

**Claflin University**

**RESEARCH|  
SCHOLARSHIP|  
CREATIVE EXPRESSION|  
DAY**

**2026**  
**Spring**

HOSTED BY: SPONSORED PROGRAMS AND  
RESEARCH OFFICE



**In the Spirit of UJIMA**

Transforming Our Community through Collective Work and Responsibility

# Lift Every Voice and Sing

1. Lift ev - 'ry voice and sing, till earth and heav - en  
 2. Ston - y the road we trod, bit - ter the chast - 'ning  
 3. God of our wea - ry years, God of our si - lent

ring, Ring with the har - mo nies of lib er -  
 rod, Felt in the days - when hope un - born er -  
 tears, Thou who hast brought us thus far on had the

ty; Let our re - joic - ing rise, high as the lis - t'ning  
 died; Yet with a stead - y beat, have not our wea - ry  
 way; Thou who hast by Thy might, led us in - to the

skies, Let it re - sound loud as the roll - ing sea.  
 feet, Come to the place for which our fa - thers sighed?  
 light, Keep us for - ev er in the path, we pray.



SPAR@CLAFLIN.EDU

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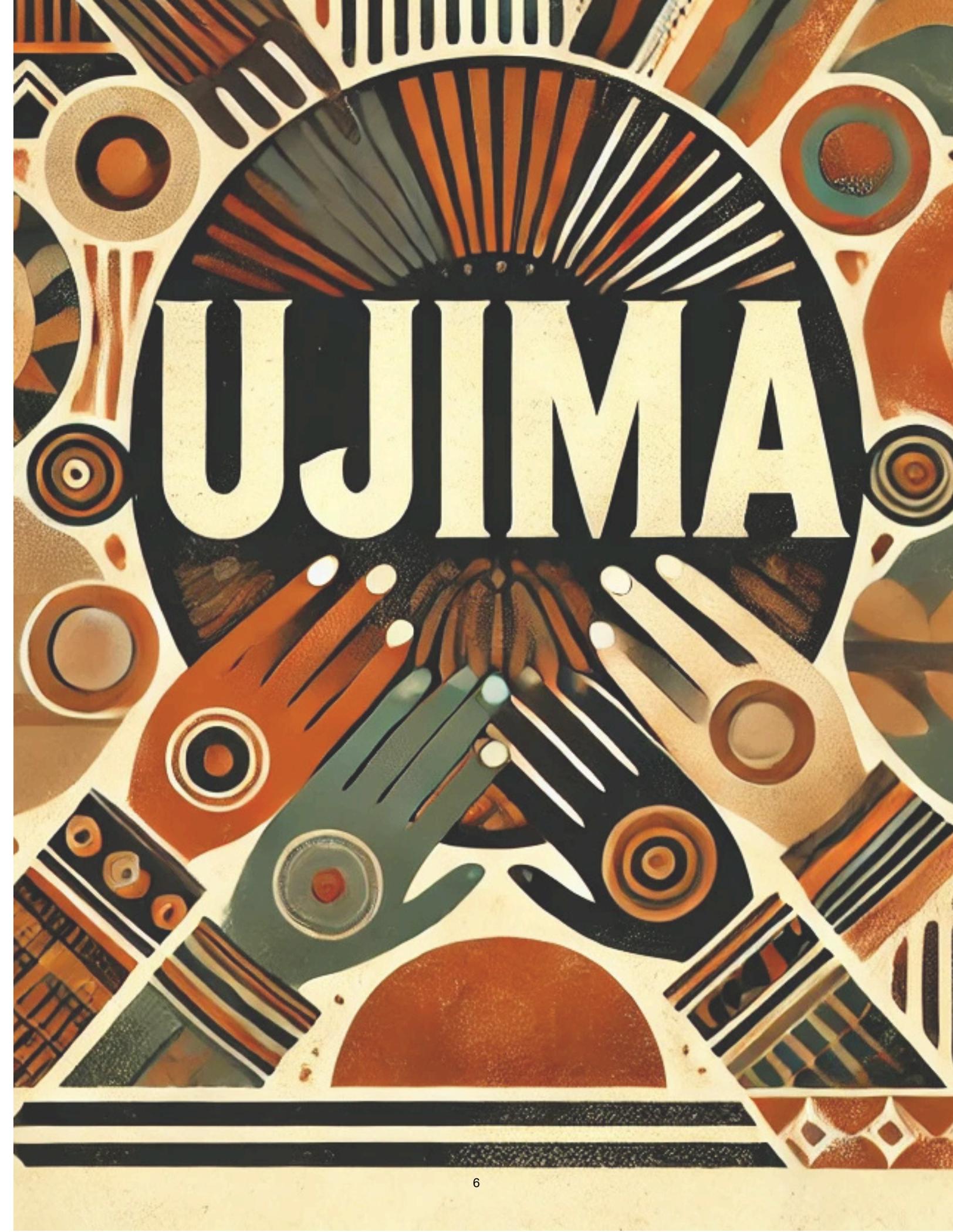
# PURPOSE

We believe that fostering a culture of intellectual inquiry, academic exploration, and artistic innovation is fundamental to the growth and enrichment of our campus community. Therefore, our purpose in celebrating Research, Scholarship, and Creative Expression Day is to promote diversity and inclusion by celebrating the diverse endeavors of our scholars, researchers, and artists. This day serves as a platform to showcase the fruits of their labor, whether it be groundbreaking discoveries, insightful analyses, or captivating works of art.

This celebration aims to inspire curiosity, encourage critical thinking, and promote the exchange of ideas across disciplines. We recognize the importance of supporting and nurturing the pursuit of knowledge and creativity in all its forms, as it contributes not only to the advancement of our society but also to the development of engaged, empathetic, and innovative individuals.

Ultimately, Research, Scholarship, and Creative Expression Day embodies our commitment to excellence in education, research, and artistic expression. It is a day to honor the dedication, passion, and ingenuity of our campus community and to reaffirm our collective belief in the transformative power of ideas and creativity.





# UJIMA



**Ujima** is the third principle of Kwanzaa, a holiday celebrating African heritage and culture. It is a Swahili word that means “Collective Work and Responsibility.” Ujima emphasizes the importance of working together as a community to solve problems and uplift one another. It encourages people to build and maintain their communities by recognizing that individual struggles are shared struggles. The principle is about cooperation, responsibility, and collective progress.

# Visit IAMM

-Charleston, SC

## Trauma, Truth, and Triumph

“Charleston, the International African American Museum (IAAM), and Claflin University form a powerful historical arc—from arrival and oppression to remembrance and empowerment—illustrating the journey of a people who turned survival into scholarship, and struggle into significance.”



# CU's Historical Facts

## Celebrating Black History Month

**Claflin University is the oldest historically black college or university in South Carolina.**

**Boston Philanthropist Lee Claflin and his son, Massachusetts Governor William Claflin, provided initial financing for purchasing the Orangeburg Female Institute, where the University is located today.**

**Claflin University was chartered on December 18, 1869.**

**The first class in the Normal Department of Claflin University graduated in 1879. The College Department grants its first diplomas in 1882 to William Lewis Buckley and Nathaniel Middleton.**

**The origin of Claflin University may be traced to the founding of the Baker Biblical Institute in Charleston, SC, in 1866.**

**Dr. Alonzo Webster and the Rev. T. Willard Lewis played prominent roles in securing the site of the institution.**

**The Baker Biblical Institute was moved to Orangeburg in 1870 and emerged with Claflin University.**

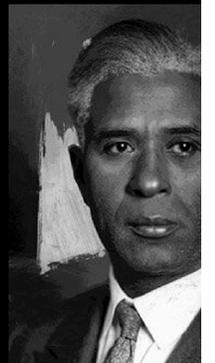
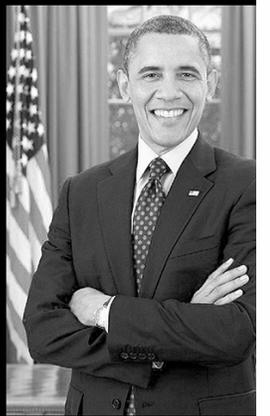
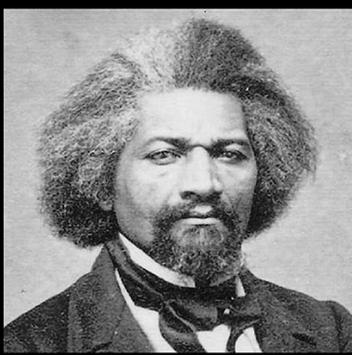
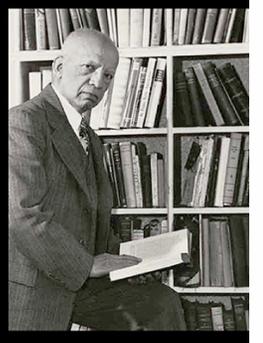
**In 1896 the S.C. General Assembly passed an act of separation which severed the State Agricultural and Mechanical Institute from Claflin University which eventually became South Carolina State University.**



## Freedom Tree

In 1956, students at South Carolina State University were denied permission to hold civil rights meetings on campus. In the spirit of Ujima, these students collaborated with students from Claflin University, meeting under the Freedom Tree at Claflin University to strategize on how to protest the oppressive Jim Crow Laws of the Deep South.

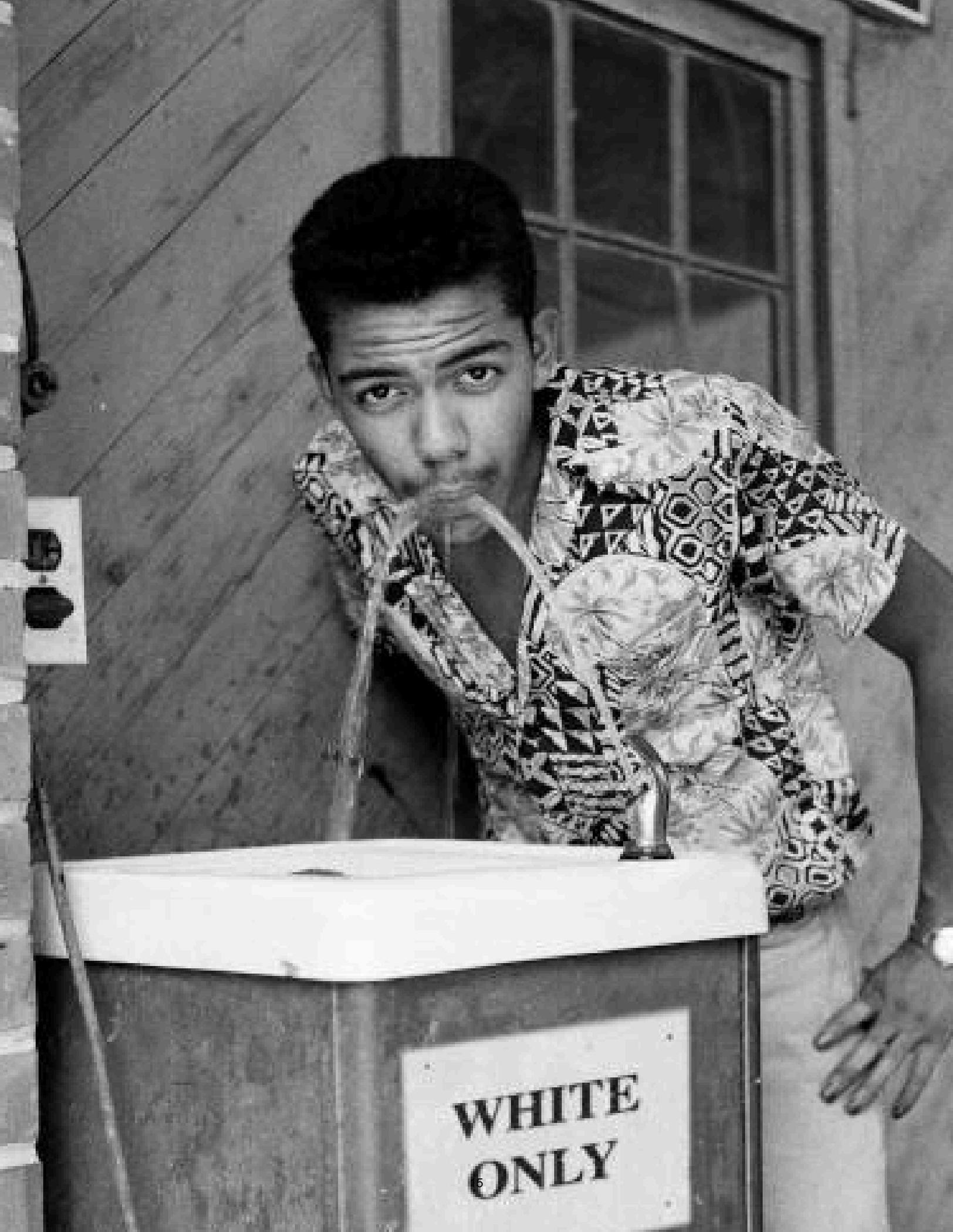
The Freedom Tree still stands today as a historic landmark and a constant reminder of the transformative power of collective work and responsibility.











**WHITE  
ONLY**

Here, you are, and every  
day you are. And the part of  
your life may be yours.  
Remember that.

# The Times and Democrat

AT SOUTH CAROLINA'S CROSSROADS OF AGRICULTURAL AND INDUSTRIAL PROSPERITY

THE WEATHER  
STATE CAPITAL - Jan  
10th 6:40 2:00p 10:0  
City - Orangeburg  
Friday, 11:00 2:15 2:15  
Spartan.

VOL. 117 NO. 40

ORANGEBURG, S.C. 29115

FRIDAY, FEBRUARY 9, 1968

10 CENTS DAILY 15 CENTS SUNDAY

# All Hell Breaks Loose -- Three Killed, Many Wounded In College Nightmare

## Officers Blast Rioting Negroes

By FRANK M. MYERS  
Of The Times and Democrat

More Pictures  
On Page 10

What was supposed to be a  
peaceful gathering of the 400  
Negro students of the 400  
Negro College (Clemson) night  
turned out to be a massacre of a  
fire fight between Federal  
troops and Negroes at the  
400 College State College  
campus which left three Negroes  
dead, over 20 wounded, and  
a 200-man Federal military  
force.

The 400 Negroes were led  
by Rev. James H. Bevel, a  
pastor of the 400 Negro  
church in Orangeburg, S.C.  
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church in Orangeburg, S.C.

The state and federal  
troops fired at the 400  
Negro students who had  
gathered for a protest  
at the 400 College  
campus. The 400  
Negroes were  
led by Rev. James  
H. Bevel, pastor  
of the 400 Negro  
church in Orangeburg,  
S.C.



Orangeburg Massacre  
"Making Good Trouble"

2/8/1968



**“ELEVATION &  
TRANSFORMATION”**



**Dr. Dwuan Warmack, President**

## OFFICE OF THE PRESIDENT

Tingley Memorial Hall  
Tel +1 803.535.5412  
Fax +1 803.535.5402



Dear Faculty and Students,

It is with great pride that I welcome you to **Clafin University's Research, Scholarship, and Creative Expression Days**, to be held February 19–20, 2026. Rooted in our rich legacy as a historically Black college and university, this year's theme—***In the Spirit of UJIMA: Transforming Our Community through Collective Work***—speaks directly to who we are and the work we are called to do.

Since our founding, Clafin University has stood as a beacon of access, excellence, and empowerment. As an HBCU, our mission has always extended beyond the classroom—to cultivate intellect, character, leadership, and service in ways that uplift our communities and advance the common good. Research, scholarship, and creative expression are central to that mission, and RSCE Days serve as a powerful affirmation of our collective pursuit of knowledge and social impact.

I strongly encourage faculty and students to engage fully in RSCE Days by participating in oral and poster presentations, attending sessions, and supporting the scholarly and creative work of your peers. These experiences embody high-impact educational practices and reinforce the role of inquiry, innovation, and creativity in preparing our students for leadership in a global society.

We are honored to welcome two distinguished guest speakers whose work aligns with Clafin's values and vision. **Taiese Bingham-Hickman**, Executive Director of **The Leadership Appliance** and Assistant Director of Pathways and Pipelines in the Office of Diversity and Inclusion at Brown University, brings deep expertise in leadership development and equity-centered educational pathways. We are also pleased to welcome **Emily Dickens**, Chief of Staff and Head of Government Affairs at the **Society for Human Resource Management (SHRM)**, whose national leadership continues to shape conversations on workforce development, public policy, and inclusive organizational practice.

As we gather in the spirit of UJIMA, let us remember that our strength lies in our collective work—across disciplines, generations, and communities. RSCE Days reflect Clafin University's enduring commitment to scholarship with purpose, leadership with integrity, and education that transforms lives.

Thank you for your continued dedication to excellence. I look forward to the meaningful scholarship, dialogue, and discovery that will emerge during these days of celebration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dwaun Warmack', written in a cursive style.

Dr. Dwaun Warmack  
President

**“ACADEMIC  
EXCELLENCE”**



**Dr. Michelle Mayo, Provost**

## Office of the Provost

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Tingley Memorial Hall  
Tel +1 803.535.5417  
Fax +1 803.535.5170



Dear Faculty and Students,

Research, scholarship, and creative expression are not peripheral to the academic enterprise at **Clafin University**—they are central to how we teach, learn, question, and create meaning. In this context, I invite you to engage fully in **Research, Scholarship, and Creative Expression (RSCE) Days**, taking place **February 19–20, 2026**.

Guided by this year's theme, ***In the Spirit of UJIMA: Transforming Our Community through Collective Work***, RSCE Days remind us that knowledge production is a shared responsibility. As an HBCU, Clafin's academic tradition has always affirmed scholarship as a vehicle for intellectual rigor, cultural affirmation, and community advancement. These days provide a structured, intentional space where that tradition becomes visible across disciplines.

I strongly encourage students to claim their voices as emerging scholars and creators through oral and poster presentations. These experiences are essential to academic growth, strengthening research literacy, communication skills, and professional readiness. I also encourage **faculty** to support and mentor student presenters, share your own work, and intentionally embed RSCE participation into teaching and learning as a high-impact educational practice.

RSCE Days will also feature a special performance by the **CU Theatre Ensemble**, highlighting creative expression as a vital form of scholarly inquiry. This performance underscores the role of the arts in advancing critical reflection, storytelling, and collective understanding within the academic community.

