

# UMBC LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION (LSAMP) YEAR IN REVIEW

## 2023 ANNUAL REPORT



Louis Stokes Alliance for Minority Participation



# WELCOME!

Welcome to the UMBC LSAMP community's 2023 Annual Report. As an LSAMP participant, you have access to personalized advising, campus workshops, funded research opportunities, and national and international conferences, all designed to enhance your STEM identity and facilitate your admission to top graduate programs.

Through this catalog, we aim to showcase and commend the achievements of our undergraduate participants, Research Fellows, as well as the staff and faculty who contribute to the program's success each year.

UMBC LSAMP is funded by the National Science Foundation Award #2207374

## **UMBC LSAMP DIRECTOR'S MESSAGE WRITTEN BY SUNDIATA "SUNJI" JANGHA - MR. J**

"Welcome to our celebration of greatness. We are as proud of the students excelling as we are of the students struggling and persevering. All we ask of our Scholars is maximum effort and they give it. This Year in Review highlights some of the achievements of this outstanding group of Scholars, showcases the phenomenal work that they have been able to do despite everything else, and identifies the faculty and staff in the LSAMP community who make it happen. The Scholars have demonstrated a level of Grit that will serve them long after they have graduated from UMBC and gone on to find paths, blaze trails, and change the world. Thank you to all the individuals, labs, programs, departments, colleges, and units that have continued to demonstrate the commitment and dedication necessary to make the UMBC LSAMP Program successful and continue to pour into our Scholars. Special thanks to the College of Engineering and Information Technology for their continued willingness to sponsor research opportunities for our Scholars. To our Scholars, you pushed through another challenging year, continue to move forward, your future awaits... Now Go Be Great!"



# TABLE OF **CONTENTS**



**03** The University of Maryland LSAMP Alliance

**04** The Legacy of Louis Stokes

**05** Our Story

**06** Fellows Across Borders

**08** UMD 18th Annual Winter Student Leadership Retreat

**9** UMBC Semester Events

**11** Annual Biomedical Research Conference for Minoritized Students (ABRCMS)

**12** Student Showcase-Chizaram Ugboh

**14** 7th Annual USM LSAMP Undergraduate Research Symposium

**15** USM Alliance Presidential Addresses

**16** Distinguished Keynote Address

**17** Student Showcase- Diego Iglesias Vega

**19** 7th Annual Symposium Exhibitor

**20** Student Showcase- Kelvin Fadojutimi

**22** UMBC Friends of LSAMP

**25** Spring 2023 Research Fellowship Program

**26** Summer 2023 Research Fellowship Program

**28** Fall 2023 Research Fellowship Program

**31** LSAMP Faculty Research Mentors

**32** Faculty Spotlight

**33** Graduating Seniors

**36** UMBC LSAMP Staff





# THE USM LSAMP ALLIANCE

**The Louis Stokes Alliances for Minority Participation (LSAMP) program aims to increase the representation and successful participation of underrepresented minority students in Science, Technology, Engineering, and Mathematics (STEM) fields. The LSAMP program strives to achieve this mission by providing opportunities for academic and professional development, mentorship, research experiences, and community building. The LSAMP program seeks to create a supportive and inclusive environment that empowers students to pursue their academic and career goals in STEM, and to become leaders in their communities and fields. The ultimate goal of the LSAMP Program is to contribute to a more diverse and talented STEM workforce that can address the grand challenges facing society.**



# THE LEGACY OF LOUIS STOKES



*Congressman Louis Stokes (1925-2015) was a pioneering American politician and lawyer who dedicated his career to advancing civil rights and social justice. As the first African-American member of Congress elected in Ohio and a key figure in the passage of several important pieces of civil rights legislation, Stokes left a lasting legacy as a champion for equality. He also felt a special obligation to utilize programs to help underrepresented minorities by arming talented young people with the opportunity of education to be the scientists, engineers and doctors of the future.*



**SCAN TO  
LEARN MORE**



# OUR STORY

## WHO WE ARE AND WHAT WE REPRESENT

**The University of Maryland, Baltimore County (UMBC)** has a strong tradition of developing STEM talent through the University System of Maryland Louis Stokes Alliance for Minority Participation (USM LSAMP) that began in 1995. Funded through an award from the National Science Foundation, the USM LSAMP is a senior alliance of four institutions. UMBC is the lead institution in partnership with partners at **Towson University, University of Maryland, College Park (UMD), and the University of Maryland Eastern Shore (UMES.)**

Further, we collaborate with Prince George's Community College (PGCC), Montgomery College (MC), Anne Arundel Community College (AACC), and the Community College of Baltimore County (CCBC) to offer programming to promote persistence and a strong sense of STEM identity. We build foundations for mentoring for the next generation of leaders through the following pillars of STEM Identity: Sense of Community, Strength-based approaches, and Institutional Culture Shift.



