Contact Information

Louisiana Tech University
Mathematics & Statistics
258 Bogard Hall
201 Mayfield Ave
Ruston, LA 71272

aclifton@latech.edu
(318) 257-2164

Education

Doctor of Philosophy, Computational Analysis & Modeling   August 2025
Louisiana Tech University, Ruston, LA   Advisor: Galen Turner

Master of Science, Mathematics   May 2015
University of South Carolina, Columbia, SC   Advisor: Linyuan Lu

Master of Arts, Mathematics   May 2013
East Carolina University, Greenville, NC   Advisor: Johannes Hattingh

Bachelor of Arts, Mathematics/Hispanic Studies   May 2011
East Carolina University, Greenville, NC
Cum Laude

Employment

Assistant Professor   2025 - Present
Mathematics and Statistics Program
Louisiana Tech University, Ruston, LA

Instructor   2020 - 2025
Mathematics and Statistics Program
Louisiana Tech University, Ruston, LA

Visiting Assistant Professor   2019 - 2020
Department of Mathematics
Cedar Crest College, Allentown, PA

Instructor (Part-time)   2018 - 2019
Departments of Mathematics
Lafayette College, Easton, PA
Cedar Crest College, Allentown, PA

Instructor   2016 - 2018
On Your Time Initiatives, Department of Mathematics
University of South Carolina, Columbia, SC

Advisory Specialist   2015 - 2016
Risk and Regulatory, PwC US

Columbia, SC

Graduate Teaching Assistant 2013 - 2015
University of South Carolina, Columbia, SC

Graduate Teaching Assistant 2011 - 2013
East Carolina University, Greenville, NC

Papers/Preprints

Accepted/In Print

A. Clifton, K. Corbett Cruse, B. Farman, W. Long, "Fostering Growth Mindsets: Implementing Standards-Based Grading in College Algebra," *2025 ASEE Annual Conference & Exposition*, `https://peer.asee.org/57495`.

A. Clifton, B. Farman, M. Fendley, "Work in Progress: First-Year Engineering Students' Confidence in Communicating Mathematical Content," *2025 ASEE Annual Conference & Exposition*, `https://peer.asee.org/56592`.

A. Clifton, E. Czabarka, K. Liu, S. Loeb, U. Okur, L. Szekely, K. Wicke, "Decks of Rooted Binary Trees," *European Journal of Combinatorics* 124 (2025): 104076.
`https://www.sciencedirect.com/science/article/abs/pii/S0195669824001616`

A. Clifton, B. Choi, "Analyzing the Digital Brains of Virtual Assistants," *International Journal of Knowledge Engineering*, Vol. 9, No. 2, pp. 21-26, 2023.

A. Clifton, A.L. Lewis, "But Who *Should* Have Won? Simulating Outcomes of Judging Protocols and Ranking Systems." *Mathematics Research for the Beginning Student, Volume 1: Accessible Projects for Students Before Calculus.* (pp. 137-171). Cham: Springer International Publishing, 2022.

Submitted

A. Clifton, E. Czabarka, K. Liu, S. Loeb, U. Okur, L. Szekely, K. Wicke, "Reconstruction of Caterpillar Tanglegrams," Preprint: `https://arxiv.org/abs/2501.13670`

A. Clifton, J. Hattingh, E. Jonck, O. Nkuna, "Lower Bounds for the Packing Chromatic Number."

In Preparation

A. Clifton, E. Czabarka, K. Liu, S. Loeb, U. Okur, L. Szekely, K. Wicke, "Reconstruction of Planar Tanglegrams."

A. Clifton, G. Turner, H. Whitlatch. "Recursively 2-splittable graphs."

Other Contributions

A. Clifton, "Structural and Computational Results on Equitably Dissectible Graphs," Doctoral Dissertation.
A. Clifton, E. Czabarka, K. Liu, S. Loeb, U. Okur, L. Szekely, K. Wicke, "Universal rooted phylogenetic tree shapes and universal tanglegrams," `https://arxiv.org/abs/2308.06580`