We are pleased to welcome two distinguished guest speakers whose work aligns with Clafin's academic mission and institutional values. **Taiese Bingham-Hickman**, Executive Director of **The Leadership Appliance** and Assistant Director of Pathways and Pipelines in the Office of Diversity and Inclusion at **Brown University**, will share insights on leadership development and equity-centered pathways. We are also honored to welcome **Emily Dickens**, Chief of Staff and Head of Government Affairs at the **Society for Human Resource Management (SHRM)**, whose work bridges policy, workforce development, and organizational leadership.

RSCE Days are a demonstration of academic engagement in action—where inquiry, creativity, and collaboration intersect. I invite each of you to participate with intention, curiosity, and openness to learning from one another as we continue to advance Clafin University's mission through collective work.

I look forward to your participation and to the meaningful exchanges that will emerge during these two days.

Sincerely,

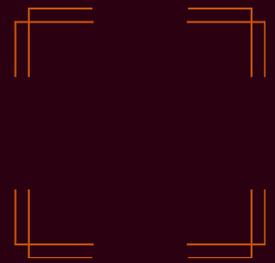
A handwritten signature in black ink that reads "Michelle L. Mayo". The signature is written in a cursive, flowing style.

Michelle L. Mayo, Ph.D.  
Provost and Vice President for Academic Affairs

**“DIVERSITY AND  
INCLUSION MATTER”**



**Taiese Bingham-Hickman Ph.D.**  
**LUNCHEON SPEAKER**



**Dr. Taiese Bingham-Hickman** serves as the Executive Director of The Leadership Alliance and is the Assistant Director of Pathways and Pipelines in the Office of Diversity and Inclusion at Brown University. She also serves as Adjunct Faculty in Biology at Brown University, where she teaches a course on AI and Drug Discovery. Dr. Bingham-Hickman earned her M.S. and Ph.D. degrees from New York University School of Medicine and an M.B.A. from Northeastern University. An HBCU graduate, she received her B.S. from the University of Maryland Eastern Shore.

Dr. Hickman previously served as Assistant Director of Biomedical Informatics Research and Operations at Brown, advancing statewide initiatives and multi-sector collaborations. Earlier, as Vice President of Data Analytics at Beacon Health Options, she led the Analytics Innovation Center and developed evidence-based behavioral health solutions.

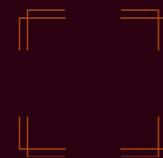
She is also the founder of the New England Equity Collective, a community-driven nonprofit promoting equitable access to homeownership, affordable housing, financial literacy, and socio-economic opportunity. Dr. Hickman serves as Development Chair for the Massachusetts Down Syndrome Congress (MDSC) and as a member of the board of Autism Care Partners, advocating for families and students with disabilities.

**“WORKPLACE DIVERSITY  
AND INCLUSION”**



**Emily M. Dickens, J.D.**

**KEYNOTE SPEAKER**



**Emily M. Dickens** is a 2025 Top Lobbyist honoree recognized by the National Institute for Lobbying & Ethics for her leadership in shaping workplace and workforce policy. She serves as Chief Administrative Officer for SHRM—the world’s largest HR trade association and the fourth largest trade association globally. As a member of SHRM’s executive leadership team, she drives organizational effectiveness and impact across governance, global policy, legal, real estate, and philanthropy, while serving as a trusted advisor to the CEO and Board of Directors.

A sought-after thought leader on workplace trends, HR leadership, and business policy, Dickens is frequently featured in top media outlets, including CNN, CBS News, NBC News, AP News, The Wall Street Journal, CNBC, Bloomberg Law, Crain’s, Marketplace, WTOP, and Yahoo Finance. She has testified before Congress and the EEOC on topics such as artificial intelligence, gender bias, and paid leave, bringing SHRM’s expertise directly to policymakers.

Dickens amplifies SHRM’s voice on key global, national, and local platforms by holding influential leadership roles, including serving on the Business 20 (B20) during Indonesia, India, and Brazil’s G20 cycles, as well as with global coalitions focused on talent mobility and the future of work. She also serves as a Governance Committee Member of the United States Council for International Business (USCIB), Vice Chair of The Bryce Harlow Foundation, and Board Member of SkillUp Coalition and the National Foundation for Women Legislators.

Before joining SHRM in 2018, Dickens built a distinguished career in higher education and nonprofit leadership. Her prior roles include General Counsel and Head of Policy for the Thurgood Marshall College Fund, Vice President of Public Policy for the Association of Governing Boards of Colleges and Universities, and Assistant Vice President for Federal Affairs at the University of North Carolina System. She also held administrative and external affairs positions at Duke University and Fayetteville State University.

A three-time graduate of North Carolina Central University (B.A., M.A., and J.D.), Dickens is the Immediate Past Chair of the NCCU Board of Trustees. She is Co-Chair of the HR Committee for the National Council of Negro Women (NCNW) Board of Directors and a life member of Alpha Kappa Alpha Sorority, Incorporated, where she has served as Chairman of the International HBCU Task Force and on the Education Advancement Foundation Board of Directors.



**Featuring**  
**CU Theatre Ensemble**



**SC 250**  
ANNIVERSARY  
*American Revolution*

# The Promise:

**Untold Stories of South Carolina's  
African American Patriots**

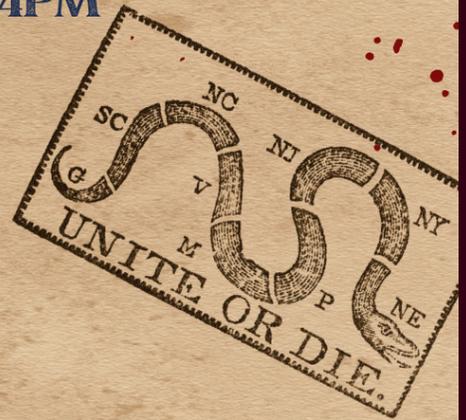
written by  
**Brandi LaShay & Annette Dees Grevious**

**SATURDAY, FEBRUARY 28<sup>TH</sup> @ 7PM**  
**SUNDAY, MARCH 1<sup>ST</sup> @ 4PM**

SCAN FOR TICKETS



MORE INFO:  
803.845.4122



**CLAFLIN**  
UNIVERSITY

**STEVENSON AUDITORIUM**  
**979 MIDDLETON ST. | ORANGEBURG, SC**



CLAFLIN UNIVERSITY  
THEATRE ENSEMBLE

# ORDER OF EVENTS



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**FEBRUARY 19, 2026**

STARTING  
AT 08:30 AM

**CONTINENTAL BREAKFAST**

GTK

STARTING  
AT 09:00 AM

**FACULTY PRESENTATIONS**

GTK and JST Rooms

ENDING  
AT 11:50 AM

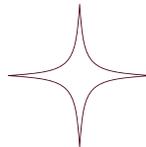
**FACULTY PRESENTATIONS**

STARTING  
AT 12:00 PM

**LUNCHEON**

Taiese Bingham-Hickman, Ph.D.  
Assistant Vice President of Pathways and Pipelines  
Executive Director, The Leadership Alliance

Leadership Alliance's A Legacy of Purpose Presentation  
Minister's Hall



Please join us for the reception and keynote speaker, Emily Dickens, at 3:00pm in the New Student Center on 2/20/2026. Prizes will be announced at the reception for students and faculty.

# ORDER OF EVENTS

FEBRUARY 20, 2026

STARTING  
AT 08:30AM

## OPENING

CU Theatre Ensemble's Touring Company

STARTING  
AT 09:20 AM

## REMARKS

Dr. Michelle Mayo, Provost of Academic Affairs

STARTING  
AT 09:35 AM

## STUDENT PRESENTATIONS

See presentations at a glance for more information.  
Peer-voting will begin at 10:00am

STARTING  
AT 12:00 PM

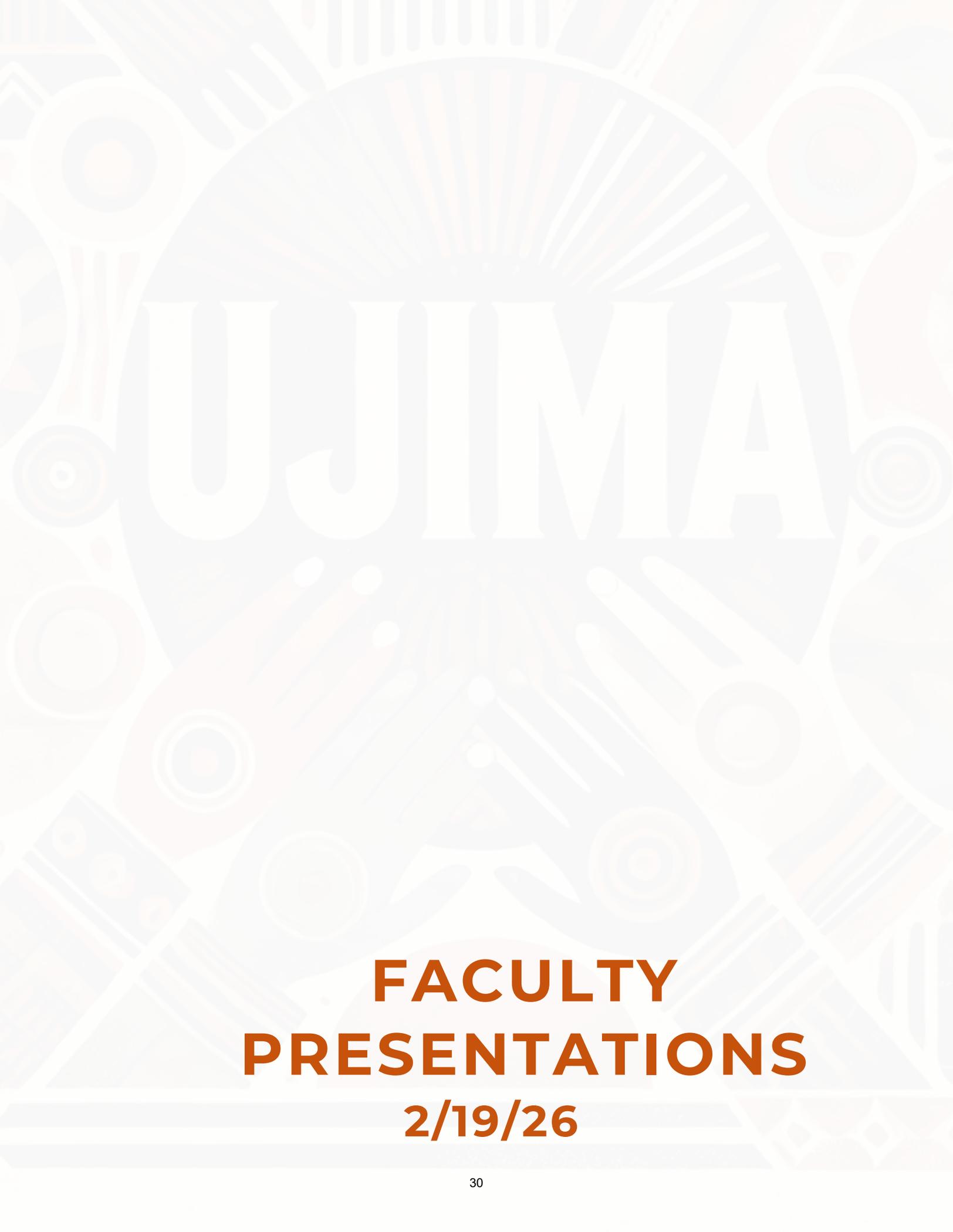
## LUNCH ON YOUR OWN

STARTING  
AT 3:00 PM

## AWARD CEREMONY

New Student Center (Ballroom B)

Emily Dickens, Keynote Speaker  
Chief Administrative Officer of SHRM



**UJIMA**

**FACULTY  
PRESENTATIONS**

**2/19/26**

## PRESENTATION INFORMATON

### School of Business

Name	Position Title	Topic	Location	Time
Dr. Damon Brown-Crawford	Visiting Assistant Professor of Management	The Customer Service Initiative	GTK 113	9:00am-9:30am
Dr. Emily Crawford	Visiting Professor of Marketing	Aya Luxe Crafted by Ghana: A Cross-Cultural E-Commerce Initiative for Experiential Learning and Global Engagement	GTK 113	9:35am-10:05am
Dr. Emily Crawford & Mrs. Samantha Perry	Visiting Professor of Marketing & Accounting Instructor	Integrating Accounting and Marketing: Empowering Students with Real-World Decision Skills	GTK 113	10:10am-10:40am
Dr. Abdullah Khan	Professor of Economics	Trend Analyses of the Blue Economy Industrial Sectors in South Carolina's Seven Lowcountry Counties	GTK 113	10:45am-11:15am

### School of Education

Dr. Theodore Anderson	Assistant Professor/Program Coordinator	Community Resources for Diabetes in Orangeburg County, South Carolina	GTK 114	9:00am-9:30am
Dr. Katrina Cummings	Assistant Professor of Education	Reflections on Teacher Well-Being	GTK 114	9:35am-10:05am
Dr. Natasha Ferguson Dennison	Associate Professor and Program Coordinator of Sport Management	Operationalizing Global Experience: Study Abroad in Sport Management	GTK 114	10:10am-10:40am
Dr. Friggita Johnson	Assistant Professor of Education	Assistive Technology Supports for Students with Dyslexia in Higher Education Settings	GTK 114	10:45am-11:15am
Dr. Nan Li	Professor of Education	In the Spirit of UJIMA: Transforming Our Community through Collective Work and Responsibility	GTK-114	11:20am-11:50am

### School of Humanities and Social Sciences

Dr. Catherine Adams	Associate Professor of Africana Studies	Where the Elders Gather: A Re-Examination of the African American Literary Tradition	GTK 115	9:00am-9:30am
Dr. Mahalah Bowman-Campbell	Assistant Professor of Psychology	In the Spirit of UJIMA: Imposter Syndrome, Attachment, and Self-Perception Across Adulthood—Collective Responsibility for Personal and Community Transformation	GTK 115	10:10am-10:40am
Dr. Robert Greene II	Associate Professor of History	Reconstruction Memory and the Civil Rights Era, 1945 to 1972	GTK 115	10:45am-11:15am
Dr. Matthew Hiatt	Associate Professor of Psychology	Escape the Exam: Reimagining Assessment Through Game-Based Learning in Undergraduate Statistics	GTK 115	11:20am-11:50am
Dr. Caroletta Ivey	Associate Professor of Criminal Justice	Artificial Intelligence and the Criminal Justice System: Preparing Future Practitioners in Today's Classrooms	GTK 120	9:00am-9:30am
Dr. Andrea Key	Associate Professor of African and African American Studies	From Blackness to the Primal: Africana Thought, Primate Sociality, and the Question of the Human Animal	GTK 120	9:35am-10:05am

Dr. LaKerri Mack	Assistant Professor of Criminal Justice	Investigating the Impact of Leadership Programs on Student Engagement, Success, and Retention at Claflin University	GTK 120	10:10am-10:40am
Ms. Michelle Provost-Wassell	Instructor of Psychology	Fortifying Youth Resilience: Integrated Wellness Education as a Pathway to Rural Student Flourishing	GTK 120	10:45am-11:15am
Dr. Scott Ryan	Associate Professor of Religion & Biblical Studies and Acting Chair of the Department of Humanities	Paul and the Rhetoric of Comparison in 2 Corinthians	GTK 113	11:20 am - 11:50 am
Dr. Mitali Wong , Dr. Mohammed Yousuf , Dr. Peggy Ratliff, Dr. Nick Robinson, Dr. Astrid Beckers , Dr. Jonathan Evans	Professor of English, Associate Dean, School of Humanities and Social Sciences	Teaching with Library of Congress Resources	GTK 121	9:00 am-9:30 am
Dr. Jason Youngkeit	Associate Professor of Spanish	Authentic Texts and Their Unique Pedagogical Application in The Foreign Language (Spanish) Classroom	GTK 120	11:20 am - 11:50 am
<b>School of Natural Sciences and Mathematics</b>				
Dr. Amith Devireddy	Assistant Professor of Biology	Harnessing Genetic Diversity in Populus Rrichocarpa to Investigate the Physiological and Molecular Mechanisms of Heavy Metal Tolerance	GTK-121	9:35am-10:05am
Dr. Bijoy Dey	Associate Professor of Chemistry	Calculating Chemical Reaction Paths and Path Profiles: A New Method Based on Fermat's Principle of Optics	GTK-121	10:10am-10:40am
Dr. Steffani Driggins	Associate Professor of Biology	An Innovative Learning Approach to Module-Based Learning for Biology Junior Seminar Courses	GTK-121	10:45am-11:15am
Dr. Samina H. Assanie-Shivji	Professor of Biology	Community-Level Surveillance of SARS-CoV-2 and Influenza A and B Viruses Through Wastewater Analysis in Orangeburg, South Carolina	GTK-121	11:20 am - 11:50 am
Dr. Corey Johnson	Assistant Professor of Organic Chemistry	Synthesis and Binding Assessment of a Tripodal Thiourea Receptor against Nuclear Waste Surrogates	JST-226	9:00am-9:30am
Dr. Karina Liles	Associate Professor of Computer Science and Department Chair	Claflin University SmarHOME: GRIOT (Granular Real-time Insights on Outcomes and Trajectories) Project	JST-226	9:35am-10:05am
Dr. Somasundaram Velumyylum	Professor of Mathematics	Use of Maple software to efficiently Visualize and Approximate the Area Under Curves	JST-226	10:10am-10:40am
Mr. Brandon Yarbrough	Organic Lab Instructor	Recent Progress in "Green Chemistry" Applications for STEM Education: Increasing Accessibility and Safety in Chemical Demonstrations with Natural Products	JST-226	10:45am-11:15am

The background features a large, stylized graphic of hands reaching upwards towards a sun with rays. The hands are rendered in a light blue and orange color palette, and the sun is a large orange circle with radiating lines. The overall style is clean and modern.

**UJIMA**

**ABSTRACTS**  
**FACULTY**

**School of Business**

Name	Position Title	Category	Project Title
<b>Dr. Damon Brown-Crawford</b>	<b>Visting Assistant Professor of Management</b>	<b>Research</b>	<b>The Customer Service Initiative</b>

Businesses and organizations succeed when they consistently meet and exceed customer expectations. This customer service initiative provides a framework for establishing clear service principles that foster a culture of hospitality. Exceptional customer service must be treated as an ongoing process, reinforced through consistency and training. Investing in employees' time and talents begins with leadership leading to successful customer service interactions. Leaders are responsible for creating an environment that supports excellent customer service by understanding the market and identifying the needs of their customer. Excellent customer service boost sales, establish business, engage employees, and create a revolving door of customers.