**WHERE HAVE OUR STUDENTS TAKEN**



**THEIR TALENTS GLOBALLY?**



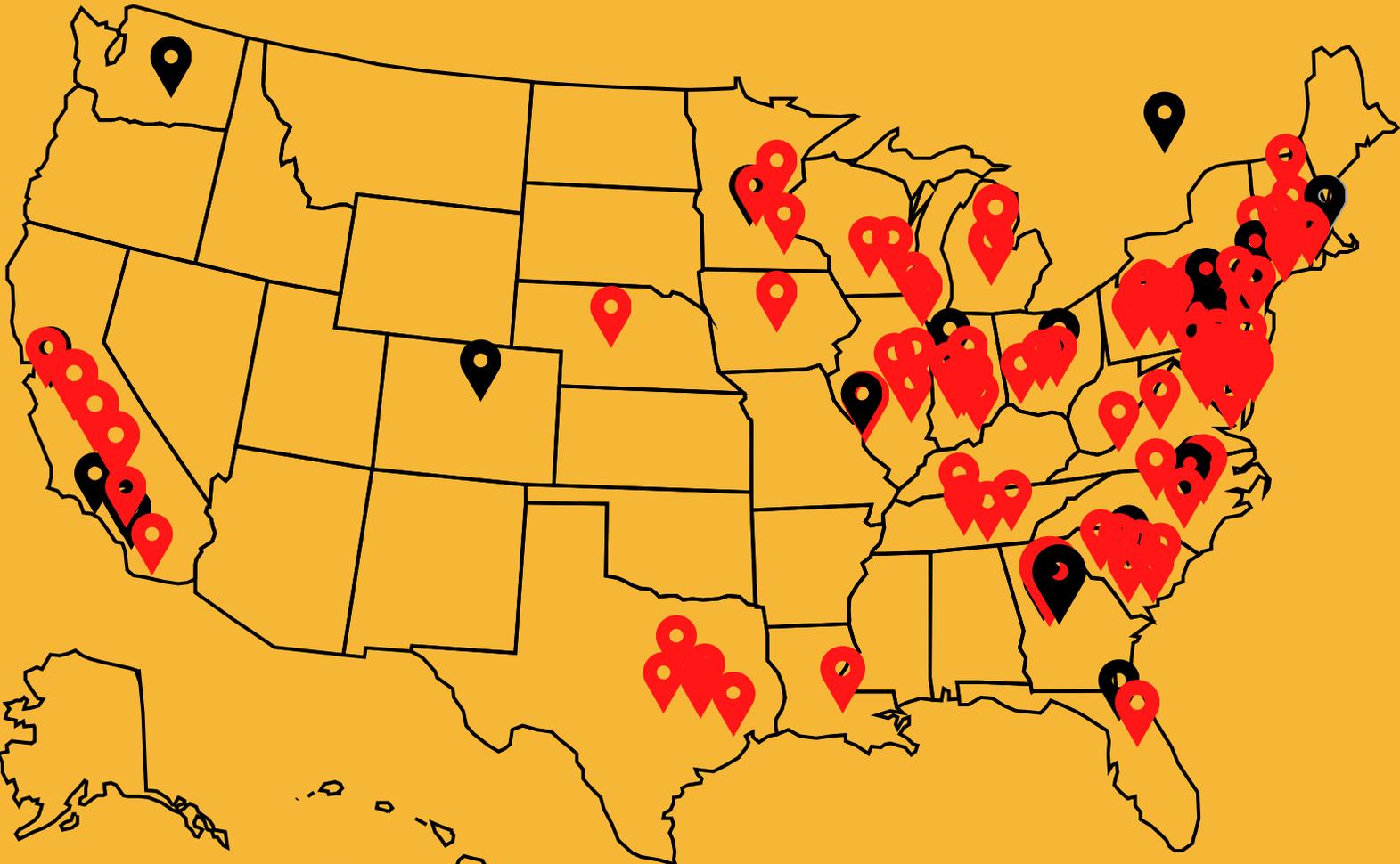
**Gabriel Duran '20,  
Masters Student,  
Canada**



**Joshua Slaughter '22  
PhD Student,  
University of Edinburgh**

**Christopher Slaughter '22  
PhD Student,  
University of Cambridge**

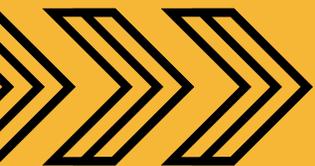
# RESEARCH EXPERIENCES FOR UNDERGRADUATES



**GRADUATE PROGRAMS**



**POSTBACCALAUREATE  
PROGRAMS**



# USM ALLIANCE-WIDE EVENTS

## UMD 18TH ANNUAL WINTER STUDENT LEADERSHIP RETREAT



The Center for Minorities in Science and Engineering (CMSE) at UMD has been hosting the Winter Student Leadership Retreat (WSLR) for the last 17 years. Community College and UMBC LSAMP participants were invited to attend the January 2023 WSLR. The attendees benefited from interacting with other college students, networking with students from various four-year institutions in the metropolitan DMV area, and interacting with industry professionals.

### Leadership Principles

Amazon



### Interview Tips Panels

Amazon | Lockheed Martin | Northrop Grumman  
| W. L. Gore



### The Power of Advanced Degrees

Northrop Grumman

### Resume Writing for College Students

Engineering Co-op and Career Services—A. James Clark  
School of Engineering



### Building a Powerful Network

W.L Gore



### Shark Tank

Lockheed Martin



# UMBC SEMESTER EVENTS



## INTRO TO CODING BOOTCAMP



DR. PATRICIA ORDÓÑEZ AND STARS AT UMBC HOSTED "PYTHON PALOOZA," A CODING BOOTCAMP TAILORED FOR STUDENTS PREPARING FOR CMSC 201. THE WORKSHOP, CENTERED ON PYTHON AND JUPYTER NOTEBOOKS AND WELCOMED PARTICIPANTS OF ALL SKILL LEVELS. BEYOND CODING FUNDAMENTALS, PYTHON PALOOZA AIMED TO CULTIVATE A SENSE OF COMMUNITY, FOSTERING COLLABORATION AND SHARED LEARNING EXPERIENCES, THE EVENT BECAME A SOCIAL HUB FOR STUDENTS TO CONNECT, LEARN, AND CONQUER CODING CHALLENGES TOGETHER.



## GEM GRADLAB - PHILADELPHIA TRIP

GETTING READY FOR ADVANCED DEGREES (GRAD) LAB OFFERS UNDERREPRESENTED STUDENTS EXPOSURE TO THE BENEFITS OF RESEARCH AND TECHNOLOGY CAREERS. SESSIONS WERE DESIGNED TO BREAK THE COMMON MYTHS ABOUT PURSUING AN ADVANCED DEGREE AND SET STUDENTS ON COURSE TO ACHIEVING THEIR FULLEST POTENTIAL. THE DAYLONG EVENT WAS HOSTED BY MS. JOANN RANSOM AND FEATURED A KEYNOTE ADDRESS FROM DR. HOWARD G. ADAMS.