"The Packing Chromatic Number of Random d-Regular Graphs"
University of South Carolina, Master's Thesis, Advisor: Linyuan Lu

"Irredundant and Mixed Ramsey Numbers"
East Carolina University, Master's Thesis, Advisor: Johannes Hattingh

Honors, Awards, and Recognition

Institute for Advanced Study Graduate Summer School   July 6-26, 2025
Funded participant
Park City Mathematics Institute, Park City, UT

Mathematical foundations of sampling connected balanced graph partitions   June 1-7, 2025
Funded participant
American Institute of Mathematics, Pasadena, CA

Catalyzing Advocacy in Science and Engineering Workshop   April 6-9, 2025
American Mathematical Society Fellow
Washington, D.C.

Mathematical Modeling of Severe Convective Hazards Under Future Climate Scenarios   Under Review
Co-PI, C.H. Robinson Postdoctoral Pairs Support Fund $14,762
Society for Industrial and Applied Mathematics

Applied eXploration In Open Mathematics Lab (AXIOM Lab)   Under Review
Co-PI, Targeted Departmental Enhancement Grant $60,875
Louisiana Board of Regents Support Fund

AWM Workshop and Poster Session at the Joint Mathematics Meeting   January 2025
Funded participant through NSF-DMS grant #2113506 $2000

First-Year Engineering Students' Confidence in Communicating Mathematical Content   December 2024
PI, KEEN Mini-Grant $2165
Louisiana Tech University

Engineering Unleashed Faculty Development   July 2024
EML and Student Research (EMRe) Funded Participant $3500

COES RED Travel Grant   Spring 2024
Support to present at the SIAM Conference on Discrete Mathematics (DM24) $1000
Louisiana Tech University, Ruston, LA

AMS Mathematics Research Communities, "Trees in Many Contexts"   Spring 2023
Follow-up research collaboration funding $3200

American Mathematical Society, Travel Grant   January 2022
Support to attend and host a special session at the Joint Mathematics Meetings $1300

COES RED Travel Grant   Fall 2022
Support to attend the Joint Mathematics Meetings $600
Louisiana Tech University, Ruston, LA

American Mathematical Society Mathematics Research Communities	2022
"Trees in Many Contexts," Funded Participant	

Faculty Development Award	Fall 2019
Support to attend the Joint Mathematics Meetings	$1380
Cedar Crest College, Allentown, PA	

Innovative Pedagogy Grant	Spring 2018
Flipping the Calculus I Classroom	$2070
University of South Carolina, Columbia, SC	

Two Thumbs Up Award	Spring 2018
University of South Carolina, Columbia, SC	

Mentoring and Research Supervision

Louisiana Tech University

Program Mentor	2024-2025
Louis Stokes Louisiana Alliance for STEM Participation	

Worked with students from historically underrepresented groups who wish to pursue
graduate studies in STEM.

Research Mentor	Winter 2022

Mentored one master's degree student on the statistical analysis in a project
concerning measures of trust for human-machine automation.

Cedar Crest College

Research Mentor	2019 - 2020

Supervised (with Dr. Joshua Harrington) one undergraduate student
in a research project concerning Paley-Type Graphs.

Presentations

Engineering Better Math Communication: Journaling as a Tool for Student Success	February 22, 2025
LA/MS MAA Section Meeting	
Belhaven University, Jackson, MS	

Network Resources: Towards a characterization of balanced vertex partitioned graphs	January 10, 2025
AWM Poster Session at the Joint Mathematics Meetings 2025	
Seattle, WA	

Equitable Dissections of Graphs	November 6, 2024
Invited Seminar Speaker	
Louisiana State University of Alexandria, Alexandria, LA	

A Graph Partitioning Problem	July 8, 2024
SIAM Conference on Discrete Mathematics 2024	
Spokane, WA	

Reconstructing Trees and Tanglegrams	May 18, 2024
33rd Cumberland Conference on Combinatorics, Graph Theory, & Computing	

Mississippi State University, Starkville, MS

Analyzing the Brains of Virtual Assistants   June 10, 2023
International Conference on Knowledge Engineering and Applications
Undiknas University, Bali, Indonesia

