CALIFORNIA STATE UNIVERSITY LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION

January 2023 | Vol. 9

PROGRAM RECOGNIZING OUTSTANDING UNDERGRADUATE DISTINCTION

2023

CSU-LSAMP is funded through the National Science Foundation (NSF) under grant #HRD-1826490 and the Chancellor's Office of the California State University. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation or the Chancellor's Office of the CSU

INTRODUCTION

Welcome to the eighth edition of CSU-LSAMP PROUD, the annual publication of the California State University Louis Stoke Alliance for Minority Participation. CSU-LSAMP PROUD recognizes the outstanding academic, research, and service achievements of students and alumni from throughout our alliance. Each year, the CSU-LSAMP coordinators at each of our alliance campuses nominate students to be recognized through our Program Recognizing Outstanding Undergraduate Distinction (PROUD). Our PROUD scholars have distinguished themselves in so many ways - in the classroom, in the laboratory, and in the community - and the success of CSU-LSAMP is truly written in their stories, which are featured in this publication.

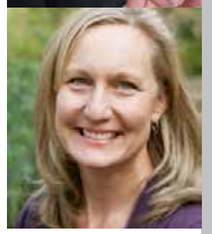
In this year's publication, we feature our two signature international research programs in Costa Rica and Uzbekistan. After more than two years of restrictions due to COVID-19, we were delighted to finally be able to offer these experiences again to our CSU-LSAMP students. CSU-LSAMP added international research experiences as one of its objectives in 2008. Since then, 469 CSU-LSAMP participants (an average of 47 per year) have had the opportunity to conduct research overseas. We have placed students in research on all continents, including Antarctica. This year marks the final year of the current CSU-LSAMP grant and, after ten years, my final year as Lead Project Director for the program. I am very PROUD of the work we do, as an alliance, and as a university system. I look forward to the future achievements of CSU-LSAMP under the leadership of Semarhy Quinones Soto, who will be stepping into the Lead Project Director role for the next grant cycle.

Lisa Hammersley, Ph.D.

Lead Project Director, CSU-LSAMP

Dean, College of Natural Sciences & Mathematics, California State University, Sacramento

CSU-LSAMP STATEWIDE OFFICE



PRINCIPAL INVESTIGATOR
Robert Nelsen, Ph.D.
President, California State University, Sacramento

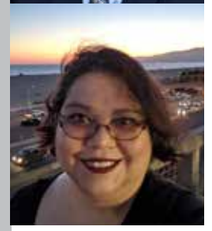
Co-PI, LEAD PROJECT DIRECTOR
Lisa Hammersley, Ph.D.
Interim Dean, College of NSM

Co-PI, ASSOCIATE PROJECT DIRECTOR
Semarhy Quiñones-Soto, Ph.D.
Lecturer, Biology

Co-PIs
David Barker, Ph.D.
Professor, Government
Director, Center for Congressional and Presidental Studies
American University

Shannon Williams, Ph.D.
Executive Director, Institute for Social Research,
Sacramento State

PROJECT MANAGER
Nicole Campos



LEAD AUTHORs & EDITORs
Lisa Hammersley, Ph.D.
Semarhy Quiñones-Soto, Ph.D.

AUTHOR & DESIGN EDITOR
Nicole Campos

COVER ART
Semarhy Quiñones-Soto, Ph.D.

ADDITIONAL CONTRIBUTORS
CSU-LSAMP Campus Coordinators
Sacramento State Institute for Social Research

Published by the Claifornia State University Louis Stokes Alliance for Minority Participation
~January 2023~

CONTENT

PROUD SCHOLARS BY CAMPUS

SPARA UPDATE

CSU-LSAMP STEM PATHWAYS AND RESEARCH ALLIANCE: PERSISTENCE & GRADUATION

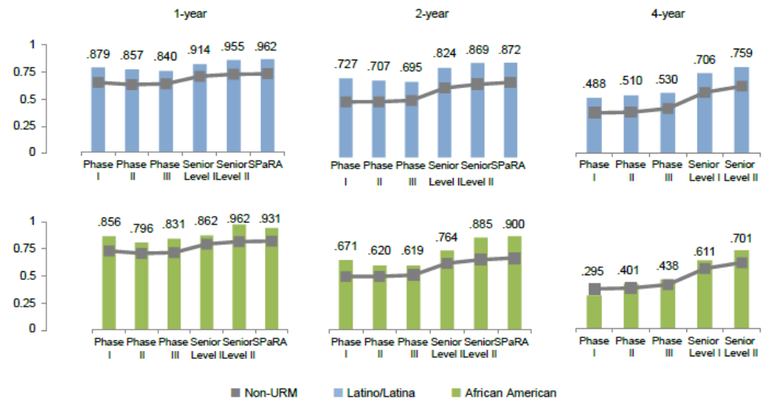
Funded by the National Science Foundation and the Chancellor's Office of the California State University, the CSU-LSAMP Alliance is a coordinated and comprehensive program dedicated to broadening participation in STEM. Over its 29-year history, the CSU-LSAMP Alliance has grown to include all 23 campuses of the CSU. The primary goal of CSU-LSAMP is to enhance the academic and professional preparation of CSU-LSAMP participants for careers in STEM. Currently, our project is on its fifth year of our sixth five-year cycle of funding, known to us as the STEM Pathways and Research Alliance (SPaRA). The following excerpt was taken from the CSU-LSAMP SPaRA Year Four Report from the Institute for Social Research:

To assess the impact of CSU-LSAMP participation on persistence and graduation rates, this analysis compares persistence and graduation rates for annual cohorts of CSU-LSAMP Latino/Latina and African American participants with benchmark cohorts. ISR obtained aggregate benchmark cohort information from the California State University Data for the Consortium for Student Retention Data Exchange (CSRDE).

CSRDE specifications for first-time, full-time freshmen cohorts, defined the subset of CSU-LSAMP participants that are included in the analysis. The subset includes 8,164 (28%) of the 29,032 CSU-LSAMP participants. Both CSU-LSAMP participant and benchmark cohorts are comprised of students who entered the CSU system during a fall term as first-time, full-time freshmen with declared majors in a STEM discipline. The benchmark cohorts for 1996-2007 include all students in the specified category who matriculated at one of the 19 CSU campuses participating in Phase III of the CSU-LSAMP program. The benchmark cohorts for 2008-2012 include all students in the specified category who matriculated at one of the 22 CSU campuses participating in the Senior Level I CSU-LSAMP program. All 23 CSU campuses are participating in the Senior Level II and SPaRA CSU-LSAMP program; therefore, the benchmark cohorts for 2013-2019 include all students in the specified category who matriculated at any of the 23 CSU campuses.

The analysis describes average persistence and graduation rates across cohort years and CSU-LSAMP phases, making it easier to evaluate overall trends. The cohort years included in each average necessarily vary as indicated in the figure and table headings. For example, the first-year persistence average includes data from the 1996-2019 cohorts, while the sixth-year average only includes data from the 1996-2014 cohorts. Similarly, the fourth-year graduation average includes data from the 1996-2016 cohorts, while the sixth-year average only includes data from the 1996-2014 cohorts.

: Average One-, Two-, and Four-Year STEM Discipline Persistence Rates by Phase for Latino/Latina and African American CSU-LSAMP Participants, 1996-2019 Cohorts



Sources: Longitudinal participant database constructed from WebAMP records matched to CSU ERS records. Non-URM student data is from the ASD Consortium for Student Retention Data Exchange (CSRDE) Data for California State University.
The cohorts included in the phase averages vary based on the available data, see Figure 7 for more detail.

CSU-LSAMP NSF NATIONAL GRADUATE RESEARCH FELLOWSHIP AWARDEES 2022

Mayra M. Banuelos (SFSU)
Life Sciences - Evolutionary Biolgy
Brown University

Carla B. Campos (CSUS)
Life Sciences - Developmental Biology
University of Oregon

Valeria Garcia (SDSU)
Life Sciences - Biochemistry
University of Texas at Austin

Madison Lalica (Cal Poly Humboldt)
Geosciences - Paleontology and Paleobiology
Cal Poly Humboldt

Kaitlin Macaranas (CSUB)
Life Sciences - Environmental Biology
California State University, Biology

Gabriel Medina-Kim (Cal Poly SLO)
Social Sciences - History and Philosophy of Science
Rensselaer Polytechnic Institute

Annie E. Meeder (Cal Poly SLO)
Life Sciences - Ecology
California Polytechnic University, SLO

Aliyah Penn (CSUS)
Life Sciences - Neurosciences
California State University, Sacramento

Fabian Ramirez (SSU)
Mathematical Sciences - Algebra, Number Theory, and Combinatorics
University of California, Irvine

Leeza-Marie Rodriguez (CSUF)
Life Sciences - Ecology
California State University, Fullerton