# UMBC SEMESTER EVENTS



## FALL 2023 UMBC LSAMP STUDENT SUCCESS SEMINARS



THIS SEMESTER, WE HAVE CREATED A SERIES FOR NEWER STEM STUDENTS AT UMBC TITLED THE LSAMP STUDENT SUCCESS SEMINARS. CURRENT STUDENTS AND GUEST SPEAKERS DISCUSSED TOPICS INCLUDING: BUILDING COMMUNITY ON CAMPUS; ACADEMIC SUCCESS STRATEGIES; TIME MANAGEMENT; WELLNESS; AND UNDERGRADUATE RESEARCH. WE ARE GRATEFUL TO DR. KEN BARON AND ALL THE STUDENT LEADERS WHO SHARED THEIR WISDOM WITH THE COMMUNITY OF STUDENTS.



## COLLABORATIVE WORKSHOPS

IN PARTNERSHIP WITH STARS COMPUTING CORPS, SOCIETY FOR HISPANIC PROFESSIONAL ENGINEERS, AND THE NATIONAL SOCIETY OF BLACK ENGINEERS, PETER DECRESCENZO AND DR. PATTI ORDÓÑEZ CO-HOSTED A WORKSHOP ON HOW TO SECURE SUMMER RESEARCH OPPORTUNITIES. STUDENTS BROKE INTO SMALL GROUPS TO WORK ON NEW AND CURRENT APPLICATION MATERIALS.

JOIN US FOR THE UPCOMING WORKSHOP:

### SUBMITTING A STRONG APPLICATION FOR SUMMER RESEARCH EXPERIENCES

PRESENTED BY:  
DR. PATTI ORDÓÑEZ &  
PETER DECRESCENZO

WEDNESDAY, NOVEMBER 8TH  
11:00AM - 12:30PM  
LOCATION: ITE 239

IN THIS SESSION, WE WILL DISCUSS

- ✓ Finding Research Opportunities
- ✓ Application Components
- ✓ Personal Statement Tips
- ✓ Securing Strong Letters of Recommendation



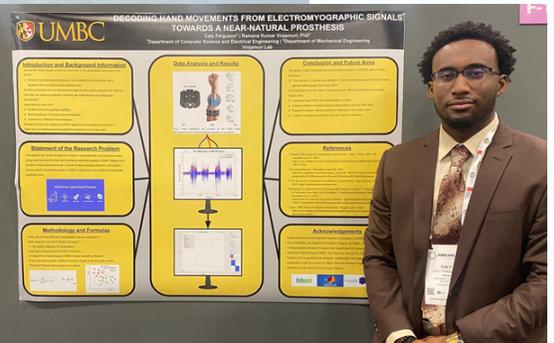
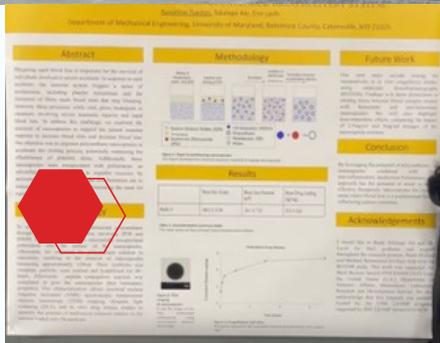
# USM ALLIANCE-WIDE EVENTS

## ANNUAL BIOMEDICAL RESEARCH CONFERENCE FOR MINORITIZED STUDENTS (ABRCMS)

The Annual Biomedical Research Conference for Minoritized Students (ABRCMS) is one of the largest communities of underrepresented minorities in science, technology, engineering, and mathematics. Students attend this conference to present their research, explore graduate schools, and network. This year, there were a total of 56 students who had abstracts accepted and attended the conference. Of the students who presented, 11 undergraduates and one post-baccalaureate won awards for their presentations. The winners included:

### NAME | MAJOR | TOPIC | FACULTY ADVISOR

Achalefac Akem | Biological Sciences | Developmental Biology | Dr. Sofia De Oliveira  
Sera Chase | Biological Sciences | Neuroscience | Dr. Fernando Vonhoff  
Evalynn Ellison | Chemical Engineering | Molecular Biotechnology | Dr. Brandon DeKosky  
Caly Ferguson | Mechanical Engineering | Biomechanics | Dr. Ramana Kumar Vinjamuri  
Gelila Isayas | Biological Sciences | Physiology | Dr. Anoj Ilanges  
Jariatu Kargbo | Biological Sciences | Neuroscience | Dr. Phyllis Robinson  
Emmanuel Mekasha | Biological Sciences | Structural Biology | Dr. Julia TCW  
Emmanuel Okusanya | Biological Sciences | Cell Biology | Dr. Jennifer Lippincott-Schwartz  
Andrew Opincar | Biological Sciences | Cell Biology | Dr. Michelle Starz-Gaiano  
Tithi Prajapati | Bioinformatics & Computational Biology | Bioengineering | Dr. Govind Rao  
Mesha Shajahan | Biochemistry and Molecular Biology | Bioengineering | Dr. Govind Rao  
Ariel Wilson-Gray | Chemical Engineering | Bioengineering | Dr. Tamara Kinzer-Ursem



# STUDENT SHOWCASE

## CHIZARAM UGBOH '23 - MECHANICAL ENGINEERING

Through LSAMP, Chizaram met Dr. Deepa Madan, the lead investigator of the FlexMESHED Lab (Flexible Materials for Energy Storage/Harvesting Lab). She collaborated with Dr. Madan and her graduate students, Malhar Patel and Sanjay Singh-Persad, to research enhancements towards thermoelectric batteries for use in flexible electronics. She acquired hands-on experience in various wet laboratory techniques, including pipetting and titration, while also familiarizing herself with the use of personal protective equipment and proper chemical handling. Additionally, she became proficient in utilizing various lab equipment, such as an ultrasonicator and hotplate for component mixing, a Vacuum Drying Oven for electrolyte dehydration, and a potentiostat for testing electrolyte potential and overall battery performance. Under Dr. Madan's guidance, she created various concentrations of Chitosan-PVA electrolytes, which were subsequently analyzed for their ionic conductivity individually and within the battery system. Chizaram is the recipient of the GEM Fellowship and current master's student studying mechanical engineering at Purdue University.

