

## CONTACT INFORMATION

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

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## 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, “Effects of Standards Based Grading in Introductory Mathematics”

### 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>	July 2024
EML and Student Research (EMRe) Funded Participant	\$3500

<i>COES RED Travel Grant</i>	Spring 2024
Support to present at the SIAM Conference on Discrete Mathematics (DM24)	\$1000

Louisiana Tech University, Ruston, LA

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

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

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

<i>American Mathematical Society Mathematics Research Communities</i>	2022
"Trees in Many Contexts," Funded Participant	

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

<i>Innovative Pedagogy Grant</i>	Spring 2018
Flipping the Calculus I Classroom	\$2070
University of South Carolina, Columbia, SC	

<i>Two Thumbs Up Award</i>	Spring 2018
University of South Carolina, Columbia, SC	

## MENTORING AND RESEARCH SUPERVISION

### LOUISIANA TECH UNIVERSITY

<i>Program Mentor</i>	2024-2025
Louis Stokes Louisiana Alliance for STEM Participation	
Worked with students from historically underrepresented groups who wish to pursue graduate studies in STEM.	

<i>Research Mentor</i>	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

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

## PRESENTATIONS

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

<i>A Graph Partitioning Problem</i>	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*  
Old Dominion University, Norfolk, VA

March 24, 2012

## 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 75<sup>th</sup> 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

<i>Coast Combinatorics Conference</i> Virtual Conference	March 6, 2021
<i>SECANT III</i> , Organizer Cedar Crest College, Allentown, PA Virtual Conference	January 16-17, 2021
<i>Undergraduate Mathematics Conference</i> Moravian College, Bethlehem, PA	February 22, 2020
<i>Joint Mathematics Meetings</i> Denver, CO	January 14-18, 2020
<i>SECANT II</i> , Organizer Cedar Crest College, Allentown, PA	October 12-13, 2019
<i>EPADel, MAA Section Meeting</i> Kutztown University, Kutztown, PA	October 5, 2019
<i>Joint Mathematics Meetings</i> Baltimore, MD	January 16-19, 2019
<i>SECANT I</i> Cedar Crest College, Allentown, PA	November 17-18, 2019
<i>Atlanta Lecture Series XIX</i> Georgia State University, Atlanta, GA	April 22-23, 2017
<i>Atlanta Lecture Series XIV</i> Georgia State University, Atlanta, GA	February 14-15, 2015
<i>Atlanta Lecture Series XI</i> Georgia State University, Atlanta, GA	January 25-26, 2014
<i>Triangle Lectures in Combinatorics</i> North Carolina State University, Raleigh, NC	September 21, 2013
<i>44th Southeastern International Conference on Combinatorics, Graph Theory, and Computing</i> Florida Atlantic University, Boca Raton, FL	March 4-8, 2013
<i>Conference for Undergraduate Women in Mathematics</i> University of Nebraska-Lincoln, Lincoln, NE	January 28-30, 2011

## OUTREACH AND SERVICE

<i>College of Engineering and Science First-Year Project Showcase</i> , Judge Louisiana Tech University, Ruston, LA	May 9, 2024
<i>Undergraduate Research and Service Learning Symposium</i> , Judge Louisiana Tech University, Ruston, LA	March 15, 2024

<i>Office of Women in Science &amp; 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</i> (Two sections)	Fall 2023
<i>Math 241 - Calculus I</i>	Spring 2023
<i>Stat 200 - Basic Statistics</i> (Two sections)	Spring 2023
<i>Math 100BC - College Algebra with Corequisite Support</i> (Two sections)	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 (Two sections)</i>	Spring 2017
<i>Math 141 - Calculus I (Two sections)</i>	Spring 2017
<i>Math 141 - Calculus I (Two sections)</i>	Fall 2016
<i>Math 122 - Calculus for Business Administration and Social Sciences (Two sections)</i>	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)*