Decks of Rooted Binary Trees   April 14, 2023
COES Graduate Student Symposium
Louisiana Tech University, Ruston, LA

Implementing Standards Based Grading in STEM   March 28, 2023
Co-Presenter, Universities of Louisiana 6th Annual For Our Future Conference
Lake Charles, LA

Knowledge Graphs: An Overview of Techniques and Applications   March 6, 2023
Graduate Mini-Conference in Discrete Mathematics
University of South Carolina, Columbia, SC

Equitable Dissections   March 1, 2022
Invited Speaker, Spring Math Symposium
Gonzaga University, Spokane, WA

Equitable Dissections   February 18, 2022
COES Graduate Student Symposium
Louisiana Tech University, Ruston, LA

Packing Chromatic Number of Random d-regular Graphs   May 15-17, 2015
28th Cumberland Conference on Combinatorics, Graph Theory, & Computing
University of South Carolina, Columbia, SC

Lower Bounds for the Packing Chromatic Number of Cubic Graphs   October 31, 2014
Discrete Seminar
University of South Carolina, Columbia, SC

Lower Bounds for the Packing Chromatic Number of Cubic Graphs   May 24-26, 2013
26th Cumberland Conference on Combinatorics, Graph Theory, & Computing
Middle Tennessee State University, Murfreesboro, TN

Irredundant Ramsey Numbers   May 10-12, 2012
25th Cumberland Conference on Combinatorics, Graph Theory, & Computing
East Tennessee State University, Johnson City, TN

Irredundant Ramsey Numbers   April 13-15, 2012
Graduate Student Combinatorics Conference
University of Illinois at Urbana-Champaign, Champaign, IL

Research and Creative Achievement Week, Talk: Irredundant Ramsey Numbers   March 26-30, 2012
East Carolina University, Greenville, NC

SIAM Math Awareness Conference, Talk: Irredundant Ramsey Numbers   March 24, 2012
Old Dominion University, Norfolk, VA

Professional Development

Turn Your Idea into a Competitive NSF DUE Grant Proposal   March 20, 2025
Mathematical Association of America
Virtual Workshop

Association for Women in Mathematics Mentoring Luncheon   January 11, 2025
Invited participant; Joint Mathematics Meetings
Seattle, Washington

Framing & Maintaining a Research Agenda   December 12, 2024
Louisiana Tech University, Ruston, LA
Developing a research agenda that is productive and successful.

KEEN Crescendo Event   December 9, 2024
Tulane University, New Orleans, LA
Incorporating Entrepreneurially Minded Learning into the curriculum.

Quality Education for Minorities Network: Supporting Sponsored Program Success NSF EDU Proposal Development Workshop for IHEs in Arkansas, Louisiana, and Mississippi
Louisiana Tech University, Ruston, LA   November 12-13, 2024
Grant-writing workshop focused on NSF EDU proposals.

LA Tech Online Instruction Training   July 2022
Four virtual courses on incorporating universal design and active learning in online courses.

University of Louisiana System: Bridging the Divide   Summer 2020
Five virtual workshops concerning various aspects of student success and development.

LVAIC Teagle Video Creation Workshop: Levels 1 and 2   February 2019
Lehigh Valley, PA
Two workshops focusing on best practices in hybrid learning and flipped classrooms
and understanding the learners of the future.

LVAIC Teagle Universal Design Workshop   January 25, 2019
Lehigh University, Bethlehem, PA
Workshop focused on making educational materials, practices, and interactions
more inclusive and useful for all learners.