### **UMBC Affiliations:**

*Center for Women in Technology (CWIT) Scholar, S-STEM Scholar, American Society of Mechanical Engineers (ASME), Theme Park Engineering Group (TPEG), National Society of Black Engineers (NSBE), and the Spanish Conversation Club (SCC).*

Chizaram is currently pursuing her masters degree in mechanical engineering at Purdue University.





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"LSAMP PLAYED MANY ROLES IN MY UNDERGRADUATE CAREER. FROM SUPPORTERS TO CONNECTORS, TO INSTRUCTORS, TO STRESS RELIEVERS, LSAMP HAS TRULY BEEN A CORNERSTONE OF MY ACADEMIC JOURNEY TO GRADUATE SCHOOL AND A RESEARCH CAREER."

-CHIZARAM UGBOH'23



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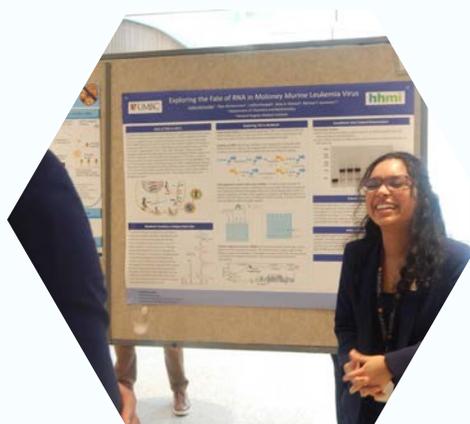


# USM ALLIANCE-WIDE EVENTS

## 7TH ANNUAL USM LSAMP UNDERGRADUATE RESEARCH SYMPOSIUM



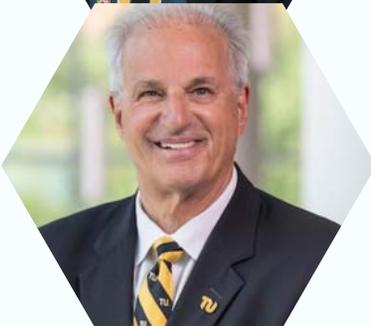
The USM LSAMP Fall Research Symposium features ample opportunity to view and present research through a poster, traditional oral, and TED-style presentations. As part of the Symposium, over 100 students participated in the Graduate School Resource Fair, networked with graduate schools, learned about summer research opportunities, and graduate school funding. There were 20 oral presenters and 37 poster presenters. There were 108 attendees. Students used this opportunity to bolster their presentation skills and refine their content. All attendees were able to meet with representatives from LSAMP institutions in the region and other local graduate programs to participate as exhibitors. This list included the Meyerhoff Graduate Fellowship Program, STAR-PREP post-baccalaureate program, and the University of Baltimore, Neuroscience program.



# USM ALLIANCE-WIDE EVENTS

## 7TH ANNUAL USM LSAMP UNDERGRADUATE RESEARCH SYMPOSIUM

### USM ALLIANCE PRESIDENTIAL ADDRESSES



For the 7th Annual Research Symposium, the Chancellor of the University System of Maryland and the Presidents of each of the four member institutions offered greetings to welcome the students, emphasize the importance of research for undergraduates, and to express their pride in the Fellow's hard work on display throughout the Symposium.

**(center)**

Dr. Jay Perman - Chancellor, University System of Maryland

**(clockwise from top left)**

Dr. Valerie Sheares Ashby - President, University of Maryland, Baltimore County

Dr. Darryll Pines - President, University of Maryland, College Park

Dr. Heidi Anderson - President, University of Maryland Eastern Shore

Dr. Mark Ginsberg - President, Towson University

# USM ALLIANCE-WIDE EVENTS

## 7TH ANNUAL USM LSAMP UNDERGRADUATE RESEARCH SYMPOSIUM

### DISTINGUISHED KEYNOTE ADDRESS



### **DR. ANNICA WAYMAN**

ASSOCIATE DEAN FOR SHADY GROVE AFFAIRS  
COLLEGE OF NATURAL AND MATHEMATIC SCIENCES  
UNIVERSITY OF MARYLAND, BALTIMORE COUNTY

ANNICA WAYMAN DIRECTS THE UNDERGRADUATE TRANSLATIONAL LIFE SCIENCE TECHNOLOGY BACHELOR OF SCIENCE AND THE MASTER'S OF PROFESSIONAL STUDIES IN BIOTECHNOLOGY. AT UMBC, DR. WAYMAN IS ALSO PART OF THE STEM BUILD LEADERSHIP TEAM, A NIH-FUNDED PROGRAM TO SCALE PROVEN INTERVENTIONS TO SUPPORT UNDERREPRESENTED GROUPS IN PURSUING SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) DEGREES, WHERE SHE LEADS THE CAREER MENTORING PROGRAM.

# STUDENT SHOWCASE

## DIEGO IGLESIAS VEGA '23- CHEMICAL ENGINEERING

At UMBC, Diego worked in Dr. Lee Blaney's lab. In the lab, he hypothesized that fluorescence excitation-emission matrices (EEMs) and dissolved organic carbon could be used to not only discriminate between natural and wastewater-derived DOM in urban and suburban streams, but also identify point sources of pollution. To address this hypothesis, he created mixtures of deionized (DI) water, Suwannee River natural organic matter, stream water from two watersheds in Baltimore, and wastewater from sanitary sewers to serve as calibration standards for wastewater content. The goal of the research was to locate leaky sewer pipes and sanitary sewer overflows. As an LSAMP Research Fellow, Diego learned how to leverage his research experiences to advance his academic and professional goals. Diego emphasizes the importance of the LSAMP community and how being around others that shared similar goals encouraged him to be his best self and support others on their academic and professional journeys.

