

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
Louisiana Tech University, Ruston, LA

Expected February 2025
Advisor: Galen Turner

Master of Science, Mathematics
University of South Carolina, Columbia, SC

May 2015
Advisor: Linyuan Lu

Master of Arts, Mathematics
East Carolina University, Greenville, NC

May 2013
Advisor: Johannes Hattingh

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

May 2011

EMPLOYMENT

Instructor
Mathematics and Statistics Program
Louisiana Tech University, Ruston, LA

2020 - Present

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

2019 - 2020

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

2018 - 2019

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

2016 - 2018

Advisory Specialist
Risk and Regulatory, PwC US
Columbia, SC

2015 - 2016

Graduate Teaching Assistant
University of South Carolina, Columbia, SC

2013 - 2015

PAPERS/PREPRINTS

ACCEPTED/IN PRINT

A. Clifton, E. Czabarka, K. Liu, S. Loeb, U. Okur, L. Szekely, K. Wicke, “Decks of Rooted Binary Trees,” *European Journal of Combinatorics*, To appear.
Preprint: <https://arxiv.org/abs/2311.02255>

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, 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>

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.

IN PREPARATION

A. Clifton, E. Czabarka, K. Liu, S. Loeb, U. Okur, L. Szekely, K. Wicke, “Reconstruction of Caterpillar and Planar Tanglegrams.”

A. Clifton, K. Corbett Cruse, B. Farman, W. Long, “Fostering Growth Mindsets: Implementing Standards-Based Grading in College Algebra”

A. Clifton, M. Fendley, T. Fendley, “First-Year Engineering Students’ Confidence in Communicating Mathematical Content”

MASTER’S THESES

“The Packing Chromatic Number of Random d -Regular Graphs”
University of South Carolina, Advisor: Linyuan Lu

“Irredundant and Mixed Ramsey Numbers”
East Carolina University, Advisor: Johannes Hattingh

HONORS, AWARDS, AND RECOGNITION

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

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

<i>Engineering Unleashed Faculty Development</i> EML and Student Research (EMRe) Funded Participant	July 2024 \$3500
<i>COES RED Travel Grant</i> Support to present at the SIAM Conference on Discrete Mathematics (DM24) Louisiana Tech University, Ruston, LA	Spring 2024 \$1000
<i>AMS Mathematics Research Communities, "Trees in Many Contexts"</i> Follow-up research collaboration funding	Spring 2023 \$3200
<i>American Mathematical Society, Travel Grant</i> Support to attend and host a special session at the Joint Mathematics Meetings	January 2022 \$1300
<i>COES RED Travel Grant</i> Support to attend the Joint Mathematics Meetings Louisiana Tech University, Ruston, LA	Fall 2022 \$600
<i>American Mathematical Society Mathematics Research Communities</i> "Trees in Many Contexts," Funded Participant	2022
<i>Faculty Development Award</i> Support to attend the Joint Mathematics Meetings Cedar Crest College, Allentown, PA	Fall 2019 \$1380
<i>Innovative Pedagogy Grant</i> Flipping the Calculus I Classroom University of South Carolina, Columbia, SC	Spring 2018 \$2070
<i>Two Thumbs Up Award</i> University of South Carolina, Columbia, SC	Spring 2018

MENTORING AND RESEARCH SUPERVISION

LOUISIANA TECH UNIVERSITY

<i>Program Mentor</i> Louis Stokes Louisiana Alliance for STEM Participation Worked with students from historically underrepresented groups who wish to pursue graduate studies in STEM.	2024-2025
<i>Research Mentor</i> Mentored one master's degree student on the statistical analysis in a project concerning measures of trust for human-machine automation.	Winter 2022

CEDAR CREST COLLEGE

<i>Research Mentor</i> Supervised (with Dr. Joshua Harrington) one undergraduate student in a research project concerning Paley-Type Graphs.	2019 - 2020
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PRESENTATIONS

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

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

Joint Mathematics Meetings January 8-11, 2025
 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,
Graph Theory, and Computing* March 4-8, 2013
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