<b>Dr. Emily Crawford</b>	<b>Visting Professor of Marketing</b>	<b>Research</b>	<b>Aya Luxe Crafted by Ghana: A Cross-Cultural E-Commerce Initiative for Experiential Learning and Global Engagement</b>
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This project examines Aya Luxe Crafted by Ghana, an innovative e-commerce initiative that integrates experiential education, cultural exchange, and international economic development. The purpose of this work was to create a student-led online platform that markets and sells handcrafted Ghanaian products while fostering global business competencies among HBCU students. Objectives: The primary objectives were to: 1. Provide marketing students with hands-on experience in international trade and digital commerce. 2. Support Ghanaian artisans by expanding their market reach. 3. Generate scholarship funds for HBCU students through sustainable business practices. Methodology: The approach combined applied learning with cross-cultural collaboration. Students conducted market research, developed branding strategies, and built an e-commerce website tested for usability by faculty and external reviewers. Partnerships with Ghanaian entrepreneurs ensured authentic product sourcing and cultural representation. Results: The initiative successfully launched a functional online store and facilitated student participation in live vending events, including South Carolina State University's Homecoming. These activities demonstrated the viability of the business model and strengthened student skills in marketing, logistics, and global engagement. Significance: This project illustrates how experiential learning can bridge academic theory and real-world practice while promoting equity and cultural appreciation. By aligning with federal priorities in workforce development and global engagement, Aya Luxe Crafted by Ghana serves as a replicable model for integrating education, entrepreneurship, and international collaboration.

<b>Dr. Emily Crawford &amp; Mrs. Samantha Perry</b>	<b>Visting Professor of Marketing, Accounting Instructor</b>	<b>Scholarship</b>	<b>Integrating Accounting and Marketing: Empowering Students with Real-World Decision Skills</b>
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This team-taught project brings together accounting and marketing to prepare students as interpretive entrepreneurs—practitioners who synthesize quantitative financial data and qualitative market insights to make adaptive, ethical business decisions. The purpose is to model interdisciplinary pedagogy that develops decision-making, communication, and strategic thinking skills relevant to small businesses and startups. Objectives include: (1) equipping students to translate accounting metrics into actionable marketing strategies; (2) fostering entrepreneurial interpretation of ambiguous market signals; and (3) measuring learning gains in applied decision-making. The methodology combines co-designed modules, project-based learning, and formative assessment. Students work in cross-functional teams on semester-long business challenges, using accounting-led financial analysis, marketing research, and iterative pitching. Instructors alternate roles—introducing technical concepts, facilitating integrative workshops, and coaching reflective practice. Assessment blends rubrics for analytical accuracy, marketing creativity, teamwork, and a capstone portfolio demonstrating integrated decisions. Findings indicate improved student competency in connecting financial constraints to market opportunity, enhanced ability to justify strategy with mixed-method evidence, and greater confidence in entrepreneurial decision-making. Teams produced viable business plans with clear ROI projections and customer-acquisition pathways, and reflective narratives showed growth in interpretive reasoning. Significance: This model demonstrates that deliberate team-teaching across accounting and marketing cultivates interpretive entrepreneurs who can translate data into strategy under uncertainty. Implications include scalable curriculum templates, assessment frameworks for interdisciplinary skills, and stronger alignment between classroom experiences and the needs of contemporary small-business ecosystems.

In this presentation I will analyze recent economic performance trends of the ‘Blue economy’ industrial sectors in seven ‘lowcountry’ counties in South Carolina. Studies of economic performance in the “Blue Economy” sectors provide useful insights for coastal region’s economic resilience, environmental stewardship, and regional competitiveness. Understanding sector-specific dynamics in fisheries, marine construction and transportation, coastal tourism, offshore energy, and mineral resource etc. helps policymakers anticipate workforce needs, target investments in training and education, and ensure that growth aligns with sustainable resource management. Trend analysis also reveals potential vulnerabilities due to automation, changing global markets, coastal hazards, climate change etc. Results of such studies are useful for data-supported decision making to diversify economic opportunities by identifying and supporting emerging industries that show promises in terms of employment and GDP contributions. Such studies are useful to foster sustainable economic development while preserving the coastal and marine ecosystems. These Seven ‘lowcountry’ counties of South Carolina are Allendale County, Bamberg County, Barnwell County, Colleton County, Hampton County, Jasper County, and Orangeburg County. The “Lowcountry” counties are named so due to their proximity to the coastline. These seven counties together encompass sixteen percent of SC land area and is the home of four percent of the SC population implies the rural nature of these areas and importance and potential of acceleration of economic development. By strategically infusing data targets and emphasizing sustainability in these key sectors, the Lowcountry can transform its natural geographical features into a powerful engine for resilient and high-growth economic prosperity.

**School of Education**

**Dr. Theodore Anderson    Assistant Professor/Program Coordinator    Research    Community Resources for Diabetes in Orangeburg County, South Carolina**

Research shows that non-medical community resources such as those that support diet and physical fitness can impact the management, treatment, and even the prevention of diabetes. The purpose of this paper was to examine the role of these resources for residents of Orangeburg County, South Carolina who have been diagnosed with diabetes. The survey instrument addressed the awareness and use of these resources. A snowball sample which included 10 survey participants identified through convenience sampling and then nine other participants identified by each of those participants was used. This method likely impacted the survey results which focused more on medical rather than the intended non-medical community resources for diabetes. Training of the initial survey participants who communicated directly with other participants should be incorporated in future research.

**Dr. Katrina Cummings    Assistant Professor of Education    Scholarship    Reflections on Teacher Well-Being**

Teacher efficacy is often associated with having a range of knowledge, skills, and dispositions. While these factors are important, they do not take into account teacher well-being. Some studies indicate that up to 50% of teachers leave the teaching field within the first five years (Ingersoll, 2012). Notably, people of color tend to leave the teaching field at higher rates than Caucasians (Ingersoll, 2004; Ingersoll & May, 2011). High attrition rates among teachers is often due to burnout (Iancu, Rusu, Măroiu, Păcurar, & Maricuțoiu, 2018). Self-care is one approach to addressing burnout and related attrition of beginning teachers. The objectives of this session are to share self-care strategies that might be helpful for teachers Presenters will share ideas for stress reduction and mindfulness as well as building a support system. Well-being is a worthy focus given the alarming statistics noted above and the relative impact on other stakeholders. Additionally, it is intended to clear a path for the discussion of mental health (and related stigma and exclusion practices) as a diversity and inclusion issue.

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**Dr. Natasha Ferguson  
Dennison**

**Associate Professor and  
Program Coordinator of  
Sport Management**

**Research**

**Operationalizing Global Experience: Study Abroad in  
Sport Management**

The global sport industry generates over \$550 billion annually and demands professionals with intercultural competence and international management expertise. This exploratory qualitative study examines how study abroad programs can serve as effective experiential learning models in sport management education, addressing critical gaps in discipline-specific international education research. This research investigated the 2024 Claflin University School of Education South African study abroad program, which provided Sport Management and Human Performance and Recreation students with intensive cultural and professional immersion. The 10-day program incorporated professional site visits, cultural experiences, academic seminars, and service-learning components. Using an interpretive phenomenological research design, data collection employed methodological triangulation through semi-structured interviews (60-90 minutes), student symposium presentations, and faculty field observations. Systematic thematic analysis via Taguette software identified key learning outcomes. Five significant themes emerged: enhanced intercultural competence and adaptability; applied professional skills development through engagement with South African sport organizations; reinforcement and extension of academic course concepts; career identity evolution with expanded global perspectives; and profound personal growth including increased self-confidence and cultural humility. Findings demonstrate that well-designed short-term international immersion programs produce meaningful learning outcomes comparable to longer-term experiences, making global education more accessible for diverse student populations. This research provides empirical evidence supporting study abroad integration as a sustainable experiential learning model that enhances students' global competency and professional readiness for careers in the interconnected sport industry, directly addressing industry demands for internationally competent sport management professionals.

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**Dr. Friggita Johnson**

**Assistant Professor of  
Education**

**Research**

**Assistive Technology Supports for Students with Dyslexia  
in Higher Education Settings**

Dyslexia, a neurobiological learning disability, is characterized by difficulties with accurate or fluent word recognition, spelling, and decoding, presenting unique challenges to academic success in reading- and writing-intensive environments. Approximately 15–20% of the population may have a language-based learning disability, with dyslexia being the most prevalent (LDA). According to the U.S. Department of Education's National Center for Education Statistics (NCES, 2023), 20.5% of undergraduates and 11.9% of postbaccalaureate students report having a disability, with learning disabilities, particularly dyslexia, representing the largest subgroup. Despite its prevalence, dyslexia remains widely misunderstood and stigmatized. Many higher education institutions lack the resources or expertise to effectively support students with dyslexia, contributing to higher attrition rates among this population. While dyslexia is a lifelong condition without a cure, individuals can achieve academic and professional success when provided with appropriate support. The increasing integration of digital tools into education has highlighted the potential of assistive technologies (AT) to enhance accessibility and academic outcomes for students with dyslexia. This session explores AT supports that enable students to complete tasks independently, improving access to information, reading comprehension, and written expression. By bridging the gap between students' needs and the demands of college-level learning, AT empowers students with dyslexia to fully engage in higher education and achieve their academic potential.

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**Dr. Nan Li**

**Professor of Education**

**In the Spirit of UJIMA: Transforming Our Community  
through Collective Work and Responsibility**

40 years after the A-Nation-at-Risk report today, American education is still very much at risk as the report was released. The Program for the International Student Assessments (PISA, 2023) released data from its latest international assessment of 15-year-old students, illustrating how the U.S. is still lagging many other countries. This jeopardizes American economic strength in today's globalized market competition. Therefore, it is important we address the needs of improving American education. It must start by supporting pre-service teachers' academic success and paying attention to the basic literacy skills of future teachers. This is because the teachers are foundations for all disciplines. Thus, teacher education plays a most important role. We as teacher educators have the great responsibility meet the challenge and to improve literacy skills of American P-12 students by preparing future teachers and help them graduate and become qualified teachers who can prepare American P-12 students.

**School of Humanities and Social Sciences**

Name	Position Title	Category	Project Title
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<b>Dr. Catherine Adams</b>	<b>Associate Professor, Africana Studies</b>	<b>Scholarship</b>	<b>Where the Elders Gather: A Re-Examination of the African American Literary Tradition</b>
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This presentation argues that the presence and function of elders are central, often overlooked, elements in the African American literary tradition. Drawing on Toni Morrison's concept of the elder/ancestor as a foundational figure whose relationship to characters is "benevolent, instructive, and protective, and they provide a certain kind of wisdom," this study explores how authors utilize these figures to connect contemporary narratives to a deep historical and cultural past. I contend that this connection is vital for understanding African American identity, resistance, and community formation, particularly in the context of self-determination and confronting oppression. This work makes an original contribution by centering the elder figure as a primary lens through which to analyze a range of African American literary texts across different genres and historical periods. It challenges traditional literary analyses that may overlook or misinterpret the political and cultural significance of these figures and the cultural traditions they embody. Using the Africana Studies Framework, articulated by Greg Carr, this work includes insights from African cultural practices, concepts of movement and memory, and historical accounts of Black resistance and community building. The project highlights the enduring relevance of elder wisdom for navigating present-day challenges and shaping future consciousness. The significance is underscored by contemporary questions regarding the role of elders and intergenerational wisdom in facing societal pressures.

<b>Dr. Mahalah Bowman-Campbell</b>	<b>Assistant Professor of Psychology</b>	<b>Research</b>	<b>In the Spirit of UJIMA: Imposter Syndrome, Attachment, and Self-Perception Across Adulthood—Collective Responsibility for Personal and Community Transformation</b>
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This project presents preliminary and forthcoming findings from a two-phase mixed-methods study conducted in Summer and Fall 2025, examining imposter syndrome, adult attachment styles, attention, and volitional personality change across two age groups: emerging adults (18–25) and working adults aged 35 and older. Guided by the theme “In the Spirit of UJIMA: Transforming Our Community through Collective Work and Responsibility,” the study explores how psychological development contributes to both personal empowerment and collective uplift. Inspired by Madam C. J. Walker’s call to action, “Don’t sit down and wait for the opportunities to come. Get up and make them”, the project emphasizes self-initiative, resilience, and communal responsibility as drivers of transformation. Using validated psychological measures and qualitative reflections, the Summer 2025 cohort found that emerging 18-25-year-old adults experience heightened emotional fluctuations tied to imposter feelings, particularly as they navigate academic and early-career uncertainty. Attention and self-awareness significantly predicted positive personality change, while participants emphasized that personal growth is deeply connected to family responsibility, aligning with UJIMA principles. Data collection for the 35+ cohort is ongoing and is expected to expand understanding of how attachment histories, career demands, and self-perception shape developmental trajectories later in adulthood. This research underscores that personal development is not solely an individual journey but a communal process with implications for mentoring, leadership, and community strengthening. Findings aim to inform programs that support psychological resilience and foster collective responsibility across generations.

<b>Dr. Robert Greene II</b>	<b>Associate Professor of History</b>	<b>Scholarship</b>	<b>Reconstruction Memory and the Civil Rights Era, 1945 to 1972</b>
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Reconstruction Memory and the Civil Rights Era, 1945 to 1972" examines how Black activists and intellectuals used collective memory of the Reconstruction era to push forward reform during the so-called "Second Reconstruction," or the Civil Rights Movement. Leaders such as Martin Luther King, Jr., W.E.B. Du Bois, and writers such as Lerone Bennett and historians such as John Hope Franklin all used Black America's collective, positive memory of Reconstruction to support change in the Civil Rights era. This presentation argues that the use of memory then was a distinctly political act, which melded with the social revolution of the post-World War II years. Ultimately, this presentation also showcases the links between how different publics perceive the past and how those perceptions shape contemporary debates about politics, culture, and power. For the activists and intellectuals of the era, remembering Reconstruction was also a reminder of how history can be a tool in the larger toolbox of activism and social change--a situation that echoes in the 21st century and its many social movements as well.

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**Dr. Matthew Hiatt**

**Associate Professor of  
Psychology**

**Research**

**Escape the Exam: Reimagining Assessment  
Through Game-Based Learning in  
Undergraduate Statistics**

Undergraduate statistics courses are often perceived as intimidating, leading to high levels of anxiety and disengagement among students. Traditional final exams may not fully capture students' understanding or ability to apply statistical reasoning, further contributing to negative perceptions of the subject. Research in education underscores the benefits of active learning and innovative assessment strategies to improve outcomes. One emerging approach is the use of educational escape rooms (EERs), which integrate collaboration, problem-solving, and course concepts into a game-based format. This project reimagines the final exam in undergraduate statistics through the implementation of an EER aligned with course learning objectives. The aim was to see whether a physical EER is a viable option to assess student learning in undergraduate statistics courses, and, if so, to measure its impact on student learning. Students completed pre- and post-surveys on engagement, motivation, anxiety, enjoyment, satisfaction, and competency. They engaged in a 60-minute EER experience where they had seven statistical puzzles to solve. Their performance was based on completion time and hints used. Performance data was compared with prior traditional exam results. With the proper preparation, equipment, and staffing, a physical EER seems to be a viable option to assess student learning in undergraduate statistics courses. Findings suggest that while students felt anxiety during the EER, engagement, motivation, enjoyment, and satisfaction were high. Students thought that the EER experience would positively affect their statistics course experience. The study provides evidence on the effectiveness of EERs in statistics education, with implications that extend to other disciplines.

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**Dr. Caroletta Ivey**

**Associate Professor of  
Criminal Justice**

**Research**

**Artificial Intelligence and the Criminal Justice  
System: Preparing Future Practitioners in  
Today's Classrooms**

The rapid integration of Artificial Intelligence (AI) into the criminal justice system—from predictive policing to algorithmic risk assessments—has fundamentally altered the landscape of modern justice. As the field shifts toward "algorithmic governance," a critical gap has emerged between technological implementation in the field and the traditional pedagogical frameworks used in undergraduate education. This study investigates the "AI literacy" of undergraduate criminal justice majors, assessing their objective knowledge of AI mechanics, their ethical perceptions of automated decision-making, and their self-reported readiness to utilize these tools in professional practice. Using a cross-sectional survey design, this researcher will evaluate student familiarity with industry-standard technologies and the "black box" ethical dilemmas associated with them.

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**Dr. Andrea Key**

**Associate Professor of  
African and African  
American Studies**

**Scholarship**

**From Blackness to the Primal: Africana  
Thought, Primate Sociality, and the Question  
of the Human Animal**

This project advances a species-level inquiry into the human by placing Africana philosophical traditions in dialogue with contemporary research on primate sociality, moral cognition, and evolutionary anthropology. Africana Studies has long been compelled to interrogate the instability of "the human" as a category, given the historical positioning of Blackness at the contested boundary between human, animal, and object under slavery and colonial modernity. Thinkers such as W. E. B. Du Bois, Frantz Fanon, and Sylvia Wynter reveal that modern humanism is not a neutral framework but a racialized genre of Man that distorts both social life and moral imagination. Building on this insight, the project asks what becomes possible when critiques of Man emerging from Africana thought are brought into conversation with primatological accounts of empathy, cooperation, hierarchy, and kinship among non-human primates. While dominant evolutionary narratives often privilege competition and domination as foundational to moral life, recent primate research suggests a more complex picture of relationality, care, and social repair. Africana philosophy offers a critical lens for reassessing these findings by foregrounding how violence, social death, and exclusion deform species-typical social capacities rather than define them. By moving from racialized critiques of modernity toward questions of shared primate inheritance, this research reframes Black experience not as an exceptional case but as a methodological vantage point for rethinking the human animal itself. By doing so, it models a transition from traditional Africana Studies toward a broader inquiry into the conditions, limits, and possibilities of human becoming.