### **Other UMBC Affiliations:**

*Treasurer of Tau Beta Pi  
The Engineering Honors Society*

*Diego is currently pursuing his  
masters in Chemical Engineering  
at MIT on a full ride.*





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“THANKS TO LSAMP I MADE WONDERFUL  
PERSONAL AND PROFESSIONAL  
CONNECTIONS THAT SUPPORTED ME AND  
HELPED ME ACHIEVE MY ACADEMIC  
GOALS”

-DIEGO IGLESIAS VEGA '23

”



# THANK YOU!

## TO OUR 7TH ANNUAL SYMPOSIUM EXHIBITORS!



UMBC



UNIVERSITY of MARYLAND  
SCHOOL OF MEDICINE



*Special Thanks to  
Dr. Kris Marsh,  
Associate Professor and  
Director of Graduate  
Studies!*

# STUDENT SHOWCASE



## KELVIN FADOJUTIMI '23 - BIOCHEMISTRY

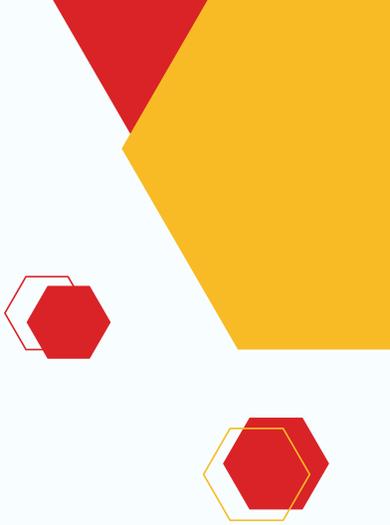
Kelvin engaged in biochemistry research in Dr. Michael Summer's lab. The primary goal of his two major projects was to characterize the protein-RNA interactions involved in the packaging of the HIV-1 RNA genome. In his second project, he used a chemical probing method called S.H.A.P.E to help understand the structural and biochemical differences between two types of unspliced HIV-1 RNA as a complementary method to the NMR approaches used by the lab. Kelvin was introduced to LSAMP through the Summer Bridging Conference before his freshman year where he met other incoming freshmen and the LSAMP team. LSAMP helped Kelvin get involved in his first-ever research experience, in addition to securing research presentation opportunities such as ABRCMS. Kelvin's experience being a part of the LSAMP community was critical in the development of his confidence as a researcher and a student. Kelvin stated "the leadership (Peter and Mr.J) kept me very levelheaded throughout my undergraduate career and instilled in me a deep level of resolve." A hobby Kelvin has that no one knows is that he has a podcast! It's called "My Letter to Science!" It's a podcast about Kelvins lessons as a Black student pursuing the physician-scientist pathway.

### **Other UMBC Affiliations:**

*Phi Delta Epsilon (an academic fraternity for pre-meds) as a committee chair for Recruitment/peer mentor.  
Peer mentor for the STEM LLC and the Pre-Med Society as well.*

*Kelvin is currently a postbacc fellow at MSK and preparing to apply to MD/Ph.D. programs in the upcoming cycle.*





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“LSAMP WAS INSTRUMENTAL IN  
GETTING MY FEET WET AS A  
RESEARCHER AND BOLSTERED MY  
CONFIDENCE IN PURSUING A  
RESEARCH-ORIENTED CAREER.”

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-KEVLIN FADOJUTIMI '23

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The page features several large, abstract, rounded shapes in red and yellow, and two solid black circles. These shapes are scattered across the white background, creating a modern, minimalist aesthetic.

OUR VILLAGE

**Because it takes a  
village.**

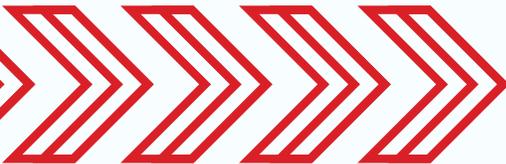
# CAREER DEVELOPMENT PARTNERS



**Marykate Conroy**

**Associate Director, Internships and Employment**  
UMBC

Marykate came to UMBC with 10 years of career development experience. She brings experience in experiential education and applied learning curriculums, faculty partnerships, career coaching, and creating and analyzing meaningful and impactful career development programming, events, and employer relations to her role on the leadership team in the Career Center.



**Adam Morris**

**Assistant Director, Internships and Employment**  
UMBC



Adam joined the UMBC Career Center in 2023. His 15+ years of experience spans for-profit, nonprofit and academia. He is an AmeriCorps alum and previously guided the undergraduate Internship Program in the Department of Human Development & Family Sciences at the University of Delaware. Adam has worked with the LSAMP program for the past year and served as the primary instructor of the University's internship, cooperative education, and research practicum course (PRAC 98) for our LSAMP students. He provides support for workshops, presentations, and professional skill development.

# UMBC FRIENDS OF LSAMP

## MEYERHOFF SCHOLARS PROGRAM STAFF

**Keith Harmon**  
Director,  
Recruitment and  
Retention  
Graduate and  
Professional School  
Placement



**Holly Willoughby**  
Program Coordinator,  
2nd Year Academic  
Advising

**Mitsue Wiggs**  
Assistant Director,  
1st Year Academic Advising | Liaison to  
Academic Departments

## MCNAIR PROGRAM STAFF

**Michael Hunt**  
Program Director



**Dr. Antoinette Newsome**  
Program Coordinator

## FULBRIGHT FELLOWSHIP PROGRAM STAFF

**Dr. Brian V. Souders**  
Advisor



## STEM BUILD PROGRAM STAFF

**Justine Johnson**  
Executive Director



**Maria Cambraia Guimaro**  
Assistant Director

## U-RISE PROGRAM STAFF

**Jacqueline King**  
Associate Program Director  
Associate Director,



**Mary Carole Jorgensen**  
Program Management  
Specialist

# SPRING 2023 RESEARCH FELLOWSHIP PROGRAM

The Research Fellows program offers STEM students at UMBC, UMES, Towson, and community colleges the opportunity to participate in a funded research experience within the University System of Maryland. Students conducted scientific research under the supervision of a faculty mentor for 8-10 hours per week. All aspects of the program (research, professional development workshops, conferences, reflections) were designed to lead to an increase in the numbers and academic competitiveness of underrepresented minority undergraduates who are graduate school-ready as they transition to graduate programs.