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

<i>Undergraduate Research and Service Learning Symposium</i> , Judge Louisiana Tech University, Ruston, LA	March 15, 2024
<i>Office of Women in Science & Engineering at Louisiana Tech University</i> , Faculty Mentor Participate in various campus events throughout the year in an effort to connect undergraduate women in STEM majors.	2020 - present
<i>Undergraduate Research and Service Learning Symposium</i> , Judge Louisiana Tech University, Ruston, LA	February 10, 2023
<i>Cyberstorm</i> , Volunteer Louisiana Tech University, Ruston, LA	May 13, 2022
<i>High School Teacher Workshop</i> , Co-Instructor Louisiana Tech University, Ruston, LA	April 29-30, 2022
<i>Literary Rally</i> , Proctor Louisiana Tech University, Ruston, LA	March 12, 2022
<i>Women in Science and Engineering (WISE) Forum</i> , Faculty Mentor DeSales University, Center Valley, PA	February 12, 2019
<i>32nd High School Math Contest</i> , University of South Carolina Scavenger Hunt Coordinator	February 3, 2018
<i>Columbia College's Math and Science Day for High School Girls</i> "Traveling Queen Chickens," Workshop Organizer and Leader	November 11, 2017
<i>29th High School Math Contest</i> , University of South Carolina Proctor	January 31, 2015
<i>28th High School Math Contest</i> , University of South Carolina Proctor	February 1, 2014
<i>Summer Ventures in Science and Mathematics</i> "Graphs, Groups, and Games," Instructor	Summer 2013
<i>Summer Ventures in Science and Mathematics</i> "Graph Theory/Groups and Games," Instructor	Summer 2012

TEACHING EXPERIENCE

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

LOUISIANA TECH UNIVERSITY

<i>Math 240 - Calculus 0</i> (Two sections)	Fall 2024
<i>Stat 200 - Basic Statistics</i>	Fall 2024
<i>Math 242 - Calculus II</i> (Three sections)	Spring 2024
<i>Math 241 - Calculus I</i> (Two sections)	Winter 2024
<i>Math 240 - Precalculus</i>	Winter 2024
<i>Math 241 - Calculus I</i>	Fall 2023

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

CEDAR CREST COLLEGE

Allentown, PA

<i>Math 210 - Probability and Statistics</i>	Spring 2020
<i>Math 140 - Precalculus</i>	Spring 2020
<i>Math 110 - Probability and Statistics</i>	Spring 2020
<i>Math 102 - College Mathematics</i>	Spring 2020
<i>Math 140 - Precalculus</i>	Fall 2019
<i>Math 110 - Probability and Statistics (Two sections)</i>	Fall 2019
<i>Math 102 - College Mathematics</i>	Fall 2019
<i>Math 110 - Probability and Statistics</i>	Spring 2019
<i>Math 110 - Probability and Statistics</i>	Fall 2018

LAFAYETTE COLLEGE

Easton, PA

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

UNIVERSITY OF SOUTH CAROLINA

Columbia, SC

<i>Math 122 - Calculus for Business Administration and Social Sciences</i>	Summer 2018
<i>Math 142 - Calculus II (Two sections)</i>	Spring 2018
<i>Math 141 - Calculus I (Two sections)</i>	Spring 2018
<i>Math 141 - Calculus I (Two sections)</i>	Fall 2017
<i>Math 122 - Calculus for Business Administration and Social Sciences (Two sections)</i>	Fall 2017
<i>Math 122 - Calculus for Business Administration and Social Sciences</i>	Summer 2017

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

UNIVERSITY OF SOUTH CAROLINA (GRADUATE STUDENT)

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

EAST CAROLINA UNIVERSITY (GRADUATE STUDENT)

Greenville, NC

<i>Math 1065 - College Algebra</i>	Spring 2013
<i>Math 1065 - College Algebra</i>	Fall 2012
<i>Math 1050 - Mathematical Ideas</i>	Spring 2012
<i>Math 0001 - Intermediate Algebra</i>	Fall 2011

PROFESSIONAL MEMBERSHIPS

American Mathematical Society (AMS)

Society for Industrial and Applied Mathematics (SIAM)

Association for Women in Mathematics (AWM)