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**Dr. LaKerri Mack**

**Assistant Professor  
Criminal Justice**

**Research**

**Investigating the Impact of Leadership  
Programs on Student Engagement, Success,  
and Retention at Claflin University**

At Claflin University, a distinguished Historically Black College and University (HBCU) established in 1869, there is a critical and immediate need to develop innovative programming that bolsters student success, strengthens retention rates, and accelerates graduation. This study addresses the persistent challenges of student retention, engagement, and degree completion in higher education, focusing specifically on first-generation students and those from underrepresented backgrounds at Claflin University, a Historically Black College and University (HBCU) in Orangeburg, South Caroling. The recognized need for evidence-based interventions to support student success drives this preliminary research. While co-curricular leadership development programs are widely regarded as promising strategies for enhancing student outcomes, a significant gap remains in the scholarly understanding of their specific contribution to success metrics within the unique cultural and institutional context of HBCUs. This research aims to explore and evaluate the impact of current co-curricular leadership programming on key indicators of student success, retention, and graduation at Claflin University, providing critical insights for developing and refining innovative, effective, and culturally relevant support interventions.

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**Ms. Michelle Provost-Wassell  
& Dr. Candice Idlebird**

**Instructor of Psychology,  
Department of Social  
Sciences Chair**

**Research**

**Fortifying Youth Resilience: Integrated  
Wellness Education as a Pathway to Rural  
Student Flourishing**

Adolescents in Orangeburg County demonstrate disproportionately high rates of substance misuse and overdose compared to state and national averages. Despite awareness of these challenges, rural schools often lack consistent prevention programming, mental health supports, and clear pathways for early intervention, revealing an urgent need for integrated wellness education that strengthens protective factors and resilience. This initiative aimed to reduce adolescent substance misuse and suicide risk among middle and high school students by delivering interactive psychosocial education focused on mental health challenges, bullying, suicide ideation, and substance use risks, while equipping youth with practical coping and prevention skills. The research question examined how Youth Mental Health First Aid-trained college student liaisons influenced student awareness of protective factors and perceived ability to apply coping and help-seeking skills. A community-engaged, peer-led, multi-step model was implemented in which undergraduate students from Claflin University were competitively selected and certified through Mental Health First Aid youth training. Liaisons co-developed and delivered presentations across two rural schools on four occasions, followed by post-program surveys. Students rated sessions as highly effective, expressed strong engagement, and indicated a desire for continued wellness education, particularly requesting deeper content on suicide prevention, stress, empathy, bullying, alcohol, vaping, smoking, and self-harm. Results support peer-facilitated wellness education by Mental Health First Aid-trained college liaisons as a scalable, upstream prevention strategy for increasing behavioral health literacy and strengthening rural adolescent resilience.

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**Dr. Scott Ryan**

**Associate Professor of  
Religion & Biblical Studies  
and Acting Chair of the  
Department of Humanities**

**Scholarship**

**Paul and the Rhetoric of Comparison in 2  
Corinthians**

Readers of the Apostle Paul's texts routinely note his use of comparisons in his arguments against opponents in the second letter to the Corinthians. In this missive, Paul defends his apostolic ministry against those who speak negatively about him in the interval between his visits to Corinth. The shift in his relationship with Corinthian communities leads him to argue for his apostolic credentials in terms of comparison and self-boast. But Paul does not go about comparing himself to others and elevating his own authoritative status in the usual or expected manner of rhetoricians in his day. In this presentation, I will place Paul's use of comparisons (or synkrisis) in conversation with the Greco-Roman rhetorical handbooks of the ancient Mediterranean context. When Paul's argument in 2 Corinthians and the instructions for synkrisis in the rhetorical handbooks are juxtaposed, we find that Paul's argumentative strategy aligns with the practice of synkrisis but also subverts the accepted standards of what accounts for that which is praiseworthy. What is more, attention to the rhetorical figures of the ancient world reveals that Paul repeatedly draws on and reverses other rhetorical expectations to make the case that his suffering and weakness actually bears witness to his faithfulness to Jesus Christ and his worthiness as a bearer of God's message of salvation.

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<p><b>Dr. Mitali Wong , Dr. Mohammed Yousuf , Dr. Peggy Ratliff, Dr. Nick Robinson, Dr. Astrid Beckers , Dr. Jonathan Evans</b></p>	<p><b>Professor of English, Associate Dean, School of Humanities and Social Sciences</b></p>	<p><b>Research</b></p>	<p><b>Teaching with Library of Congress Resources</b></p>
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During the current academic year, a team of six Claflin University professors is conducting monthly workshops for 11th and 12th grade ELA teachers to use Library of Congress primary sources for teaching four selected literary classics. The PI for the project is Dr. Mitali Wong. The Claflin faculty team has discovered that Library of Congress resources both primary and secondary can be used creatively across disciplines for university courses as well as the Library of Congress is a free national resource for all educators. This group presentation will share ideas for using LOC resources for assignments in university courses in general education and upper level courses for majors. The team members are Dr. Peggy Ratliff, Dr. Mohammed Yousuf, Dr. Nick Robinson, Dr. Jonathan Evans, and Dr. Astrid Beckers. Their proposed presentation for Faculty Research Day 2026 will share ideas for the creative use of Library of Congress resources in undergraduate courses.

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<p><b>Dr. Jason Youngkeit</b></p>	<p><b>Associate Professor of Spanish</b></p>	<p><b>Research</b></p>	<p><b>Authentic Texts and Their Unique Pedagogical Application in The Foreign Language (Spanish) Classroom</b></p>
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My presentation will consist of dozens of personal photographs of signage I have taken over 3 trips to Argentina. As Alice Omaggio Hadley, points out in her landmark book *Teaching Language in Context* 3rd ed. (2001): "The contexts for language practice should be devised, as much as possible, from culturally authentic sources. The use of real or simulated travel documents, hotel registration forms, biographical data sheets, train and plane schedules, authentic restaurant menus, labels, signs, newspapers, and magazines will acquaint students more directly with real language than will any set of contrived classroom materials used alone. . . . The proficiency-oriented classroom will incorporate such material frequently and effectively into instructions at all levels." (97) Hence, as Hadley asserts, the use of signage with authentic language from bona-fide geographic sources can indeed very effectively enhance language instruction. This certainly has been the case with the photos I have taken thus far of signage during my many travels. I have very effectively used my growing collection of authentic texts printed on signs to teach Spanish vocabulary and grammatical concepts. From roadsides, the sides of buildings, inside or outside commercial businesses, inside shopping malls, etc., I have captured numerous photographs of these signs which I now use very appropriately in my Spanish language classes. Moreover, I have found that these different images contain at times much latent cultural and historical significance and thus have pedagogical use in those areas also.

**School of Natural Sciences and Mathematics**

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Name	Position Title	Category	Project Title
<b>Dr. Amith Devireddy</b>	<b>Assistant Professor of Biology</b>	<b>Research</b>	<b>Harnessing Genetic Diversity in Populus Rrichocarpa to Investigate the Physiological and Molecular Mechanisms of Heavy Metal Tolerance</b>

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Heavy metal (HM) contamination poses a significant environmental threat, with cadmium (Cd) being particularly concerning due to its toxicity and prevalence in soil and water sources. In response to this environmental challenge, phytoextraction strategies have been developed, leveraging the ability of plants to uptake metal and metalloids from the soil, for applications such as phytoremediation and phytomining. Among the plant species employed for such applications, Populus species and their hybrids stand out as promising candidates due to their rapid growth, high biomass production, and tolerance to heavy metals. In this study, we leveraged extensive genomic resources available for a large population of black cottonwood poplars (*P. trichocarpa*) to investigate the impact of genetic diversity in the molecular and physiological underpinnings of heavy metal tolerance in trees. Three poplar genotypes with contrasted transcriptomic levels for the heavy-metal transporter gene PtHMA4 were selected; through integration of physiological and multi-omics analyses, we then investigated their strategy in alleviating the adverse effects of Cd toxicity. We used a systems biology approach to explore the complex relationships between transcriptomic changes, physiological responses, and perturbations in the ionome induced in response to Cd treatment. Our findings shed light on the mechanisms underlying Cd tolerance in poplar genotypes, particularly highlighting the critical intra-specific variations in responses across genotypes, which are distinct from previously observed inter-specific variations. The genotype with the highest expression of PtHMA4 showed the highest level of resilience to Cd stress and unique molecular signatures. These insights will be critical in aiding future breeding and genetic improvement efforts aimed at developing superior *P. trichocarpa* varieties specifically tailored for phytoextraction applications.

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<b>Dr. Bijoy Dey</b>	<b>Associate Professor of Chemistry</b>	<b>Research</b>	<b>Calculating Chemical Reaction Paths and Path Profiles: A New Method Based on Fermat's Principle of Optics</b>
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Application of eikonal equation, widely used in optics, will be discussed in the context of reaction path optimization problem. It is shown that the pertinent solutions of the eikonal equations, when applied to the potential energy surfaces representing chemical reaction, offer a renewed understanding of reaction dynamics in terms of the characteristics or rays. From theoretical point of view the connection between ray optics to describe the propagation of light and the PES to describe the progress of a reaction is interesting for various reasons. For example, properties such as wavefront, refractive index, rays, caustics, interface that are typically associated with the field of optics can be similarly defined for chemical reactions on a given PES. As an example of the potential powers of the eikonal equation we will present our calculation of the reaction paths with two representative PES.

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<b>Dr. Steffani Driggins</b>	<b>Associate Professor of Biology</b>	<b>Research</b>	<b>An Innovative Learning Approach to Module-Based Learning for Biology Junior Seminar Courses</b>
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In the Biology Department at Claflin, the undergraduate students begin developing a research proposal or research thesis in their junior seminar courses. However, the students that are enrolled in the biology junior seminar courses lack the research training needed to effectively develop a research project for their senior capstone. Therefore, curriculum changes were completed and implemented in the biology junior seminar courses beginning in the fall of 2023. The curriculum changes consisted of the discussion of certain topics using PowerPoint slides and discussion boards, followed by administration of online research training modules. The research training modules consist of the following topics: scientific method, plagiarism, research ethics, CITI training, hypothesis development, analyzing data from a review paper and data survey, analyzing data from a research paper, and formatting references. Students completed an online assessment at the end of the fall semester and spring semester pertaining to the online training modules. The results of the assessment for the 2023 fall semester that the students completed indicated that the online training modules were somewhat effective. However, the results of the assessment for the 2024 fall semester indicated that the training modules were very effective. The results of the assessments for the spring semesters indicated an increase in effectiveness as well. Overall, the online training modules enhanced the knowledge of the students for the aforementioned topics. The data is important because the training modules were created to assist students with basic information for developing their senior capstone.

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**Dr. Samina H. Assanie-Shivji**

**Professor of Biology**

**Research**

**Community-Level Surveillance of SARS-CoV-2 and Influenza A and B Viruses Through Wastewater Analysis in Orangeburg, South Carolina**

COVID-19, caused by severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2), emerged in Wuhan, China, in December 2019 and rapidly became a global pandemic, resulting in over 7 million deaths worldwide. Influenza A and B viruses also contribute significantly to global health burdens. Both SARS-CoV-2 and influenza viruses are primarily transmitted through respiratory droplets but have also been detected in human feces. This makes wastewater a critical resource for monitoring environmental persistence and community transmission. Objective: This study evaluates the use of wastewater-based epidemiology (WBE) as a non-invasive tool for monitoring SARS-CoV-2 and Influenza virus in Orangeburg county, South Carolina. Materials and Methods: Composite raw (influent) and treated (effluent) wastewater samples were collected twice weekly from the Orangeburg County wastewater treatment plant from August through December 23, 2024. Viral RNA was quantified using digital polymerase chain reaction (dPCR). Results: SARS-CoV-2 was consistently detected in influent samples but remained below the limit of detection in effluent. Influenza A was detected from November 25–December 23, 2024, and Influenza B from November 25–December 2, 2024, outside the typical seasonal transmission period beginning in September. Conclusion: Wastewater analysis can detect trends in infection and reveal viral circulation even when clinical testing is limited. Ongoing WBE monitoring is essential for early outbreak detection and preparedness, especially as periodic waves of COVID-19 are expected following its 2023 reclassification.

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**Dr. Corey Johnson**

**Assistant Professor of Organic Chemistry**

**Research**

**Synthesis and Binding Assessment of a Tripodal Thiourea Receptor against Nuclear Waste Surrogates**

Nuclear energy is the third-most prominent source of electricity in the nation, accounting for roughly 19% of all power; it provides more than half (55%) of power in the state of South Carolina. In comparison with the top producer of fossil fuels, nuclear energy is a much more effective source of power production requiring more than ten thousand-fold less material. However, nuclear energy execution is not without controversy. Processes that produce nuclear energy afford several toxic waste products that are released into the ecosystem. These products are commonly comprised of uranium fluoride (UF<sub>6</sub>) and technetium (Tc) which break down into secondary by-products hydrofluoric acid (HF) and pertechnetate (TcO<sub>4</sub><sup>-</sup>) which are renowned for their cancerous and corrosive properties as well as highly water solubility. Due to the anionic nature of pertechnetate and the dissociation product of hydrofluoric acid, fluoride (F<sup>-</sup>), we envisioned that extraction of these substances from the water supply can be executed with anion receptors. To test this hypothesis, we have synthesized and assessed the binding affinities of a tripodal thiourea receptor with both fluoride (F<sup>-</sup>) and perrhenate (ReO<sub>4</sub><sup>-</sup>), surrogates of the hydrogen fluoride and pertechnetate, through colorimetric and step-wise <sup>1</sup>H NMR & UV-Vis titrations. Binding assessments overall revealed a stronger binding selectivity towards perrhenate over fluoride.

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**Dr. Karina Liles**

**Associate Professor of Computer Science and Department Chair**

**Research**

**Clafin University SmartHOME: GRIOT (Granular Real-time Insights on Outcomes and Trajectories) Project**

The Clafin University SmartHOME is a living and learning environment enhanced with intelligent technologies that assist individuals in managing their daily routines ranging from personal health monitoring to digital connectivity. The goals of this project include promoting early health intervention, reducing the prevalence of chronic diseases in minority populations, and developing accessible technologies that are culturally and contextually appropriate. As part of this initiative, the GRIOT (Granular Real-time Insights on Outcomes and Trajectories) project introduces a digital health tool paired with a physical representation system to monitor and promote wellness. Users input or upload personal health data (such as heart rate, sleep quality, or caloric output) into a digital dashboard that provides instant feedback using clear, color-coded cues. These data points are analyzed in real time to simulate health trajectories and identify areas of concern or improvement. The physical component of the GRIOT project brings the data to life through responsive orbs equipped with ESP32 microcontrollers and NeoPixel LED rings. These orbs glow green, red, or gray to reflect health status, offering a tangible, ambient interface that mirrors the digital tool's analytics. This dual-interface system empowers users through both visual storytelling and tactile interaction, making health insights accessible and actionable in the home environment. This hybrid approach bridges technology and health literacy to foster a new generation of interdisciplinary health tools that combine data science, smart technology, and culturally responsive design—advancing equity in digital health innovation.

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**Dr. Somasundaram  
Velumyylum**

**Professor of Mathematics**

**Scholarship**

**Use of Maple software to efficiently Visualize and Approximate the Area Under Curves**

We use paper and pencils to approximate the area under a curve with rectangular areas in our integral calculus classes. By increasing the number of rectangles that cover the area, we could get closer to the actual area. We will use the Maple software to generate, visualize and approximate areas under curves with some illustrative examples.

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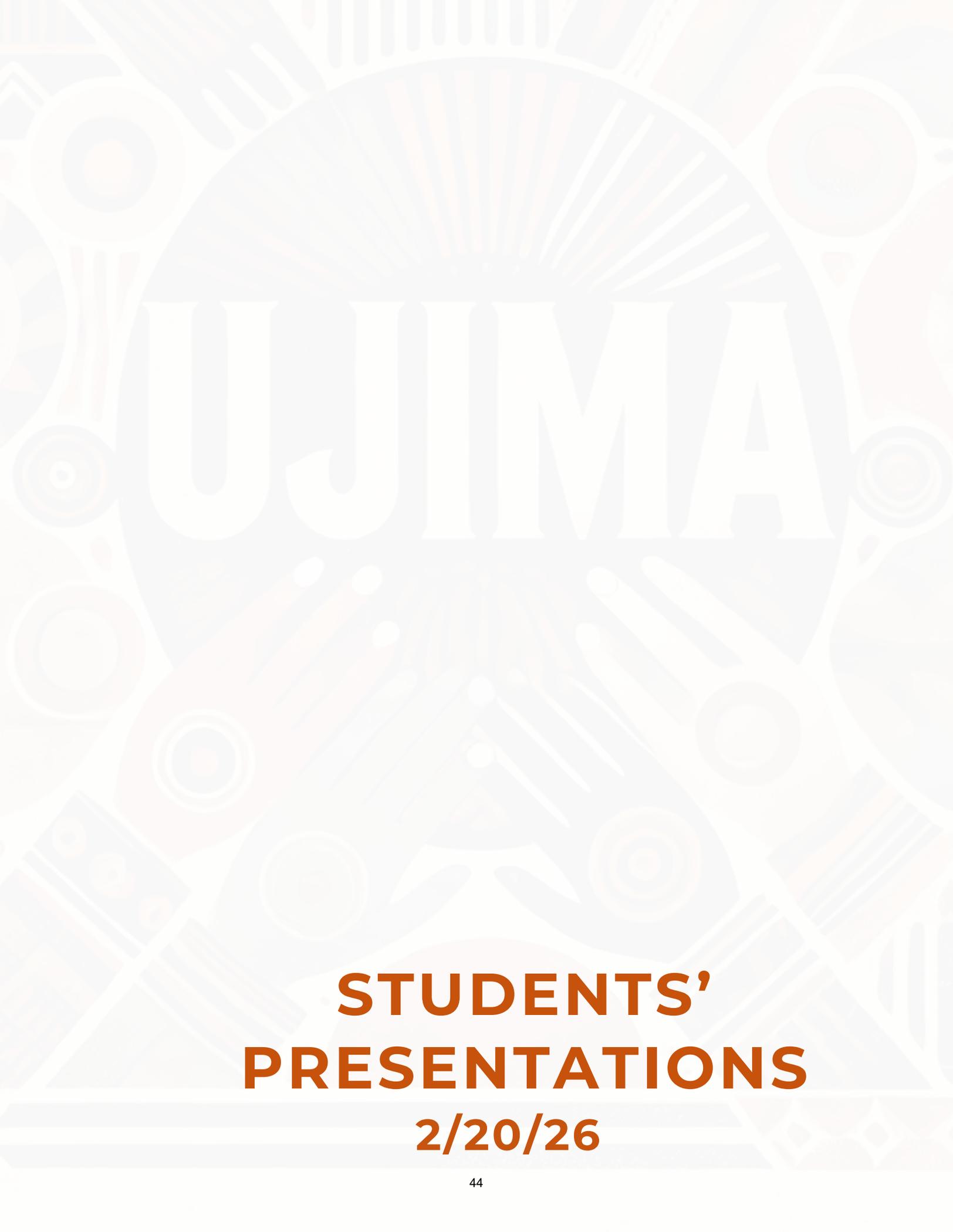
**Mr. Brandon Yarbrough**

**Organic Lab Instructor**

**Research**

**Recent Progress in "Green Chemistry"  
Applications for STEM Education: Increasing  
Accessibility and Safety in Chemical  
Demonstrations with Natural Products**

Despite record demand in areas such as healthcare and renewable energy, there are challenges in maintaining and training students in STEM-related fields: primarily the safety concerns and expense of materials/waste. These challenges, combined with learning-loss associated with the COVID-19 pandemic, have resulted in a decline in elementary and secondary performance in STEM courses in recent years. In addition, the pharmaceutical and energy sectors rely primarily on petrochemicals (non-renewable organic compounds derived from crude oil) for producing our medicines, powering our vehicles, and heating our homes, amongst others. Given the need for safer, renewable sources of raw materials in both academia and industry, one focus of "green chemistry" is the transition to sustainable resources such as natural products, which may be extracted from plants or other living organisms. To this end, current research progress has shown the use of curcumin, a natural product derived from the turmeric plant. In three areas of research, curcumin is used to illustrate potential use as a natural product in allergen detection, STEM education outreach, and water purification. Aspects of this work have been presented at both the SCICU Research Symposium (2021) and at the South-Eastern Regional Meeting of the American Chemical Society (2025). This has also resulted in outreach demonstrations that are showcased in local schools by the Claflin University Student Chapter of the American Chemical Society (CU-ACS).