## ***Name and Class | Major | Topic | Faculty Mentor | University***

*Nikki Cayas '25 | Information Systems | Data Management | Dr. Roberto Yus | UMBC*

*Safiatou Coulibaly '24 | Information Systems | Informatics for Human Flourishing |  
Dr. Karen Chen | UMBC*

*David Goba '24 | Mechanical Engineering | Computational Mechanics | Dr. Meilin Yu | UMBC*

*Isabella Lopez '24 | Computer Science | Mobile and Persuasive Computing | Dr. Sanorita Dey |  
UMBC*

*Nathaniel Welbeck '24 | Mechanical Engineering | Thermoelectric Materials | Dr. Deepa Madan |  
UMBC*

**"I had initially thought of research as a solitary activity where I would be working independently on a project. However, I quickly realized that research is a team effort that involves working with mentors and colleagues who bring different perspectives and expertise to the table. This experience has taught me the importance of collaboration and how it can lead to more meaningful and impactful research outcomes."**

**- Excerpt From A Information Systems Major '24  
Research Reflection -**



# SUMMER 2023 RESEARCH FELLOWSHIP PROGRAM

20 Research fellows conducted scientific research under the supervision of a faculty mentor for at least 20 hours per week. The fellows prepared and submitted advisor-approved scientific reports, and will present their research via an oral presentation or poster presentation at the 7th Annual USM LSAMP Research Symposium in December 2023. During the summer, fellows attended a virtual two-hour orientation, submitted bi-weekly reflection prompts, participated in professional development workshops, and attended graduate school information sessions.

***Name and Class | Major | Topic | Faculty Mentor | University***

*Christopher Appiah '24 | Mechanical Engineering | Estimation, Control, and Learning |  
Dr. Ankit Goel | UMBC*

*Adam Baji '26 | Computer Science | Machine Learning, Data Mining, and Visualization | Dr.  
Patricia Ordóñez | UMBC*

*Mofopofoluwa Bajomo '25 | Mechanical Engineering | Thermoelectric Materials |  
Dr. Deepa Madan | UMBC*

*Nikki Cayas '25 | Information Systems | Data Management | Dr. Roberto Yus | UMBC  
Mufaro Chiduzza '25 | Biological Sciences | Chemical Sensory Systems |  
Dr. Weihong Lin | UMBC*

*Justin Coles '26 | Biological Sciences | Cell Signaling | Dr. Michelle Starz-Gaiano | UMBC  
Sophia Conrad '25 | Biological Sciences | Brain Development and Function |  
Dr. Fernando Vonhoff | UMBC*

*Safiatou Coulibaly '24 | Information Systems | Informatics for Human Flourishing |  
Dr. Karen Chen | UMBC*

*Emily Cumaco '26 | Computer Science | Machine Learning, Data Mining, and Visualization |  
Dr. Patricia Ordóñez | UMBC*

*Doreen Ehiedu-Arinze '24 | Mechanical Engineering | Mechanics |  
Dr. Charles Eggleton | UMBC*



# SUMMER 2023 RESEARCH FELLOWSHIP PROGRAM

"The guidance, advice, and direction given from the LSAMP program helped to shape my experience to be the most informative and collaborative experience. From the start, it helped me maintain composure in the lab. I have learned a great deal along the way about what it means to be a student researcher and how to prepare for the near future. Overall, I am so grateful for the experience and happy with what I got out of it. I learned so much about myself and the research world. I gained confidence and excitement that I did not expect, this is indeed where I am meant to be."

- Excerpt From A Biological Sciences Major '24 Research Reflection -

## **Name and Class | Major | Topic | Faculty Mentor | University**

*Nhyira Ghunney '24 | Biological Sciences | Tissue Engineering | Dr. Erin Lavik | UMBC*

*Darryn Greene '24 | Biochemistry & Molecular Biology | Cancer Biology | Dr. Aaron Smith | UMBC*

*Lesley Hernandez '25 | Biochemistry & Molecular Biology | Retroviruses | Dr. Michael Summers | UMBC*

*Amaya Johnson '25 | Biological Sciences | Tissue Engineering | Dr. Erin Lavik | UMBC*

*Jarrett Lloyd '24 | Biological Sciences | Cell Signaling | Dr. Michelle Starz-Gaiano | UMBC*

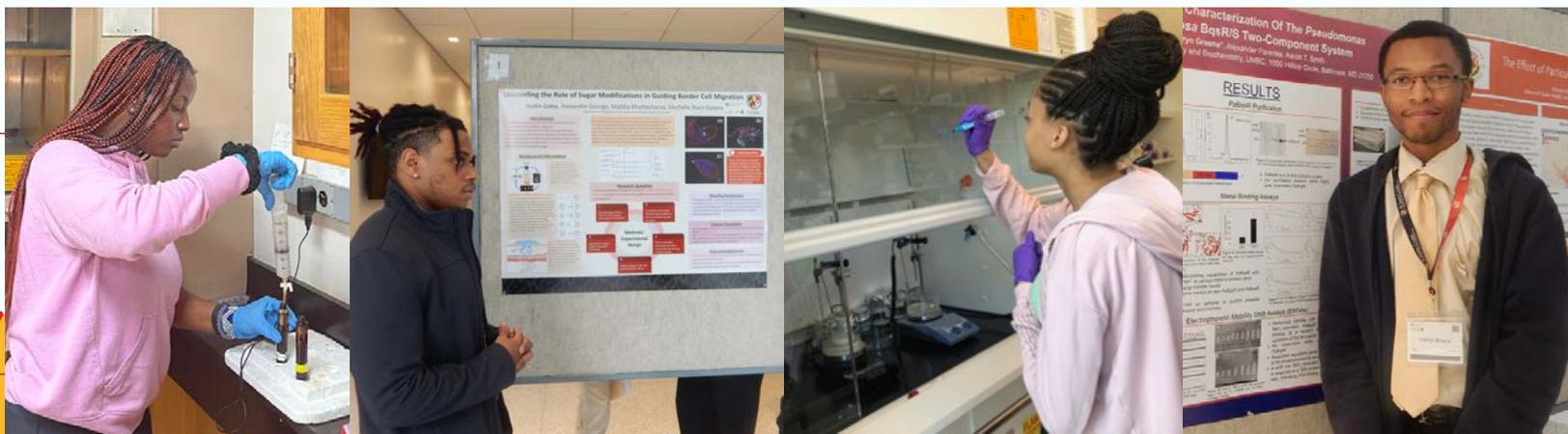
*Isabella Lopez '24 | Computer Science | Mobile and Persuasive Computing | Dr. Sanorita Dey | UMBC*

