelican Cup Entrepreneurship Pelican Cup business competition.

Emerging Scholars Program (ULM)   Spring 2021
Sagar Bhetuwal
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 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

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

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   November 7, 2023
Louisiana Board of Regents
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 Teaching)   August 1 - 3, 2022
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   November 2 - 6, 2020
Invited Participant
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

Professors on the Plaza   October 16, 2024
Louisiana Tech University

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

Mindset Meauxtivator   Fall 2024 - Spring 2025
Louisiana Board of Regents

Director   January 2024 - Present
Friends of Black Bayou
Black Bayou National Wildlife Refuge
Monroe, LA

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

High School Math Contest Proctor 2013-2015
University of South Carolina

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