The background features a large, stylized graphic of the UJIMA logo. At the top, a sunburst with orange and yellow rays is positioned above the word "UJIMA" in a bold, white, sans-serif font. Below the text, two hands are shown in a gesture of support or care, rendered in shades of orange and blue. The entire graphic is set against a light, patterned background with circular and geometric motifs in muted colors.

**UJIMA**

**STUDENTS'  
PRESENTATIONS**

**2/20/26**

### School of Business

First Name	Last Name	Presentation	Topic Title	Location	Time
August	Campbell	Oral Presentation	Evolutionary Relevance of CDF Freedom School: A Personal Reflection	JST-226	10:45 a.m. - 11:10 a.m.
Noah	Tedder	Oral Presentation	From Mixed Martial Arts to Sustainable Entrepreneurial Venture	JST-226	11:15 a.m. - 11:40 a.m.

### School of Education

First Name	Last Name	Presentation	Topic Title	Location	Time
Moriah	Jenkins	Poster Presentation	Revive Representation: How African American Male Teachers Impact African American Male Students	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Micah	Mercer	Oral Presentation	Black Representation in Animation	JST-226	11:45 a.m.- 12:10 p.m.

### School of Humanities and Social Sciences

First Name	Last Name	Presentation	Topic Title	Location	Time
Tierra	Albert	Oral Presentation	The Impact of Minimum Wage on Marginalized Communities	WVM Room-108	10:15 a.m. - 10:40 a.m.
Myah	Burt	Oral Presentation	Reparative Storytelling: Reclaiming the Voices and Perspectives of Systematically Underrepresented Indigenous Communities in Southeastern America	WVM Room-108	11:15 a.m. - 11:40 a.m.
Layla	DeCosta	Oral Presentation	The Role of Ethnic-Racial Identity as a Moderator Between Racial Discrimination and Depression in Black Teenagers: Exploring Sex Differences	WVM Room-108	11:45a.m. - 12:10 p.m.
Ja'Leah	Guenther	Poster Presentation	The Impact of Community Violence on African American Young College-Age Women	<i>Student Center - Ballroom A</i>	<i>9:35 a.m. - 11:00 a.m.</i>

Yasmine, Destine, Samaria, and Shamirra	Hall, Lesesne, Strickland, and White	Oral Presentation	The Convergence of Borders and Bars: A Systematic Review of Immigration and the U.S. Criminal Justice System (1990–2026)	WVM Room-110	10:15 a.m. - 10:40 a.m.
Tacoya	Heyward	Oral Presentation	The Speaker Advantage: How Language Production Boosts Memory and Biases Interpretation	WVM Room-110	10:45 a.m. - 11:00 a.m.
Brianna	Hunt	Poster Presentation	Plants as Contraceptives and The Politics of Reproductive Autonomy	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
MiQuel	Johnson	Oral Presentation	Jazz as Collective Work: How Harlem’s Music Scene United and Sustained the Community, 1920–1935	WVM Room-110	11:15 a.m.- 11:40 a.m.
Jalevina	King	Poster Presentation	Capoeira Angola as Living Memory: Movement, Ancestral Knowledge, and Collective Healing Across the African Diaspora	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Mason	McFadden	Oral Presentation	Diminishing Returns: A Study on Why Undergraduate Students Are Not Interested in African American Art History	WVM Room-110	11:45 a.m. - 12:10 p.m.
Nevaeh	Miller	Oral Presentation	PIGMENT	WVM Room-112	10:15 a.m. - 10:40 a.m.
La'tresa	Middleton	Oral Presentation	The Effects of Perception on the Identity of Black Women	WVM Room-112	10:45 a.m. - 11:10 a.m..
Grace	Oliver	Oral Presentation	The Effect of Font Style on Reading Comprehension	WVM Room-112	11:15 a.m. - 11:40 a.m.
Bethany	Scriven	Oral Presentation	Media Law Challenges of Information Accuracy: Ensuring News Accuracy to Viewers During U.S. Presidential Election Cycles	WVM Room-112	11:45 a.m. - 12:10 p.m.
Samuel	Stewart	Poster Presentation	Synthesizers and the Integrity of Music	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.

Mason	Summers	Oral Presentation	The Reality of Human-A.I Relationships	JST-131	10:15 a.m. - 10:40 a.m.
Aya	Talley	Poster Presentation	Decolonizing Childbirth: Indigenous Birthing Practices, Traditional Attendants, and the Profitization of Reproductive Care in the Western World	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
LaTricia	Thomas	Oral Presentation	Threads of Memory: A Cross-Generational Analysis of American Slave Art and Its Influence on Gen Z African American Artists	JST-131	10:45 a.m. - 11:10 a.m..
Alyssa	Thompson	Oral Presentation	The influence of Rhythm on Stress Reduction	JST-131	11:15 a.m. - 11:40 a.m.
Kendall	White	Oral Presentation	Where Did She Come From: A Study into the Stereotypes of Black Women	JST-131	11:45 a.m. - 12:10 p.m.
Alexis	Wilson	Oral Presentation	What is TikTok Teen Security, "I am a Visual Learner" A Study on TikTok Teen Security and how it compares to Douyin	WVM-108	9:45 a.m. - 10:10 a.m.
Qaela	Williams	Oral Presentation	Haunted Bonds: Black Girlhood and Trauma	WVM-110	9:45 a.m. - 10:10 a.m.
Darius	Wright	Oral Presentation	More Than Fashion: Streetwear as a Cultural and Psychological Tool Among Black Male Undergraduates	WVM-112	9:45 a.m. - 10:10 a.m.
Claflin University Theatre Ensemble		Creative Expression	The Promise	WVM Fine Arts Center	8:30 am - 9:20 am

## School of Natural Sciences and Mathematics

First Name	Last Name	Presentation	Topic Title	Location	Time
Caliese, Amrinder, Subash, Oluwademiladeayo	Beckford, Singh, Neupane, Ashade	Poster Presentation	Machine Learning Diagnosis of Peripheral Arterial Disease from CT- Angiography (CTA) Images	<i>Student Center - Ballroom A</i>	9:35 a.m. - 11:00 a.m.
Akai	Bracy	Oral Presentation	Metabolite Profiling Across Developmental Stages and In Vitro Regeneration of <i>Ochradenus Baccatus</i>	<i>JST-226</i>	9:45 a.m. - 10:10 a.m.
Nigel	Bradley	Poster Presentation	Regulation of $\beta$ -catenin by EBP50 in Pulmonary Vascular Endothelial Cells	<i>Student Center - Ballroom A</i>	9:35 a.m. - 11:00 a.m.
Justice, Rashanna	Clark Sr., Ireland	Poster Presentation	Role of Arabidopsis Receptor-Like Protein under Salinity Stress: Insights from Physiology, Gene Expression, and NMR Profiling	<i>Student Center - Ballroom A</i>	9:35 a.m. - 11:00 a.m.
Brooke	Cobb	Poster Presentation	Wastewater-Based Epidemiology as a Tool for SARS-CoV-2 and Influenza Virus Monitoring in Orangeburg, SC	<i>Student Center - Ballroom A</i>	9:35 a.m. - 11:00 a.m.
Zecariya	Fenwick	Poster Presentation	NMR-based Metabolomics in the Quantification of Human Saliva Samples	<i>Student Center - Ballroom A</i>	9:35 a.m. - 11:00 a.m.
<i>Jordan</i>	<i>Foster</i>	<i>Poster Presentation</i>	<i>The Impact of Dicer1 Expression on Macrophage Gene Expression</i>	<i>Student Center - Ballroom A</i>	9:35 a.m. - 11:00 a.m.
<i>Kristan</i>	<i>Hubbard</i>	<i>Poster Presentation</i>	<i>qNMR and Metabolic Profiling of Turmeric Tissues Reveal Curcumin Content</i>	<i>Student Center - Ballroom A</i>	9:35 a.m. - 11:00 a.m.
Carmen	Gonzalez	Poster Presentation	Dysregulated Gamma Delta T Cell Function In Diabetic Wound Healing	<i>Student Center - Ballroom A</i>	9:35 a.m. - 11:00 a.m.

Anthony	Jones	Poster Presentation	Understanding Soft-Hard Acid-Base Principle Based on Quantum Mechanical Calculations	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Kemaury, Eddie, Paige, Caleb	Joseph, Hopkins, Felder, Akintayo	Oral Presentation	Beyond the Box Score: Understanding Basketball Through Data	JST-226	10:15 a.m. - 10:40 a.m.
Kimora	Leverette	Poster Presentation	Differential Scanning Calorimetric (DSC) Study to Understand Thermal Properties of a Mixture of Polymer with Different Molecular Weights	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Maricellyn	McDonald	Oral Presentation	Lab-Based Spectroscopic Imaging of Submerged Aquatic Vegetation	JST-208	10:45 a.m. - 11:10 a.m.
Samaria	McFadden	Oral Presentation	Claflin Innovative Academic Advancement	JST-208	11:15 a.m. - 11:40 a.m.
Shalaya, Latrevia	Murray, Robinson	Poster Presentation	Antibiotic Synthesis Gene Identification in Bacteria Isolated from South Carolina Congaree Bluffs Heritage Preserve	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Chidinma, Zanyah	Mojekwu, Shepherd	Poster Presentation	Recent Activities and Advancements in Claflin University's ACS Student Chapter	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Briana	Nabriat	Poster Presentation	Are Evasions Really Working? Evaluating the Operational Validity of Rule-Bypassing Attacks	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Ronisha	Rush	Poster Presentation	Removing zinc from Aqueous Solutions Utilizing Cotton Bush Waste	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Khadijah	Salam	Poster Presentation	Determining the effects of aspartame and sucralose on the heart rate of Daphnia Magna	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.
Zora	Stephens	Oral Presentation	Programing Robots for Computer Science Outreach	JST-208	11:45 a.m. - 12:10 p.m.
Juanita	Williams	Poster Presentation	Improving the Bioavailability of Active Pharmaceutical Ingredients: X-Ray Diffraction (XRD) and Differential Scanning Calorimetry (DSC) Techniques	Student Center - Ballroom A	9:35 a.m. - 11:00 a.m.



UJIMA

**ABSTRACTS**  
**STUDENTS**

First Name	Last Name	Faculty Advisor/Research Mentor	Topic Title
<b>School of Business</b>			

August	Campbell	Dr. Abdullah Khan	Evolutionary Relevance of CDF Freedom School: A Personal Reflection
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This presentation is really just me sharing what I saw, learned, and experienced during my nine-week CDF Freedom School internship in North Charleston, South Carolina. I was part of the grand opening of the second Freedom School site—Jenkin’s Freedom School—so being one of the very first Servant Leader Interns there meant a lot to me. The whole program goes all the way back to the 1964 Mississippi Freedom Summer, when college students taught literacy to African-American children to push for education, empowerment, and social change. To be connected to that history and then be a part of the national Freedom School network now felt powerful, because it reminded me that I’m helping continue something bigger than myself. During the six weeks I spent directly with my scholars, I followed the CDF Freedom Schools model using the Integrated Reading Curriculum (IRC). That meant I wasn’t just helping them read — I was helping them build confidence, learn how to express themselves, and understand their own value. I also worked closely with families and helped link them to resources they needed, because Freedom School is about supporting the whole child, not just academics. Overall, the experience helped shape how I see students, community, and the type of school psychologist I want to become.

Noah	Tedder	Dr. Abdullah Khan	From Mixed Martial Arts to Sustainable Entrepreneurial Venture
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From Mixed Martial Arts to Sustainable Entrepreneurial Venture: A College Student’s Envisioned Career Trajectory  
 Student presenter: Noah Tedder (faculty advisor: Dr. Abdullah Khan) This Presentation focuses on a student’s career ambitions that would emulate skills, experience, and tactics learned from Mixed Martial Art (MMA) in developing a scalable entrepreneurial venture. The MMA is an interdisciplinary combat sport that supports both physical fitness and personal growth. This sport is a combination of boxing, wrestling, jiu-jitsu, and kickboxing that propels participants to gain cardiovascular endurance, muscular strength, flexibility, balance, and coordination. Here are a few skills to draw from my MMA career that I believe would help me in my entrepreneurial journey: Discipline and Consistency: The rigorous training schedule and commitment required in MMA to achieve physical and technical mastery translates directly into the discipline and consistent effort needed to execute a long-term business strategy. Adaptability and Strategy: Like constantly adjusting an MMA fighter's approach against a dynamic opponent, an entrepreneur must pivot quickly and respond strategically to rapidly changing market conditions. Risk Management and Opportunity Recognition: MMA fighters calculate the risks of specific maneuvers versus potential rewards, a mindset that helps entrepreneurs practice calculated risk-taking and utilize opportune moments for business development and expansion. Resilience: The ability to push through pain, fatigue, and setbacks in a fight builds resilience, which is crucial for weathering the inevitable failures and emotional toll involved in scaling a sustainable business. Teamwork and Coaching: Though seemingly an individual sport, the MMA requires effective collaboration with various stakeholders such as trainers, sparring partners, corner-persons, agents etc. mirroring an entrepreneur’s need to coordinate with various persons, trainers and mentors.

First Name	Last Name	Faculty Advisor/Research Mentor	Topic Title
<b>School of Education</b>			

Moriah	Jenkins	Dr. Friggita Johnson	Revive Representation: How African American Male Teachers Impact African American Male Students
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This presentation examines the impact of African American male educators on the academic success, self-image, and long-term development of African American male students in urban public K–12 schools. Despite persistent achievement gaps and systemic challenges facing this population, limited research has examined the role of same-race male teachers as agents of academic and social change. This study employs a mixed-methods research design to explore how teacher representation, mentorship, and culturally responsive instructional practices contribute to improve student outcomes.

Micah	Mercer	Dr. Indira Bailey	Black Representation in Animation
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This study examines how students at Claflin University perceive Black representation in animated films and shows released between 2020 and 2025, addressing ongoing concerns about whether contemporary animation fully reflects Black identity, culture, and humanity. Using a qualitative survey of seven participants, the research explored which animated works students watched, the aspects that drew their interest, and whether they felt seen, ignored, or misrepresented through these portrayals. Findings indicate that while students are primarily drawn to narrative elements such as plot, character, and art style, representation of Black characters, culturally grounded stories, and Black voice actors significantly influence engagement and emotional connection. Titles such as Spider-Verse, Entergalactic, and Wendell & Wild were most frequently mentioned, highlighting the importance of visibility combined with cultural authenticity and narrative depth. These results suggest that meaningful Black representation in animation not only fosters recognition and belonging but also shapes how audiences interpret and value media content, underscoring the need for intentional storytelling and inclusive creative practices. This study contributes to ongoing scholarship on race, media representation, and audience reception by centering Black audience perspectives within animated media.

First Name	Last Name	Faculty Advisor/Research Mentor	Topic Title
<b>School of Humanities and Social Sciences</b>			

Tierra	Albert	Dr. Poku Agyemang	The Impact of Minimum Wage on Marginalized Communities
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Minimum wage policies are widely promoted as instruments for reducing poverty and improving economic security for low-income workers. However, their effects are not experienced equally across all populations and may unintentionally reinforce structural inequalities. This thesis examines how minimum wage laws disproportionately affect Black individuals and people experiencing homelessness, two groups that remain economically vulnerable due to historical and systemic barriers. Drawing on national labor and housing data, existing scholarly literature, and qualitative insights, this research explores the relationship between wage legislation, employment opportunities, and housing stability. Particular attention is given to mechanisms such as job displacement, reduced hiring for low-skill positions, labor market discrimination, and rising costs of living that may offset wage increases. Additionally, the study situates contemporary minimum wage policies within broader historical contexts, including post-emancipation labor exclusion, mass incarceration, and unequal access to social welfare programs, to explain why Black communities are disproportionately impacted. By highlighting the unintended consequences of minimum wage laws on marginalized populations, this thesis challenges dominant policy narratives that frame wage increases as universally beneficial. The findings aim to contribute to policy discussions by emphasizing the need for more nuanced, intersectional approaches to economic reform that address both wage adequacy and structural inequality, particularly for populations at the margins of the labor market.

Myah	Burt	Dr. Peggy Ratliff	Reparative Storytelling: Reclaiming the Voices and Perspectives of Systematically Underrepresented Indigenous Communities in Southeastern America
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European colonial powers perpetuated the hemispheric phenomenon of Indigenous enslavement in the Americas as they invaded and dictated Indigenous lands and culture through the late 1400s and into the early 1900s. Scholars have estimated that between 2.5 and 5 million Indigenous individuals were enslaved during this period alone (Stolen Relations, 2023). Archival information and storylines based upon this topic have almost exclusively been told from the colonizer’s perspective, consequently fostering a lack of public awareness and emotional sensitivity to the subject. The question then arises: how can we humanize the Indigenous individuals mentioned in archival documents despite the minimal information available about them? By examining archival material and collaborating with existing tribal partners, I seek to uncover the stories that have not been told, educate the public, and restore relationships disassembled by prejudiced history. This project will expose an impediment of understanding due to colonizers’ voices primarily being readily available in archival material and oral histories, therefore raising awareness of Indigenous enslavement and fostering the repairment of Indigenous relationships.