*Kerstyn Myers '25 | Computer Science | Machine Learning, Data Mining, and Visualization |  
Dr. Patricia Ordóñez | UMBC*

*Leah Prince '25 | Computer Science | Machine Learning, Data Mining, and Visualization |  
Dr. Patricia Ordóñez | UMBC*

*Royal Smith '24 | Chemistry | Chemically Guided Approach to the Discovery and Design of New  
Functional Materials | Dr. Joseph Bennett | UMBC*

*Adekemi Sobukunola '24 | Biological Sciences | Brain Development and Function |  
Dr. Fernando Vonhoff | UMBC*



# SUMMER RESEARCH FELLOWSHIP FACILITATORS



## AMBITION & INITIATIVE

### **Amery Thompson**

Assistant Director,  
Student Transfer Success



### **Dr. Akua Asa-Awuku**

Associate Dean for Diversity and Equity,  
University of Maryland, College Park

## ADVISING & MENTORING

### **Monique Ransom**

Associate Director for  
Academic Advisor  
Development & Student  
Transition Programs



### **Denise McGill**

Program Coordinator for  
LSAMP,  
Towson University

## COMMUNICATION & CONFLICT

### **Tuesday Barnes**

Associate Director,  
CWIT



### **Carolyn Harris**

Director of Student Activities,  
Towson University

## POST-GRADUATION PLANNING

### **Pamela Allen**

Program Director,  
Multi-Ethnic Students,  
University of Maryland,  
College Park



### **Stephanie Taylor Okoukoni**

Assistant Director,  
Career Development

### **Diane Crump-Fogle**

Associate Director, Career Development

## ENGAGING & BELONGING

### **Dr. Ciara Christian**

Acting Director  
Initiatives for Identity,  
Inclusion & Belonging



### **Dr. Jennifer Roberts**

Associate Professor, Kinesiology  
University of Maryland, College Park

### **Carlos Turcios**

Assistant Director, Pride Center

# FALL 2023 RESEARCH FELLOWSHIP PROGRAM

“As I read and as I code, I realize that I’m in a privileged position to be able to continue working with my faculty mentor. I still find myself reading papers and not understanding terminology, but each time I read the paper, the terms become more clear and I’m able to formulate the questions I have about the paper in a clearer way. By doing this research and choosing to continue engaging in research, I’ve come to enjoy the fact that by I never stop learning.”

- Excerpt From A Computer Science Major '25 Research Reflection -

## **Name and Class | Major | Topic | Faculty Mentor | University**

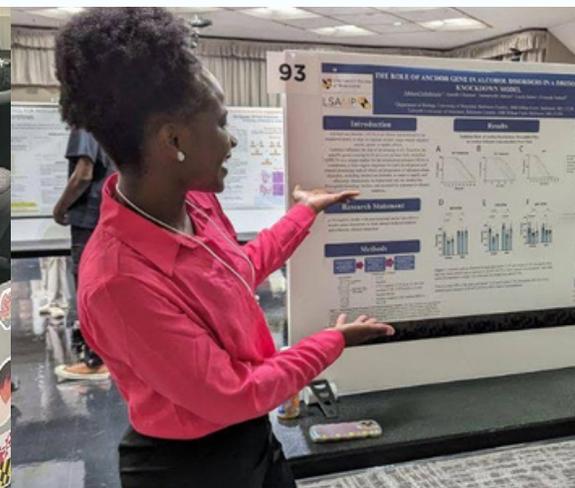
*Danielle Anane '23 | Information Systems | Health Informatics | Dr. Tera Reynolds | UMBC*

*Caly Ferguson '26 | Mechanical Engineering Biomechanics | Dr. Ramana Kumar Vinjamuri | UMBC*

*Kevin Lemus '24 | Information Systems | Machine Learning, Data Mining, and Visualization | Dr. Patricia Ordóñez | UMBC*

*Leah Prince '25 | Computer Science | Machine Learning, Data Mining, and Visualization | Dr. Patricia Ordóñez | UMBC*

*Adekemi Sobukunola '24 | Biological Sciences | Brain Development and Function | Dr. Fernando Vonhoff | UMBC*



# LSAMP FACULTY RESEARCH MENTORS

COLLEGE OF NATURAL AND MATHEMATICAL SCIENCES (CNMS)



***Name | Title | Department | Research Focus | University***

*Dr. Joseph Bennett | Assistant Professor | Chemistry & Biochemistry | Modern Chemistry | UMBC*

*Dr. Weihong Lin | Professor | Biological Sciences | Chemical Sensory Systems | UMBC*

*Dr. Aaron Smith | Assistant Professor | Chemistry and Biochemistry | Structural Biology | UMBC*

*Dr. Michelle Starz-Gaiano | Professor | Biological Sciences | Cell Signaling | UMBC*

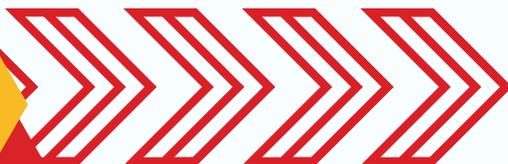
*Dr. Michael Summers | Professor | Chemistry & Biochemistry | Retroviruses | UMBC*

*Dr. Fernando Vonhoff | Assistant Professor | Biological Sciences | Brain Development and Function | UMBC*



“ I have learned to value communication and understand its importance. Through effective communication, I can identify skills that I need to develop and discuss how to enhance those skills. I ensure I keep my PI notified about my progress, discuss any challenges I face and make good use of the feedback I get from him. My PI is easily accessible, and this has made me free to address any issue I have in the laboratory without fear of judgement. It has also helped me with my professional development as I easily communicate my future career aspirations and receive advice from my P.I.”