Conferences Attended

LA/MS MAA Section Meeting   February 20-22, 2025
Belhaven University
Jackson, MS

Joint Mathematics Meetings   January 8-11, 2025
Invited presenter at the AWM Workshop Graduate Student Poster Session
Seattle, WA

SIAM Conference on Discrete Mathematics   July 8-11, 2024
Spokane, WA

33rd Cumberland Conference on Combinatorics, Graph Theory, & Computing May 18-19, 2024
Mississippi State University, Starkville, MS

Godsil75 - A Celebration of Chris Godsil's 75th Birthday March 15-17, 2024
University of Waterloo
Virtual Participant

Joint Mathematics Meetings January 4-7, 2023
AMS Special Session Organizer, "Trees in Many Contexts"
Boston, MA

Second School on Graph Theory October 3-6, 2022
University of Johannesburg, South Africa
Virtual Participant

SECANT IV January 15-16, 2022
Cedar Crest College, Allentown, PA
Virtual Participant

paraDIGMS Spring Conference April 23-26, 2021
Virtual Conference

Coast Combinatorics Conference March 6, 2021
Virtual Conference

SECANT III, Organizer January 16-17, 2021
Cedar Crest College, Allentown, PA
Virtual Conference

Undergraduate Mathematics Conference February 22, 2020
Moravian College, Bethlehem, PA

Joint Mathematics Meetings January 14-18, 2020
Denver, CO

SECANT II, Organizer October 12-13, 2019
Cedar Crest College, Allentown, PA

EPADel, MAA Section Meeting October 5, 2019
Kutztown University, Kutztown, PA

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

SECANT I November 17-18, 2019
Cedar Crest College, Allentown, PA

Atlanta Lecture Series XIX April 22-23, 2017
Georgia State University, Atlanta, GA

Atlanta Lecture Series XIV February 14-15, 2015
Georgia State University, Atlanta, GA

Atlanta Lecture Series XI   January 25-26, 2014
Georgia State University, Atlanta, GA

Triangle Lectures in Combinatorics   September 21, 2013
North Carolina State University, Raleigh, NC

44th Southeastern International Conference on Combinatorics,   March 4-8, 2013
Graph Theory, and Computing
Florida Atlantic University, Boca Raton, FL

Conference for Undergraduate Women in Mathematics   January 28-30, 2011
University of Nebraska-Lincoln, Lincoln, NE

OUTREACH AND SERVICE

Undergraduate Student Poster Session, Judge   January 10, 2025
Joint Mathematics Meetings
Seattle, Washington

College of Engineering and Science First-Year Project Showcase, Judge   May 9, 2024
Louisiana Tech University, Ruston, LA

Undergraduate Research and Service Learning Symposium, Judge   March 15, 2024
Louisiana Tech University, Ruston, LA

Undergraduate Research and Service Learning Symposium, Judge   February 10, 2023
Louisiana Tech University, Ruston, LA

Cyberstorm, Volunteer   May 13, 2022
Louisiana Tech University, Ruston, LA

High School Teacher Workshop, Co-Instructor   April 29-30, 2022
Louisiana Tech University, Ruston, LA

Literary Rally, Proctor   March 12, 2022
Louisiana Tech University, Ruston, LA

Faculty and Staff University Senate   2021 - present
College of Engineering and Science Representative
Louisiana Tech University

Office of Women in Science & Engineering at Louisiana Tech University, Faculty Mentor   2020 - present
Participate in various campus events throughout the year in an effort to connect
undergraduate women in STEM majors.

Women in Science and Engineering (WISE) Forum, Faculty Mentor   February 12, 2019
DeSales University, Center Valley, PA

32nd High School Math Contest, University of South Carolina   February 3, 2018
Scavenger Hunt Coordinator

Columbia College's Math and Science Day for High School Girls   November 11, 2017
"Traveling Queen Chickens," Workshop Organizer and Leader

29th High School Math Contest, University of South Carolina	January 31, 2015
Proctor	

Summer Ventures in Science and Mathematics	Summer 2013
"Graphs, Groups, and Games," Instructor	

Summer Ventures in Science and Mathematics	Summer 2012
"Graph Theory/Groups and Games," Instructor	

TEACHING EXPERIENCE

The following is an exhaustive list of the courses I have taught with full responsibility.