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Layla

DeCosta

Dr. Matthew Hiatt

The Role of Ethnic-Racial Identity as a Moderator Between Racial Discrimination and Depression in Black Teenagers: Exploring Sex Differences

Black youth experience high rates of racial discrimination, thus leading to increased depressive symptoms. Utilizing the Phenomenological Variant of Ecological Systems Theory (PVEST) as a guiding theoretical framework, this study examined ethnic-racial identity (ERI)'s moderating role between racial discrimination and depressive symptoms. Participants were 460 Black adolescents who were 12-to-17-years old (48.3% females;51.3% males) and were recruited through a research survey panel. Racial discrimination was a significant predictor of depressive symptoms ( $p < .001$ ). ERI also predicted higher levels of depressive symptoms ( $p = .003$ ). The interaction between racial discrimination and ERI predicted increased depressive symptoms ( $p = .018$ ). Simple slope analyses indicated that racial discrimination was more strongly associated with depressive symptoms for those who displayed higher ERI than lower ERI. These findings highlight the complexity of ERI and the varying nature of its protective nature. These insights can be used to enhance future research potentially looking at components of ERI individually to look at differences between exploration and affirmation, belonging and commitment. As well as exploring other moderators that can lower the impact of racial discrimination on depressive symptoms.

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Ja'Leah

Guenther

Dr. Daniel Cooper

The Impact of Community Violence on African American Young College-Age Women

Exposure to community violence has been shown to contribute to reduced academic progress, anxiety, post-traumatic stress symptoms, social withdrawal, as well as difficulties with trusting others. Minorities, particularly African Americans, living in urban areas, experience conditions such as limited educational opportunities, poverty, economic obstacles, and racism. These disadvantages can lead to an increased risk of being exposed to violence (Wilson et. al, 2012). Many studies focus on the short-term effects of community violence or highlight specific behavioral challenges. However, there is a lack of attention on how this violence continues to impact African American college-aged women, beyond their childhood years. This research will examine how exposure to community violence influences relationship building, mental health and overall well-being, as well as academic performance and persistence. To explore this topic, a meta-analysis will be conducted along with interviews of African American college-aged women who have experienced community violence.

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Yasmine, Destine, Samaria, and Shamirra	Hall, Lesesne, Strickland, and White	Dr. Caroletta Ivey	The Convergence of Borders and Bars: A Systematic Review of Immigration and the U.S. Criminal Justice System (1990–2026)
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This research project explores the overlapping worlds of immigration law and the American criminal justice system. Over the last 30 years, the U.S. has seen the rise of "crimmigration"—a trend where being an immigrant is increasingly treated as a criminal matter rather than a civil one. By reviewing research from 1990 through early 2026, this paper investigates whether the common belief that "immigrants cause more crime" is actually supported by evidence. The review focuses on four main areas: The "Immigrant Paradox": Why data consistently shows that areas with more immigrants often have lower crime rates. Policing and Tech: How police use new tools like AI and biometrics to track migrant communities. The Court System: The legal hurdles immigrants face, such as the lack of a right to a public defender in immigration hearings. Mass Detention: The social and economic toll that detention and deportation take on families and local neighborhoods. The study also examines how enforcement has shifted between different presidential administrations, including the recent policy changes in 2025 and 2026.

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Tacoya	Heyward	Dr. Sarah Brown-Schmidt, Mairiam Ibrahim (Graduate Student), and Yu Zhou (Graduate Student)	The Speaker Advantage: How Language Production Boosts Memory and Biases Interpretation
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Prior linguistic experience can influence how people comprehend and remember spoken language. The current study investigated whether producing a referential expression, as opposed to comprehending it, results in stronger memory of candidate referents—objects that share partial features with a target but are not ultimately named. We predict that referents activated during initial utterances (e.g., a striped skirt) will remain active in memory and influence later interpretation of related descriptions (e.g., "the black and white..."), with stronger and more persistent effects for referents encountered during production. Participants (N=64) alternated between speaker and listener roles while identifying objects among distractors that varied in feature overlap (e.g., adjective competitors like "striped" vs. noun competitors like "skirt"). Participants eye movements were tracked during comprehension trials to assess referent activation, and memory was probed using a forced choice recognition task. Our primary analyses focus on whether prior speaker role enhances memory for candidate referents and biases visual attention toward them during subsequent comprehension. The coding analysis focused on highlighting the use of noun phrases, which were structured as determinanter-adjective-noun (i.e., "the black and white dress"), fillers, and disfluencies (i.e., "um," "uh"). The study's findings aligned with previous studies and it highlights how language production impact visual memory recall and may inform methods for improving communication in eyewitness testimony and conversational settings.

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Brianna

Hunt

Dr. LaKerri Mack

Plants as Contraceptives and The Politics of  
Reproductive Autonomy

This research stems from my internship with Morehouse College Campbell-Wright Gullah Geechee Internship Program. It centers the contribution of enslaved women, particularly their use of ethnobotanical practices. Using plants such as Okra and Cotton Root as contraceptives. These became tools for bodily autonomy and resistance within systems that sought to control their reproduction. This research explores the historical use of plants as contraceptives and examines how such knowledge reflects broader systems of medical racism, survival, and control. This project is guided by the following question: What did ethnobotanical practices reveal about bodily autonomy, power, and access to reproductive knowledge? Methodology: Interpretation of cultural practices documented through educational videos, museum collections, and scholarly websites. Key Findings: Western medical research has historically criminalized black women reproductive practices and systems. Significance: As a result, Black women today remain disproportionately impacted by limited access to reproductive healthcare, inadequate treatment, and compromised bodily autonomy through medical racism.

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MiQuel

Johnson

Dr. Eunjung Choi

Jazz as Collective Work: How Harlem's Music  
Scene United and Sustained the Community,  
1920–1935

From 1920 to 1935 Harlem was a place where Black Americans could be creative. They also had to deal with a lot of serious problems. A lot of families moved to the north during the Great Migration but when they got there they found that the housing was very crowded, the rents were very high. It was hard to find a job. Things got even tougher after the Great Depression started in 1929. This caused a lot of poverty and unemployment for Black Americans. During these tough times jazz music was very important to the Black American community. Jazz music was not just something you listened to, jazz music helped the Black American community get through the hard times. It showed people working together as a team and being responsible for each other, which is connected to the RSCE theme of UJIMA and UJIMA is all about jazz music and the Black American community working together and helping each other. The main reason for this research is to see how jazz music helped people in Harlem become closer, earn a living, and feel good about their jazz music culture. Jazz music performances at the Savoy Ballroom, which opened on March 12, 1926, and the Cotton Club gave jobs to jazz musicians like Louis Armstrong, Duke Ellington, Cab Calloway, and Fletcher Henderson. These jazz music performances also brought the people in the community together. Jazz music was a part of this. According to History.com jazz music did a lot for the people in Harlem. Jazz music at places like the Savoy Ballroom and the Cotton Club was very important for the community and jazz music. Jazz was really helpful to people in their lives. During these time they had these things called rent parties, which were like get togethers in the neighborhood. At these rent parties musicians would play music and people would collect money to help pay the rent. Jazz musicians like Fats Waller, James P. Johnson, and Willie "The Lion" Smith would play at these rent parties. These rent parties were a way for neighbors to help each other out and stay in touch with the people around them. The Library of Congress has interviews and stories from people that music and social gatherings helped people feel better during times like poverty and racial challenges. You can find these stories at guides.loc.gov. Music and social gatherings gave people hope, made them strong, and also helped people come together as a community and support each other. Music and social gatherings were really important to people during these times. This research shows that jazz helped Harlem residents survive hard times, work together, and build community pride, making it a true example of UJIMA in action.

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Jalevina

King

Dr. Catherine Adams

Capoeira Angola as Living Memory: Movement,  
Ancestral Knowledge, and Collective Healing  
Across the African Diaspora

The condition of African descendants across the diaspora is constantly shaped by disconnection from ancestral knowledge, psychological and physiological stress, and systematic forms of dehumanization rooted in colonialism and enslavement. This research addresses the need for culturally grounded practices that restore memory, identity, and holistic wellbeing. The research focuses on Capoeira Angola, an Afro-Brazilian martial art and performance tradition that offers a living model of how African people have always had practices to survive the harmful effects of colonialism and enslavement. This research is rooted in Greg Carr's conceptual categories: Ways of Knowing, Cultural Meaning Making, and Movement and Memory, with attention to how knowledge is held in the body, sound, and spirit rather than exclusively in written texts. Capoeira Angola reflects how Africans have used movement as a liberatory way of knowing and being. This project demonstrates that not all answers can be written and must instead be felt, reminding us that some of what African ancestors left behind was not physical. Although some scholars affirm its African roots and historical role in resistance, much of the literature reinforces rigid epistemological borders that limit its diasporic and cosmological context. This project intervenes where scholarship fails to remember the history connecting Capoeira Angola to African cosmology, ritual practice, and collective healing.

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Mason

McFadden

Dr. Indira Bailey

Diminishing Returns: A Study on Why  
Undergraduate Students Are Not Interested in  
African American Art History

This research investigates the lack of interest some undergraduate students show towards African American Art History. The study will go in depth to see why students feel detached from the course. Research suggests that a lack of identity, other important educational majors, or artwork and artists not being well documented could be the cause. A particular focus is placed on outside studies that pushes on why higher education is undervaluing the curriculum of the course. A qualitative survey will be conducted to gather student's perspectives on the importance and relevance of African American Art History in their educational fields. The outcome will reveal how undergraduate students think towards the history of African American art, whether it be conservative or elaborate. The discoveries from this suggest the need for broader education, strong documentation in African American art and artists, and more educational support from higher education students towards African American Art History.

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Nevaeh

Miller

PIGMENT

PIGMENT is a psychological horror series that fuses supernatural terror with sharp social commentary, set against the backdrop of a historically Black college (HBCU). The story follows Jaylen Harris, a creative but cautious student, as he uncovers a terrifying secret: a hidden cult that doesn't just appropriate Black culture—they steal it, body and soul. What begins as a slow-burn mystery spirals into a chilling exploration of identity erasure, as students on campus begin losing their personalities, their passion, and even their pigmentation—becoming hollow shells of their former selves. At the center of it all is Professor Deon Brooks, a charismatic academic with a monstrous secret: he is a vessel of an ancient ritual, part of a centuries-old conspiracy that allows white elites to literally possess Black bodies and erase Black souls under the guise of admiration. Inspired by the surreal horror of Jordan Peele and the atmospheric dread of Ari Aster, PIGMENT uses genre storytelling to expose the parasitic nature of cultural appropriation, the commodification of Blackness, and the insidious evolution of white supremacy. With twists rooted in historical trauma and supernatural lore, the series invites viewers to question what happens when identity isn't just copied — it's stolen. PIGMENT is not just a horror story — it's a haunting allegory about visibility, authenticity, and the price of being consumed by a culture that wants the rhythm, but not the people.

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La'tresa

Middleton

Dr. Julie Crawford

The Effects of Perception on the Identity of  
Black Women

My research project, *An Analysis of Black Women's Identity*, explores the works of Cheryl Clarke: a self-identified Black lesbian writer and activist. It investigates how societal perceptions affect Black women's identity expression. In this paper, I suggest that Clarke employs Kimberlé Crenshaw's theory of "intersectionality" throughout her works. More specifically, I aim to explore how Clarke details the evolution of American-centric beauty standards through Crenshaw's theoretical framework. I define American-centric beauty standards as beautiful, blonde, slim, tall, and upper class as defined by Tracey Owens Patton in "Hey Girl, Am I More than My Hair?: African American Women and Their Struggles with Beauty, Body Image, and Hair." My objects of analysis include two of Clarke's seminal poems: "Hair: the narrative" (1982) and "if you black get back" (1982). Each text discusses similar topics such as "identity," "beauty," and "acceptance." As a result, I employ an intersectional framework when reading to highlight complex representations of the Black female body in the late 20th-century. My approach to these rhetorical tensions, as expressed through Clarke's usage of imagery depicting alienation and violence, primarily focuses on the materiality of Black hair. This project asks: How does the styling of various hair textures impact how a Black woman is perceived by American society? How does intersectionality complicate this perceived identity within the Black American society? In sum, I aim to expand on the significance of these works by emphasizing each poem's focus on the "topic" of intersectionality and the "utilization" of an intersectional approach.

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Grace

Oliver

Dr. Matthew Hiatt

The Effect of Font Style on Reading  
Comprehension

This study examined whether font style influences reading comprehension and performance. Participants read a short passage in either Times New Roman or Fifth Grade Cursive and completed a comprehension test. It was hypothesized that the cursive group would perform worse due to reduced readability. Results showed no significant differences in comprehension scores, reading times, or test completion times between the groups. While minor differences favored Times New Roman, they were not statistically meaningful. These findings suggest that font style alone may not significantly affect reading comprehension or efficiency. Possible limitations include a small sample size and task simplicity, which may have masked any potential cognitive effects.

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Bethany

Scriven

Dr. Ju, Dr. Gise-Johnson,  
and Dr. Adams

Media Law Challenges of Information  
Accuracy: Ensuring News Accuracy to Viewers  
During U.S. Presidential Election Cycles

This thesis explores the legal limitations on regulating misinformation in U.S. presidential election media coverage from 2004 to 2024. Misinformation poses serious risks to democratic trust and electoral integrity, yet the U.S. legal system offers few tools for direct government intervention. This is largely due to strong constitutional protections for political speech and press freedom. Through a content analysis of 56 news articles spanning six presidential elections, this study examines how media outlets report on candidates and election issues within the boundaries of existing law. Key legal frameworks include the First Amendment, Section 230 of the Communications Decency Act, and landmark Supreme Court cases like *New York Times v. Sullivan* (1964) and *Miami Herald v. Tornillo* (1974) which consistently prioritize editorial independence and free expression over regulating truthfulness. As a result, misinformation often goes unchecked by law, placing the burden of accuracy on journalists, digital platforms, and the public. While campaign finance laws and broadcast fairness rules influence media access, they do not address the accuracy of content. Defamation law sets a high bar for legal accountability, and platform liability protections further limit oversight of false or misleading reporting. The findings reveal a central paradox: the same legal protections that safeguard democratic discourse also allow misinformation to spread. Because constitutional law restricts direct regulation, solutions must come from outside the legal system. Responsible journalism, civic education, media literacy, and platform transparency are essential tools for promoting accurate information. Ultimately, this study highlights the ongoing tension between protecting free speech and ensuring truthful political communication.

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Samuel

Stewart

Dr. Eunjung Choi

Synthesizers and the Integrity of Music

Over the years, one instrument has managed to completely revolutionize modern music. The extent of this instrument's power caused fearmongering, exaggerated rumors, and multiple attempts to have the instrument prohibited from professional use. This instrument is the synthesizer. The purpose of this research is to introduce people to the synthesizer, give information on the history of the instrument and backlash it received, and offer perspective on whether or not the synthesizer upholds musical integrity. Questions that should be asked are including but not limited to: What is a synthesizer? How did the synthesizer impact live music? What is musical integrity? Does the synthesizer follow the values of musical integrity? To answer these questions, I have done thorough research on the creation of the synthesizer, how it was developed and how it affected musicians. I have analyzed the synthesizer from the perspective of a performing musician and also the perspective of business and efficiency. The significance of this research is still relevant today, especially in fields such as the arts. The fear and backlash the synthesizer received was only the start of technological advances that could risk the jobs of musicians. Even beyond music, new innovations such as A.I. (artificial intelligence) continue to threaten the integrity of not just the arts, but the entire world.

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Mason

Summers

Dr. Indira Bailey

The Reality of Human-A.I Relationships

The rise of Artificial Intelligence companions has reshaped the way people seek comfort, connection, and emotional support in today's time. This paper takes a deep dive into how and why people choose to emotionally invest in Artificial Intelligence companions rather than investing into more genuine human connections. This research consists of the experiences of 10 people who are aged between 20 to 30 years old to gain insight into the reasoning behind the use of Artificial Intelligence for emotional purposes instead of genuine human to human connection. These experiences are used to argue that emotionally investing in Artificial Intelligence can be linked back to underlying mental health disorders that have not been acknowledged by the individual such as depression and anxiety. By leaning on programmed empathy and sympathy rather than confronting the challenges of real relationships, individuals may unintentionally deepen their feelings of isolation. The use of Artificial Intelligence for emotional purposes must be addressed to combat a larger issue at hand. As Artificial Intelligence continues to develop and become more accepted in our society, we are beginning to see people use Artificial Intelligence as their personal therapist, in some cases, people are using Artificial Intelligence to replicate the feeling of love and romance. These artificial connections must be addressed to prevent the reduction of genuine human connections. By understanding the psychological roots behind this trend, society will be able to better understand the emotional struggles that make Artificial Intelligence so appealing to these individuals and encourage more genuine human connections.

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Aya

Talley

Dr. Catherine Adams

Decolonizing Childbirth: Indigenous Birthing Practices, Traditional Attendants, and the Profitization of Reproductive Care in the Western World

The black maternal health crisis in the United States is a pressing issue, with black women facing maternal mortality rates more than three times higher than those of white women. These disparities are not due to biological differences but are rooted in systemic racism, implicit bias in healthcare, and structural inequities that limit access to quality care. This crisis not only threatens physical health but also creates psychological trauma, fear, and mistrust surrounding pregnancy and childbirth. In response, many women of color are turning back to traditional and holistic practices that center balance, community, and the well being of both mother and child. Across Africa, indigenous birthing practices have historically been guided by midwives and traditional attendants who embody community-based knowledge passed down through generations. These approaches focus on holistic care, ritual, and the involvement of family, which stands in sharp contrast to the clinical, profit driven model that dominates modern obstetrics. Yet colonial and postcolonial medical systems have often dismissed these traditions as “primitive” or “unsafe.” The theoretical framework will be guided by Dr. Greg Carr’s six conceptual categories of Africana Studies. The primary conceptual category that will be at the foundation of this inquiry is “Ways of Knowing,” because this project centers on how African communities have historically understood, practiced, and transmitted knowledge about childbirth. This study sheds light on which epistemologies are legitimized and which are dismissed, highlighting the muddled and historic violence inherent in colonial and postcolonial medical systems.