- Excerpt From A Biological Sciences Major '24  
Research Reflection



# LSAMP FACULTY RESEARCH MENTORS

## COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY (COEIT)

**Name | Title | Department | Research Focus | University**

*Dr. Karen Chen | Assistant Professor | Information Systems | Informatics for Human Flourishing | UMBC*

*Dr. Sanorita Dey | Assistant Professor | Computer Science | Mobile and Persuasive Computing | UMBC*

*Dr. Charles Eggleton | Professor | Mechanical Engineering | Mechanics | UMBC*

*Dr. Ankit Goel | Assistant Professor | Mechanical Engineering | Estimation, Control, and Learning | UMBC*

*Dr. Deepa Madan | Assistant Professor | Mechanical Engineering | Thermoelectric Materials | UMBC*

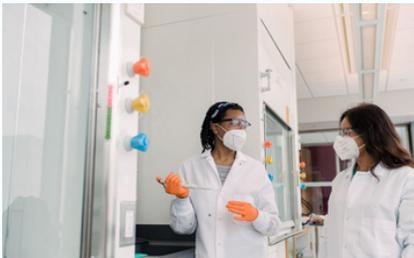
*Dr. Patricia Ordóñez | Associate Professor | Information Systems | Machine Learning, Data Mining, and Visualization | UMBC*

*Dr. Tera Reynolds | Assistant Professor | Information Systems | Health Informatics | UMBC*

*Dr. Ramana Vinjamuri | Assistant Professor | Computer Science & Electrical Engineering | Brain-Machine Interfaces | UMBC*

*Dr. Meilin Yu | Associate Professor | Mechanical Engineering | Computational Mechanics | UMBC*

*Dr. Roberto Yus | Assistant Professor | Computer Science | Data Management | UMBC*



"It is important to develop a strong relationship with your principal investigator. They provide you with the guidance to navigate the complexities of research. Particularly as a novice to the field, they are almost your lifeline, providing you with the information needed to be successful. Taking initiative with communication and showing dedication and enthusiasm for your research are vital to initially developing this relationship. To ensure that this mentor-mentee relationship is strengthened with a foundation of mutual respect and shared goals, one should regularly be asking questions, seeking feedback, and demonstrating their dedication to the project."

- Excerpt From A Computer Science Major '24  
Research Reflection -

# FACULTY SPOTLIGHT



FROM THE ENTIRE UMBC LSAMP COMMUNITY, WE THANK DR. MICHELLE STARZ-GAIANO AND DR. PATRICIA ORDÓÑEZ FOR THEIR CONTINUED SUPPORT.



**Dr. Michelle Starz-Gaiano** (pictured above) is the Chair and Professor in the Department of Biological Sciences. Dr. Starz-Gaiano's research projects focus on the movement of the border cells, a cluster of cells in the ovary that detach from an epithelial cell layer and undergo a stereotyped movement between germ line cells as the egg develops. Over the years, Dr. Starz-Gaiano has hosted 9 LSAMP Research Fellows. Jarrett Lloyd '24 states, *"Dr. Starz-Gaiano has been an invaluable mentor in my academic journey, promoting my growth as a scientist. Through insightful guidance, encouragement, and opportunities for hands-on research, Dr. Starz-Gaiano has not only expanded my knowledge but also instilled a passion for critical thinking and scientific inquiry that will undoubtedly shape my future contributions to the field."*



**Dr. Patricia Ordóñez** (pictured above) is an Associate Professor in the Department of Information Systems. Her research team applies machine learning, data mining, and visualization to multivariate time series analysis, specifically to large repositories of clinical and biological data. Over the years, Dr. Ordóñez has hosted 5 LSAMP Research Fellows. Leah Prince '25 states, *"Without Dr. Ordóñez, I would be the student researcher that I am today. By participating in her health information technology lab, I began to envision myself as a budding data scientist. She encouraged me to enhance my skillset in a challenging yet supportive environment."*

# GRADUATING SENIORS



CLASS  
OF 2023



# CLASS OF 2023 GRADUATING FELLOWS AND POST-GRADUATION PLANS

## **Eunice Aninkwa**

Biochemistry/Molecular Biology  
*Quality Engineer, Ultium Cells*



## **Sergio Diaz**

Physics and Mathematics  
*Graduate Student at  
Johns Hopkins University*



## **Kelvin Fadojutimi**

Biochemistry/Molecular Biology  
*MSK Bridge Scholar*



## **Bethel Ghezai**

Biochemistry/Molecular Biology  
*Prospective Graduate Student*



## **Joana Hernandez**

Chemical Engineering  
*Prospective Graduate Student*



## **Diego Iglesias Vega**

Chemical Engineering  
*Graduate Student at MIT*



## **Victoria Joya Euceda**

Geography and Environmental Studies  
*Ph.D. Student at San Diego State University*



## **Stephen Isabell**

Biological Sciences  
*Prospective Graduate Student*



# CLASS OF 2023 GRADUATING FELLOWS AND POST-GRADUATION PLANS

**Tobi Majekodunmi**

Mechanical Engineering  
*Graduate Student at MIT*



**Rachel Myers**

Chemical Engineering  
*PhD Student @ Massachusetts Institute of Technology*



**Nithya Navarathna**

Bioinformatics & Biological Sciences  
*Research Project Coordinator at the University of Maryland Medical Intelligent Imaging Center*



**Ergine Remy**  
Biological Sciences

*Prospective Graduate Student*



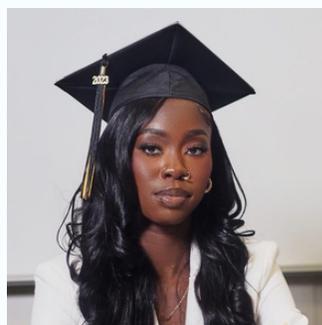
**Chizaram Ugboh**

Mechanical Engineering  
*Masters degree at Purdue University*



**Zainab Yekini**

Information Systems  
*Software Engineer*



**Xavier Smith**

Computer Engineering  
*Electrical Engineering PhD Student and Presidential Fellow at the MIT*



# UMBC LSAMP STAFF

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**Sunji Jangha**  
Program Director



**Peter DeCrescenzo**  
Assistant Director



UMBC

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