LOUISIANA TECH UNIVERSITY

Honors Math 241 - Calculus I	Winter 2025
Math 241 - Calculus I	Winter 2025
Math 240 - Calculus 0	Winter 2025
Math 240 - Calculus 0 (Two sections)	Fall 2024
Stat 200 - Basic Statistics	Fall 2024
Math 242 - Calculus II (Three sections)	Spring 2024
Math 241 - Calculus I (Two sections)	Winter 2024
Math 240 - Precalculus	Winter 2024
Math 241 - Calculus I	Fall 2023
Math 240 - Precalculus (Two sections)	Fall 2023
Math 241 - Calculus I	Spring 2023
Stat 200 - Basic Statistics (Two sections)	Spring 2023
Math 100BC - College Algebra with Corequisite Support (Two sections)	Winter 2023
FYE 100 - First Year Experience Seminar (Computer Science section)	Fall 2022
Stat 200 - Basic Statistics	Fall 2022
Math 130 - Contemporary Mathematics	Fall 2022
Math 102/103BC - Applied College Algebra with Corequisite Support	Fall 2022
Stat 200 - Basic Statistics	Spring 2022
Math 101 - College Algebra (Two sections)	Spring 2022
Math 102/103BC - Applied College Algebra with Corequisite Support (Two Sections)	Winter 2022
FYE 100 - First Year Experience Seminar (Honors section)	Fall 2021
Math 101 - College Algebra (Two sections)	Fall 2021
Math 102/103BC - Applied College Algebra with Corequisite Support	Fall 2021
Math 100BC - College Algebra with Corequisite Support	Spring 2021
Math 101 - College Algebra (Two sections)	Spring 2021
Math 102/103BC - Applied College Algebra with Corequisite Support (Two sections)	Winter 2021
Math 101 - College Algebra	Winter 2021
Math 102/103BC - Applied College Algebra with Corequisite Support	Fall 2020
Math 100BC - College Algebra with Corequisite Support	Fall 2020

CEDAR CREST COLLEGE

Allentown, PA

Math 210 - Probability and Statistics	Spring 2020
Math 140 - Precalculus	Spring 2020
Math 110 - Probability and Statistics	Spring 2020
Math 102 - College Mathematics	Spring 2020

Math 140 - Precalculus	Fall 2019
Math 110 - Probability and Statistics (Two sections)	Fall 2019
Math 102 - College Mathematics	Fall 2019
Math 110 - Probability and Statistics	Spring 2019
Math 110 - Probability and Statistics	Fall 2018

Lafayette College

Easton, PA

Math 141 - Differential Calculus and Economic Modeling	Spring 2019
Math 186 - Applied Statistics	Spring 2019
Math 161 - Calculus I	Fall 2018

University of South Carolina

Columbia, SC

Math 122 - Calculus for Business Administration and Social Sciences	Summer 2018
Math 142 - Calculus II (Two sections)	Spring 2018
Math 141 - Calculus I (Two sections)	Spring 2018
Math 141 - Calculus I (Two sections)	Fall 2017
Math 122 - Calculus for Business Administration and Social Sciences (Two sections)	Fall 2017
Math 122 - Calculus for Business Administration and Social Sciences	Summer 2017
Math 142 - Calculus II (Two sections)	Spring 2017
Math 141 - Calculus I (Two sections)	Spring 2017
Math 141 - Calculus I (Two sections)	Fall 2016
Math 122 - Calculus for Business Administration and Social Sciences (Two sections)	Fall 2016
Math 374 - Discrete Structures (Guest Lecturer)	Fall 2016

University of South Carolina (Graduate Student)

Math 141 - Calculus I	Summer 2015
Math 170 - Finite Mathematics	Spring 2015
Math 111I - Intensive College Mathematics	Fall 2014
Math 141 - Calculus I	Summer 2014
Math 142: Calculus II Maple Lab and Recitation	Spring 2014
Math 115 - Pre-Calculus	Fall 2013

East Carolina University (Graduate Student)

Greenville, NC

Math 1065 - College Algebra	Spring 2013
Math 1065 - College Algebra	Fall 2012
Math 1050 - Mathematical Ideas	Spring 2012
Math 0001 - Intermediate Algebra	Fall 2011

Professional Memberships

American Mathematical Society (AMS), Society for Industrial and Applied Mathematics (SIAM), Association for Women in Mathematics (AWM)