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LaTricia

Thomas

Threads of Memory: A Cross-Generational  
Analysis of American Slave Art and Its  
Influence on Gen Z African American Artists

**Abstract** The main goal of this paper is to examine the significance of slave art produced between the seventeenth and nineteenth centuries and its impact on contemporary cultural and political realities of African American Gen Z artists. For this study, slave art refers specifically to material forms such as quilts, textiles, carvings, and other handmade objects that carried coded messages, spiritual meaning, and cultural memory. This research uses a qualitative approach and compares Harriet Powers's Bible Quilt (1886) with Bisa Butler's *The Storm, the Whirlwind, and the Earthquake* (2020) to explore how artistic strategies developed during slavery continue to influence modern contemporary work. By analyzing their materials, imagery, and visual choices, the study identifies patterns, connections, and shared themes that link the past to the present. These methods allow for a historically grounded exploration of the ways coded communication, cultural resistance, and survival strategies shown in slave art continue to resonate in the present. The outcome demonstrates that revisiting slave art in 2025 reminds us that the legacy of slavery is not distant but active in shaping artistic and cultural expressions. The findings highlight how contemporary Gen Z artists connect past struggles with current realities by drawing from themes of endurance, resistance, and transformation. Ultimately, this study shows that slave art is more than a historical record; it is a living cultural inheritance that informs political expression, shapes identity, and strengthens the continuity of African American cultural memory. **Key Words** African American, Slave art, Gen Z, Cultural Memory, Artists.

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Alyssa

Thompson

The influence of Rhythm on Stress Reduction

Right now, I am a Music major with a minor in Psychology, and I want to get my degree in Music Therapy in the future. This research investigates the effect of musical rhythm on stress levels, with the focus on heartbeat and mood regulation. Music is widely recognized for its emotional impact, the specific role of Rhythmic patterns in reducing stress stays under explored. This employs a mixed-method design, combining quantitative physiological measurements with qualitative self report. Participants include 40 to 60 healthy adults age 18 to 35. Participants are recruited from a university population and provided informed consent prior to participation. Physiological data are collected using wearable heart rate monitors to measure heart rate variability and automated blood pressure monitors to. Participants are exposed to a series of rhythmic compositions varied in tempo difficulty and time signatures, while the rhythm of their heart variability and blood pressure are being watched. Participants complete stress in state of mind assessments before and after each session to capture subjective experiences. Data analysis uses statistical comparisons to find which rhythmic characteristics most effectively promote relaxation and emotional well-being. The initial findings suggest that moderate tempo rhythms with consistent beats are associated with significant reductions in heart rate and self reported tensity. By explaining the relationship between metrical structure and stress response, this research contributes to a deeper understanding of music as a tool for effective regulation and restorative appeal.

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Kendall

White

Dr. Indira Bailey

Where Did She Come From: A Study into the Stereotypes of Black Women

This paper examines how today's Black women are affected by the minstrel shows of the 19th century and how they perpetuate harmful stereotypes. Black women have been ridiculed for their appearance and behavior, which is rooted in racism. The racist caricatures and stereotypes from the minstrel era have continued to influence how Black women are treated in the 21st century. The purpose of this research is to uncover the roots of these stereotypes and understand the long-lasting effects on Black women. The use of Intersectionality theory as a framework assists in exploring how race and gender coincide with each other in a historical portrayal of Black women and. In order to gain a better understanding of how gender and racial, this study traces the references and photographs of minstrel shows and emphasizes their historical influence over time. By looking at caricatures from the 21st century to 19th century minstrel shows , I explore the direct correlation of what black women experience today. As a result, this research will demonstrate how images dehumanizing Black women in minstrel show lay the foundation for systemic bias and stereotypes, and their large impact on Black women today. The findings of this study show the importance of awareness and addressing racial and gender injustices. This study will also show that Society must dismantle pervasive stereotypes, as they prepare to cause systemic harm and marginalization of Black Women.

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Alexis

Wilson

Ayesha Ramachandran

What is TikTok Teen Security, "I Am A Visual Learner" A Study on TikTok Teen Security And How It Compares To Douyin

TikTok has been a popular platform for many years, especially for teens. With such a high teen presence on TikTok, security and safety are questioned. Previous research has shown that social media platforms can contribute to negative physical and psychological effects, including anxiety, depression, and sleep deprivation. In response to research, public outcry, and legislation, TikTok added teen features to ensure teen accounts use TikTok safely and responsibly. Based on primary research utilizing a TikTok account aged at 13, teens are still being exposed to inappropriate content, such as sexual and alcohol-based content. TikTok needs to enforce teen features such as Family Pairing and Restricted Mode to help eliminate harmful teen behaviors and mediate some inappropriate content seen on the app. My findings add a level of analysis to TikTok's preexisting features and comparison between TikTok's sister app Douyin, attributes not seen in current research. Research methods for this study include literature reviews and the social media walkthrough method.

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Qaela

Williams

Dr. Matali Wong

Haunted Bonds: Black Girlhood and Trauma

This paper explores the complex intersections of Black girlhood, generational trauma, and maternal relationships in Toni Morrison's *The Bluest Eye*. Through these novels, Morrison confronts the emotional inheritance of slavery, systemic racism, and internalized oppression that shape the inner lives of Black women and girls. Using close textual analysis grounded in black feminist theory and trauma studies, this research investigates how Morrison's characters embody pain and resilience within fractured family structures. The concept of haunting functions as a central motif, representing the inescapable presence of historical and emotional wounds that transcend time. Pecola Breedlove's psychological unraveling in *The Bluest Eye* illustrates how silence, memory, and survival coexist within Black motherhood and daughterhood. Ultimately, this study argues that Morrison reclaims the narrative of Black girlhood by transforming trauma into testimony, re-inscribing silenced histories, and affirming that remembrance itself can be an act of resistance and healing.

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Darius

Wright

Dr. Indira Bailey

More Than Fashion: Streetwear as a Cultural and Psychological Tool Among Black Male Undergraduates

This study examines the role of modern-day streetwear in shaping confidence among Black undergraduate men attending an HBCU. Fashion operates as a central mechanism for identity development, particularly within all communities where clothing choices carry cultural and social weight. This research focuses on the role of streetwear in shaping the ways Black male students negotiate self-image, project poise, and establish belonging in a college environment. To address this aim, the study applies the framework of social identity theory, which emphasizes how group membership and social categories influence self-concept. Semi-structured interviews with Black undergraduate men will be conducted to capture personal narratives and perspectives on the relationship between clothing, assurance, and acceptance. Data will be analyzed thematically to identify recurring patterns in how fashion choices intersect with self-expression, peer expectations, and cultural pressures. The anticipated outcome of this study is a nuanced understanding of fashion as more than a stylistic preference, highlighting its role as a strategic tool for navigating identity and social status. Love for fashion can be genuine or performative. The analysis highlights how participants' life experiences shape their use of fashion as a means of building confidence and presenting themselves within social contexts. By centering the experiences of Black undergraduate men, the research aims to contribute to scholarship on race, masculinity, and higher education by illuminating the cultural significance of streetwear. Findings are expected to reveal both the empowering aspects of fashion in building self-assurance and the challenges of conforming to external expectations within campus and societal contexts.

First Name	Last Name	Faculty Advisor/Research Mentor	Topic Title
<b>School of Natural Sciences and Mathematics</b>			

Caliese, Amrinder, Subash, Oluwademiladeayo	Beckford, Singh, Neupane, Ashade	Dr. Shrikant Pawar	Machine Learning Diagnosis of Peripheral Arterial Disease from CT-Angiography (CTA) Images
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Peripheral Arterial Disease (PAD) is a common circulatory disorder characterized by narrowed arteries that reduce blood flow to the lower extremities. In 2019, the Global Burden of Disease study attributed over 74,000 deaths to PAD, with more than 113,000,000 individuals living with the condition globally. Despite its prevalence, accurate and timely diagnosis remains a challenge, often leading to severe complications such as muscular weakness and amputation. This research investigates the use of machine learning (ML) techniques, specifically Convolutional Neural Networks (CNNs), to detect PAD from CT-Angiography (CTA) images. The study aims to determine the effectiveness of neural networks in detecting PAD, optimize model performance, and deploy a testing application for clinical trial usage. From our primary analysis, the best-performing model achieved an Area Under Curve (AUC) of 0.8 and an accuracy of 0.7 of detecting PAD on validation dataset, with balanced precision, recall, and F1-scores across both classes, demonstrating a robust, reliable diagnostic framework. By optimizing the diagnostic accuracy, we sought to utilize such ML techniques to facilitate early detection and treatment of PADs in patients, reducing the risk of severe outcomes.

Akai	Bracy	Dr. Arezue Boroujerdi	Metabolite Profiling Across Developmental Stages and In Vitro Regeneration of Ochradenus Baccatus
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*Ochradenus baccatus* (*O. baccatus*) is a desert shrub commonly found in arid environments in the Middle East, North Africa, and the Arabian Peninsula. It is a very dense, green plant that can grow up to 3m high, and has a long life span due to its ability to survive in regions with limited water availability showcasing its drought and salinity tolerant characteristics. The leaves and fruits of *O. baccatus* have been used as natural remedies for various ailments. Like all organisms, *O. baccatus* has its own metabolic fingerprint reflecting cellular activity through levels of small molecules, metabolites, and determining the presence of stress or disease. Metabolites are categorized in two different forms; primary or secondary. Primary metabolites are essential when it comes to the proper operation of an organism in relation to basic survival, growth, and reproduction. Secondary metabolism, however, is not considered crucial to the existence of organisms but is primal to their ability to thrive in their environment. Our research aims to observe and compare the metabolite profiles of *O. baccatus* at two different developmental stages—flowering SI and fruiting SII—and use in vitro regeneration to determine different plant growth regulators. The results of this study should aid in clarifying the developmental metabolomics of *O. baccatus* and contribute to existing knowledge according to its utilization in pharmaceuticals and preservation.

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Nigel

Bradley

Imad al Ghouleh

Regulation of  $\beta$ -catenin by EBP50 in Pulmonary  
Vascular Endothelial Cells

Pulmonary hypertension (PH) is a progressive and life-threatening disease characterized by profound dysfunction of the pulmonary vasculature. Increasing evidence indicates that endothelial-to-mesenchymal transition (EndMT), a process in which endothelial cells acquire smooth muscle-like characteristics, plays a critical role in the pathogenesis of PH. EndMT is driven in part by key transcriptional regulators, including  $\beta$ -catenin and SNAIL, which suppress endothelial gene expression while upregulating mesenchymal and smooth muscle-associated markers. In this study, we sought to identify a regulatory protein involved in controlling  $\beta$ -catenin signaling and intracellular migration. Using human pulmonary artery endothelial cells (HPAECs), we identified a previously uncharacterized regulatory protein that modulates the subcellular localization of  $\beta$ -catenin. Our findings demonstrate that this protein plays a significant role in regulating  $\beta$ -catenin distribution within endothelial cells, suggesting a potential mechanism by which EndMT is controlled in pulmonary hypertension. These results provide insight into the molecular regulation of EndMT and identify a potential therapeutic target for limiting vascular remodeling in PH.

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Justice, Rashanna

Clark Sr., Ireland

Dr. Amith Devireddy

Role of Arabidopsis Receptor-Like Protein  
under Salinity Stress: Insights from Physiology,  
Gene Expression, and NMR Profiling

Soil salinization, the accumulation of soluble salts, is a significant constraint on global agricultural productivity, reducing soil fertility, hindering plant growth, and posing a threat to food security. While the physiological impacts of salt stress are well characterized, the contribution of receptor-like proteins (RLPs) to salt stress responses remains largely unexplored. RLPs are plasma membrane-localized proteins that lack intrinsic kinase domains and are hypothesized to participate in the early perception and signaling of extracellular cues. Here, we characterized the *Arabidopsis thaliana* receptor-like protein 33 (AtRLP33) to evaluate its potential role in salinity stress tolerance. Wild-type (WT), independent knockout (KO), and overexpression (OE) lines of AtRLP33 were subjected to controlled salt-stress treatments and examined for physiological responses using the LI-COR 600 system and agar plate-based germination and survival assays. Physiological measurements showed that OE lines exhibited better transpiration rates and stomatal conductance compared to WT and KO plants under salt stress. In parallel, NMR-based metabolomic profiling revealed salt-induced shifts in metabolite composition that differed among the genotypes. Together, these results suggest that variation in RLP33 expression influences physiological and metabolic responses to salinity in *Arabidopsis*. Although the underlying signaling mechanisms remain to be fully elucidated, our findings support a potential role for RLP33 in modulating plant performance under salt stress.

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Brooke	Cobb	Dr. Samina Noorali Assanie-Shivji	Wastewater-Based Epidemiology as a Tool for SARS-CoV-2 and Influenza Virus Monitoring in Orangeburg, SC
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Background: COVID-19, caused by severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2), emerged in Wuhan, China, in December 2019 and rapidly became a global pandemic, resulting in over 7 million deaths worldwide. Influenza A and B viruses also contribute significantly to global health burdens. Both SARS-CoV-2 and influenza viruses are primarily transmitted through respiratory droplets but have also been detected in human feces. This makes wastewater a critical resource for monitoring environmental persistence and community transmission. Objective: This study evaluates the use of wastewater-based epidemiology (WBE) as a non-invasive tool for monitoring SARS-CoV-2 and Influenza virus in Orangeburg county, South Carolina. Materials and Methods: Composite raw (influent) and treated (effluent) wastewater samples were collected twice weekly from the Orangeburg County wastewater treatment plant from August through December 23, 2024. Viral RNA was quantified using digital polymerase chain reaction (dPCR). Results: SARS-CoV-2 was consistently detected in influent samples but remained below the limit of detection in effluent. Influenza A was detected from November 25–December 23, 2024, and Influenza B from November 25–December 2, 2024, outside the typical seasonal transmission period beginning in September. Conclusion: Wastewater analysis can detect trends in infection and reveal viral circulation even when clinical testing is limited. Ongoing WBE monitoring is essential for early outbreak detection and preparedness, especially as periodic waves of COVID-19 are expected following its 2023 reclassification.

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Zecariya	Fenwick	Dr. Arezue Boroujerdi	NMR-based Metabolomics in the Quantification of Human Saliva Samples
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The purpose of the “Metabolic Quantification of Saliva Samples” experiment was to assess the overall compositional changes in human saliva samples before and after the introduction of a stressor using Nuclear Magnetic Resonance (NMR) spectroscopy. The composition of saliva may be altered, specifically in metabolite concentration, upon introduction of an altered environment. Individual saliva samples were collected from human participants in the chemistry department (IRB application: “Exempt”). The pH and metabolic profiles of the saliva samples before and after the use of a stressor (cranberry juice) were examined. Then, the samples were lyophilized, vortexed, centrifuged, and characterized via <sup>1</sup>H NMR. A total of 25 metabolites were identified and quantified. These metabolites include amino acids, sugars, and other small polar molecules. Statistical analysis, specifically principal components analysis (PCA), was used to compare saliva samples based on gender, ethnicity, age, and lifestyle, providing insight into the possible correlations between metabolite expression and biological factors. By comparing the individual metabolomes, this study aims to highlight the biochemical trends that may not be noticeable through pH measurement alone.

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*Jordan*

*Foster*

*Dr. Alan Morrison*

*The Impact of Dicer1 Expression on  
Macrophage Gene Expression*

Cardiovascular disease caused by atherosclerosis is the leading cause of morbidity and mortality in the world. Atherosclerosis is associated with poor vascularization and impaired angiogenesis. Angiogenesis is the regrowth of new blood vessels and is crucial for maintaining tissue health and recovery. During inflammation, macrophages are a major source of pro-angiogenic factors, such as Vascular Endothelial Growth Factor A (VEGF-A), and our laboratory has shown Dicer1 influences macrophage VEGF-A expression. Deletion of Dicer1 results in a consequent reduction VEGF-A, suggesting a key role for Dicer1 in angiogenic signaling. To explore this relationship further, my work utilized bone marrow-derived macrophages to overexpress the Dicer1 protein and to assess its influence on pro-angiogenic inflammatory mediators. Overexpression of Dicer1 leads to consequent upregulation of VEGF-A. Further, we took an unbiased approach, through RNA sequencing, to identify broader pathways affected by Dicer1 upregulation. The findings from this study could provide further insight on underlying macrophage-mediated angiogenesis and provide a foundation for developing future targeted therapies for cardiovascular disease.

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*Kristan*

*Hubbard*

*Dr. Areaue Boroujerdi*

*qNMR and Metabolic Profiling of Turmeric  
Tissues Reveal Curcumin Content*

Turmeric is a spice that is widely used for its flavor, color, and potential health benefits. It contains curcumin, the yellow pigment found in the rhizome of turmeric, which has low solubility in water, which limits its usefulness in the body. This research aimed to compare the metabolite profiles of turmeric in 5 different forms (powder from a grocery store, powder from a specialty store, herbal supplements, the root flesh and root skin) and measure the concentrations of curcumin. The extraction was performed using both polar and non-polar solvents and the analysis was conducted using Nuclear Magnetic Resonance (NMR) spectroscopy. The data analysis included using Bruker Topspin, Chenomx, and MetaboAnalyst. Principal Component Analysis (PCA) revealed distinct clusters from the different sample groups, indicating significant metabolic differences. Pairwise comparisons between root flesh and root skin highlighted noticeable changes in the metabolites from just the root itself. A volcano plot identified the 10 most significantly changing metabolites, one of them being a derivative of curcumin (3,4-dihydroxybenzeneacetate) in the polar extract of the root skin. Curcumin itself was present in the non-polar extracts with varying concentrations across the samples: supplement (2.5x) and root flesh (1.5x) had the highest concentrations and the root skin (0.14x) had the lowest when compared to the powdered forms. These findings suggest that the source and form of turmeric significantly influence its metabolic content.

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Carmen

Gonzalez

Dr. Randall Harris

Dysregulated Gamma Delta T Cell Function In  
Diabetic Wound Healing

This study investigates the role of GDT cells in immune dysregulation, particularly concerning impaired re-epithelialization and wound healing in diabetic foot ulcers (DFUs). The objective is to understand how the altered function or reduced presence of GDT cells may contribute to delayed or incomplete wound healing in diabetic patients. To model diabetes, three-month-old C57Bl6 mice were treated with streptozotocin (STZ) to induce hyperglycemia, while age-matched non-diabetic mice served as controls. After four weeks of sustained diabetes (fasting blood glucose level above 200 mg/dL), skin wounds were performed using 6 mm biopsy punches, and silicone splints were applied to mimic non-contractile human skin. On day six post-wounding, dorsal skin tissue were collected from the wound area and enzymatically digested with collagenase to generate a single-cell suspension. Fluorescently labeled antibodies were used to stain the cells, allowing us to compare GDT cell subpopulations between diabetic and non-diabetic skin using flow cytometry. Paraffin-embedded tissue sections were stained with H&E and K6, and epithelial tongue length and wound closure were quantified using ImageJ and QuPath. We also used GFP-expressing GDT cell transgenic mice (Tcrd-H2BEGFP), allowing us to more precisely confirm the presence of GDT cells at the wound site.

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Anthony

Jones

Dr. Bijoy Dey

Understanding Soft-Hard Acid-Base Principle  
Based on Quantum Mechanical Calculations

The Hard-Soft Acid-Base (HSAB) principle provides a fundamental framework for understanding the stability and reactivity of chemical species based on their polarizability and electronic nature. This study aims to investigate the reactivity of exchange reactions and determine if computed chemical hardness can serve as a reliable predictive parameter for the direction and strength of coordination complex interactions. Using density functional theory (DFT) at the B3LYP/3-21G (p,d) level, molecular descriptors including hardness ( $\chi$ ), softness (S), and the HOMO-LUMO gap were calculated for a series of molecules such as NH<sub>3</sub>, AsH<sub>3</sub>, BF<sub>3</sub>, and PH<sub>3</sub>. The results demonstrate a clear correlation between the HOMO-LUMO gap and molecular stability, confirming HSAB predictions; specifically, NH<sub>3</sub> was identified as the strongest base due to its high HOMO gap, while BF<sub>3</sub> was the strongest acid with the lowest LUMO gap. These findings signify that HSAB descriptors offer a valuable quantitative method for explaining reactivity patterns based on electronic structure, providing a foundation for future research into complex metal-ligand systems and biological environments.

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Kemaury, Eddie, Paige  
Caleb

Joseph, Hopkins,  
Felder, Akintayo

Dr. Karina Liles

Beyond the Box Score: Understanding  
Basketball Through Data

Statistical analysis in the modern era of basketball is a vital part of the decision-making process for both individual players and the team as a whole. This research investigates how basketball statistics are gathered, interpreted, and how essential the application of this information is to the improvement of the team and, ultimately, its long-term success. Traditional statistics, such as points, assists, rebounds, and turnovers, provide rudimentary insights into a player's potency and the team's overall efficiency throughout a game. Additionally, advanced statistics that delve deeper into player and team production, such as true shooting percentage (TS%), offensive or defensive rating (ORTG/DRTG), and points per possession (PPP), help provide deeper evaluations of performances by accounting for overall shooting skill, game pace, and overall team efficiency. With the analysis of these statistics, coaches can easily find the gaps within the team, pinpoint strengths and weaknesses, develop offensive and defensive strategies, enhance lineups, and make additional adjustments needed to help the team thrive against specific opponents. Statistical analysis also aids in the development of players, which spotlight areas for improvement as well as predicting a player's production in future games. The use of statistical analysis promotes strategy, allowing teams to create gameplans that improve efficiency, productivity, and ultimately improve the success of the team overall.

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Kimora

Leverette

Dr. Bijoy Dey

Differential Scanning Calorimetric (DSC) Study  
to Understand Thermal Properties of a Mixture  
of Polymer with Different Molecular Weights

This study focuses on the application of the Differential scanning Calorimetry (DSC) study of a mixture of polymeric samples of varying chain lengths. The aim is to be able to determine a eutectic phase diagram. The DSC techniques employed determine equilibrium phase changes including melting, freezing, and crystallization at varying rates of cooling and heating. This allows us to understand the effect of cooling/heating on the phase change process. In addition, we have determined various thermodynamical properties, such as Enthalpy of phase change (DH), Entropy change(DS), melting temperature (Tf), glass transition temperature (Tg) for the mixture of polymers. The application was carried out on a mixture of PEG prepared with varying mass percentages.

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Maricellyn

McDonald

Dr. Victoria Orphan, Dr.  
John Magyar, Dr. Kelly  
Luis (California  
Institute of Technology)

Lab-Based Spectroscopic Imaging of  
Submerged Aquatic Vegetation

Submerged aquatic vegetation serves a key role in coastal ecosystems as an element of the habitat and a food source for many marine organisms. Additionally, seagrasses, like *Zostera marina*, are known to play a key role in carbon sequestering. Despite the known ecological services of seagrass and other aquatic vegetation, current monitoring approaches present challenges in consistency, standardization, and efficiency. A promising alternative to traditional methods is the use of spectroscopic instruments which can both map the presence of aquatic vegetation and provide insight to its health. This project examines the visible to near-infrared spectra of seagrass and macroalgae grown in lab-based tanks, addressing two key problems: how do the spectra of varying aquatic vegetation differ and what is the best approach to perform lab-based visible to near infrared spectroscopy on live marine samples? This is addressed in two concurrent phases; the growth and monitoring of macroalgae and seagrass in the lab setting and the assembly of an imaging box for the collection of spectral data. Ultimately the project aims to create an ongoing catalog of lab-based spectral data to inform the interpretation of spectral data collected in the field.

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Samaria

McFadden

Dr. Karina Liles

Claflin Innovative Academic Advancement

The Claflin University Robotics Competition is an outreach focused initiative designed to spark excitement around robotics and computer science while introducing high school juniors and seniors to coding concepts in an engaging and accessible way. Robotics competitions invite students to imagine what is possible when creativity, coding, and problem solving come together. By emphasizing exploration and innovation rather than prior experience, the competition creates an inclusive environment where students from all academic interests can envision themselves as creators in a technology driven world. Using the iRobot Root virtual platform, participants work in teams to design, code, and test robotic behaviors while completing a series of interactive challenges. The platform allows students to experiment with movement, logic, and sequencing, helping them see how code directly influences a robot's actions. This competition is designed for participants from all degree interest and backgrounds who want to engage in technology in creative ways. Through hands on interaction with virtual robotics, students develop collaboration skills, confidence in learning to code, and an appreciation for innovation. The Claflin University Robotics Competition extends beyond competition by serving as a pathway to STEM exploration, encouraging curiosity, imagination, and excitement about robotics and future opportunities in computer science and engineering.

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Shalaya, Latrevia    Murray, Robinson    Mr. Brandon Yarbrough

Antibiotic Synthesis Gene Identification in  
Bacteria Isolated from South Carolina  
Congaree Bluffs Heritage Preserve

Since the Department of Chemistry at Claflin University gained ACS accreditation in 2004, a student chapter has been established and active. In the past year, Claflin University's ACS Student Chapter (CU-ACS) has hosted a variety of events and begun preparing for off-campus outreach activities. The year 2024 was a historical year for CU-ACS, as it marked the 20th anniversary of the accreditation and establishment of the student chapter. To celebrate this milestone, a banquet was held featuring speakers Dr. Dorothy Philips, then President-elect of the ACS, and Dr. Angela Peters, current Provost and Vice President of Academic Affairs at Voorhees University and former Chair of the Chemistry Department at Claflin University. In addition, multiple outreach events will be discussed, which were hosted by the CU-ACS, such as a Solar Eclipse Viewing, "Love Your Major" Day, and "Life in Color" Workshop, which also included graduate school research opportunities with the University of South Carolina's Department of Chemistry and Biochemistry. Lastly, recent work has focused on developing new, safe demonstrations for use in outreach and recruitment activities. Some of these experiments include "Anti-gravity water", "a 'green' bottle experiment", and "color changing seasonings." These experiments were specifically designed to showcase properties that can serve to introduce STEM topics suitable for elementary school students, but with levels of complexity that can be extended to topics for high school and undergraduate students.

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Chidinma, Zanyah    Mojekwu, Shepherd    Dr. Randall Harris

Recent Activities and Advancements in Claflin  
University's ACS Student Chapter

Antibiotic-resistant bacterial infections are predicted by the World Health Organization to cause 10 million deaths worldwide each year by 2050. Underexplored environments may serve as a source of antibiotics. Previously, *Pseudomonas allokribbensis* and *Burkholderia paludis* were isolated from soil samples gathered from South Carolina Congaree Bluffs Heritage Preserve, both of which exhibited antibacterial activity against at least one ESKAPE pathogen. The objective of this research study was to identify biosynthetic gene clusters (BGCs) responsible for antibiotic production. Using the Antibiotics & Secondary Metabolite Analysis Shell platform, 17 BGCs in *P. allokribbensis* and 18 BGCs in *B. paludis* were identified in the sequenced genomes. The genomes were then analyzed using the Antibiotic Resistant Target Seeker platform to determine if the BGCs have any antibiotic resistance genes near them, suggesting that those clusters might synthesize the isolates' antibiotic. Two BGCs contained genes that were predicted to make the iron siderophore ornibactin and membrane stabilizing terpenes, neither of which are related to antibiotic resistance. Because the BGC genetic analysis did not suggest a specific cluster to target for further examination, we decided to use random transposon mutagenesis to generate mutants that were unable to produce the antibiotic. About 2600 Tn5 transposon *B. paludis* mutants were screened against the ESKAPE pathogen *Staphylococcus aureus*, and 16 of those mutants had reduced antibiotic activity as evidenced by smaller zones of inhibition. The 16 mutants will be screened against other ESKAPE pathogens, and the mutated genes will be determined.

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Briana

Nabriat

Dr. Karina Liles

Are Evasions Really Working? Evaluating the Operational Validity of Rule-Bypassing Attacks

Misuse detection is a technique used to identify malicious activity in a system or network by comparing system behavior against a set of predefined rules or known attack signatures. While effective for detecting known threats, traditional misuse detection systems are often limited in their ability to identify evasion tactics or novel attack variants. To address these limitations, the state-of-the-art Adaptive Misuse Detection System (AMIDES) introduced the adaptive misuse detection technique by incorporating machine learning. As part of its evaluation of the technique, AMIDES included a large set of manually crafted Windows command-based evasions designed to simulate behavior that bypasses detection rules. However, the functionality of these evasions was never verified, raising concerns about whether they execute as intended or reflect realistic threat behaviors. In this work, we systematically test the operational validity of these evasions by executing them in a Windows virtual machine to replicate the intended execution environment, using an automated Python-based framework to streamline the process and improve efficiency. We record whether each command succeeds or fails and categorize failures into various error types, including syntax errors, missing parameters, invalid file paths, incorrect command usage, and unsupported operations. Our findings show that many evasions are non-functional, reducing their effectiveness for evaluating detection systems.

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Ronisha

Rush

Dr. Anthony Rizzuti

Removing zinc from Aqueous Solutions Utilizing Cotton Bush Waste

The purpose of this research was to investigate the zinc (Zn) biosorption potential of cotton bush waste (CBW) from aqueous solutions. CBW samples were mixed with Zn solutions. Samples were tested unaltered and after HCl treatment. Additional parameters tested include sample dose, contact time, mixing temperature, particle size, and the concentrations and pH of the Zn solutions. The results demonstrate that HCl treatment, sample dose, particle size, contact time, and the concentrations and pH of the Zn solution had significant effects on the Zn biosorption capacity of the CBW (34-89% removal). HCl treated CBW removed less Zn than the unaltered CBW. As sample dose and contact time increased, the percentage of Zn removed increased. As particle size and Zn solution concentrations decreased, the percentage of Zn removed increased. As the pH of the Zn solution increased from 2 to 3, the percentage of Zn removed increased greatly (28%). An explanation could be that, at lower pH, the CBW are positively charged due to protonation, which decreases their Zn biosorption potential. Desorption results showed a 93% Zn recovery rate. Reused CBW were more effective at removing Zn without going through desorption (65% removal), while less effective at removing Zn after going through desorption (36% removal). In addition, the CBW that did not go through desorption were still effective at removing Zn when they were reused twice for Zn biosorption (55% removal). Hence, CBW may be reused repeatedly for this purpose without becoming a hazardous waste disposal issue.

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*Khadijah*

*Salam*

Dr. Steffani Driggins

Determining the effects of aspartame and sucralose on the heart rate of *Daphnia Magna*

*Daphnia magna* are a small freshwater crustacean widely used in ecotoxicology due to its transparent body, short life cycle, and sensitivity to environmental changes. As filter feeders that play a vital role in aquatic food webs, these organisms serve as strong bioindicators of water quality. Sucralose and aspartame are artificial sweeteners commonly used in foods and beverages and are frequently detected in wastewater and surface waters due to their resistance to degradation. Although safe for human consumption, recent studies suggest these compounds may cause subtle physiological effects in aquatic organisms. Previous laboratory data determined that 2 $\mu$ L, 4 $\mu$ L, and 6 $\mu$ L of diluted aspartame and sucralose increased the heart rate of *Daphnia magna* in a dose-dependent manner. The current study will determine the effects of 3 $\mu$ L and 5 $\mu$ L diluted aspartame and sucralose (1:10) on the heart rate of adult *Daphnia magna*. The *Daphnia* were exposed separately to spring water (control), diluted aspartame, and diluted sucralose. Pre- and post-exposure heart rates were recorded using a stereomicroscope, digital timer, tally counter, and smartphone. Experiments were repeated four times, and paired t-tests were used to determine statistical significance. Results showed that both sweeteners increased heart rate, with diluted aspartame producing the greatest increases at 3 $\mu$ L (313 bpm) and 5 $\mu$ L (308 bpm). These results support the prior findings and reinforce the dose dependent effect artificial sweeteners have on the heart rate of adult *Daphnia Magna*.

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Zora

Stephens

Dr. Karina Liles

Programing Robots for Computer Science Outreach

This project involves programming Claflin University's robots to support interactive outreach efforts for computer science. The goal is to expose potential students and visitors to our computer science department through engaging demonstrations. A series of programs have been developed to illustrate the importance and diversity of computer science using the Nao humanoid and Unitree Go2 robots. These activities aim at instilling basic computer science principles like sequencing, conditional statements, sensor-based decision making, and interactions between humans and robots. During outreach events, the robots perform tasks including autonomous movement, responsive behaviors, and other demonstrations dependent on human responses. These demonstrations allow participants to learn how code directly translates into physical actions, helping to demystify programming and robotics. By providing an interactive and visually engaging experience, making computer science more accessible to individuals with varying levels of technical background. This project highlights how robotics can serve as an effective tool for computer science outreach by increasing engagement, encouraging curiosity, and fostering interest in computing disciplines.

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Juanita

Williams

Dr. Bijoy Dey

Improving the Bioavailability of Active  
Pharmaceutical Ingredients: X-Ray Diffraction  
(XRD) and Differential Scanning Calorimetry  
(DSC) Techniques

Many pharmaceutically active ingredients (PAI) are known to be potentially effective drugs. Yet, these are accessible to patients because of their low bioavailability (low solubility and dissolution rate). There are efforts to enhance the bioavailability of these API through various means. One such means is to form the drugs in an amorphous form with the application some polymer. Such amorphous forms, where drugs are embedded into a polymeric matrix is called amorphous solid dispersion (ASD). However, the ASDs often undergo degradation by turning to crystalline form. Hence a detailed investigation of the state of the drug molecules in their ASD forms is important. Our research involves (a) preparing the ASD by various experimental techniques, (b) understanding the state of the ASD (that is, whether drug is in amorphous state or crystalline state) by X-ray crystallographic technique, (c) understanding drug-polymer interaction by DSC technique. We chose Flutamide, considered effective in curing prostate cancer, as the API and polyvinylpyrrolidone (PVP) as the polymeric vehicle.

## Sponsored Programs and Research Office

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Dear RSCE Day Presenters, Facilitators, Speakers, and Participants:

On behalf of the Office of Sponsored Programs and Research, I extend my sincere appreciation and gratitude to each of you for your invaluable contributions to this year's Research, Scholarship, and Creative Expression (RSCE) Day.

Your engagement, scholarship, and leadership were instrumental in making this event a resounding success. Whether you served as a presenter, session facilitator, keynote speaker, moderator, judge, or participant, your commitment to academic excellence and collaborative inquiry exemplified the very spirit of our theme—**In the Spirit of UJIMA: Collective Work and Shared Responsibility**.

This year's RSCE Day was especially meaningful. With nearly twice as many faculty and student presenters as in previous years and a strategic partnership with The Leadership Alliance, the program reflected both growth and momentum. That progress would not have been possible without your dedication to mentoring, researching, preparing, and presenting work that advances knowledge and addresses pressing societal challenges.

Your scholarship demonstrates that research at Clafin University is not conducted in isolation—it is cultivated through community, mentorship, and shared intellectual purpose. Through your work, you have strengthened interdisciplinary collaboration, elevated undergraduate research, and reinforced our institutional commitment to transformative learning.

As Associate Vice Provost of Research, I am deeply encouraged by the collective excellence displayed throughout RSCE Day. The rigor of your inquiry, the creativity of your expression, and the professionalism of your engagement affirm that Clafin University continues to rise as a vibrant hub of research, scholarship, and innovation.

Thank you for your time, expertise, and unwavering commitment to advancing our research culture. Your contributions have not only enriched this event but have also strengthened our collective trajectory toward research distinction and institutional impact.

With sincere appreciation,

*Jonathan T. Smalls*

Jonathan Smalls, Ph.D.  
Associate Vice Provost of Research

# SPECIAL THANKS

President Office  
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Title III and Special Initiatives  
The Leadership Alliance  
Sodexo  
CU Faculty  
CU Students  
CU Judges  
CU Facilitators  
CU SPAR Intern

# NOTES

# ALMA MATER

*When the sun of Carolina  
Mounts the eastern sky  
Proudly stands our Alma Mater,  
On the hilltop high.  
When the evening twilight deepens  
And the shadows fall,  
Linger long the golden sunbeams,  
O'er the western wall.  
When the Shades of night shall gather,  
Dark the heart may be,  
Still the rays of youth and love,  
Shall linger long o'er thee.*

## **Chorus**

*Orange, Maroon, float for aye  
Claflin fair o'er thee,  
**\*May we all be leal and loyal**  
To thy memory*

**Words: Etta Butler Rowe Revised  
by Dr. Isaiah McGee, 2014**

# 1869



## In the Spirit of UJIMA

Transforming Our Community through Collective Work and Responsibility