CSU-LSAMP: SUCCESS WRITTEN IN THE NUMBERS

- Since 1993, CSU-LSAMP has served 29,032 participants, including 24,206 URM students
- The annual number of participants has increased more than four-fold, from 641 in 1994 to 2,289 in 2021
- From 1994 to 2021, CSU URM-STEM undergraduate enrollment increased 359%. STEM enrollment for non-URM students increased by only 30% over the same time period.
- From 1994 to 2021, CSU URM-STEM baccalaureate degree production increased 769%
- CSU-LSAMP participants are 1.3-1.8 times more likely than non-participants to remain enrolled in STEM disciplines.
- CSU-LSAMP participants are 1.7 times more likely than non-participants to graduate with STEM degrees within 6 years.
- In 2020-2021, more than 800 CSU-LSAMP students engaged in professional development activities.
- Hundreds of CSU-LSAMP students disseminated their research, producing journal articles and presentations at conferences regionally, nationally, and internationally.
- 40% of CSU-LSAMP graduates persisted at the post-baccalaureate level. And, 18% of these participants earned Master's degrees, 5% earned doctorates, and 17% remain enrolled.

CSU-LSAMP COSTA RICA RESEARCH EXPEDITION PROGRAM

After two years of postponements, the CSU-LSAMP Costa Rica Research Expedition resumed in-person in summer 2022! Eight LSAMP students from four CSU campuses participated this year in a scaled-down version of past summer expeditions. This year, the students focused on a group research project in the village of Mastatal (pop. 150), learning about ecology, experimental design, statistical methods, and field techniques for sampling, sorting, and cataloguing arthropods. The expedition was bookended by a few days learning about sustainable coffee production and the coastal environment.

The first part of the expedition took place in Santa Maria de Dota, a small town in the coffee highlands in the world-famous Tarrazú region. Activities included a tour of the nearby CoopeDota production facilities (including coffee tasting, or "cupping"), along with lectures and discussions that served as an introduction to ecological concepts pertaining to sustainable coffee as well as a refresher/introduction to some statistics. The visit also featured a visit to a working coffee farm to collect some data on bean production; the group then analyzed using some of the statistical methods we learned in order to test hypotheses about coffee pollination and habitat diversity.

The main phase of the expedition took place in the small rural village of Mastatal carrying out a research project in the shadow of La Cangreja National Park. Our project, a follow-up of a project conducted with students in the same sites nearly 20 years ago, aimed to compare the relative contribution of farmland and forests to arthropod biodiversity. This entailed spending six days setting pitfall traps, characterizing ground and canopy cover, and collecting, sorting, photographing and measuring the body sizes of beetle and spider specimens from several sites around the region. Specimens were sent to colleagues who are taxonomic specialists in San Jose for further identification; we'll be using specialized software to analyze the specimen photographs, measuring body and leg sizes of the beetles and spiders in order to better understand traits like mobility and predator size as potential drivers of abundance and diversity patterns. River crossings, steep hillsides, and the usual assortment of biting insects along with the occasional torrential downpour were among the challenges the group faced; all came through with flying colors and emerged with some hard-won tropical field ecology experience. In between the hard work in the field and lab, students enjoyed playing pick-up soccer, touring the local family-run cacao farm and chocolate producer, learning about medicinal plants from an indigenous medicine man, eating dinner at the village "soda" (small restaurant), and hiking to local waterfalls. The expedition wrapped up with a visit to the coast, where the group enjoyed a guided wildlife tour of Manuel Antonio National Park, and explored nearby mangroves via kayak.

Upon returning to the U.S., student participants continued to pursue opportunities aimed at expanding their research skillsets. James Lara (Cal Poly Humboldt) has been accepted into the Doris Duke Conservation Scholars program next summer; Anh Cao (CSUMB) participated in a study abroad program during the fall at the National Taiwan University in Taipei, and Jasmin Juarez-Gonzalez (CSUMB) will be starting in the UROC Scholars program starting in January. Finally, Yazmine Bedolla (Fresno State) continues her research in the Brooks lab, focusing on elucidating the structure of an anti-tumor antibody bound to its synthetic target antigen using x-ray crystallography. She presented two research posters recently, one at the CSU Summer Symposium at UCLA, and the other at the SACNAS NDiSTEM Conference in Puerto Rico in October. Furthermore, she was recently awarded a $1,500 Undergraduate Research Award which will support her presenting at more conferences this spring!

CSU-LSAMP INTERNATIONAL PROGRAMS
IRES IN UZBEKISTAN

I am incredibly honored to have participated in the IRES program and believe this opportunity immensely expand my knowledge as a scientific researcher and allowed me to learn more about Uzbekistan culture. Not only was I able to learn and collaborate on innovative research with Uzbek peers in a very diverse environment, but also had the experience to create meaningful friendships with the people I met there.
- Tiffany Azusada, CSU Fullerton, Uzbekistan '22

A trip to Uzbekistan is a wonderful way to experience new cultures. The people of Uzbekistan are some of the most friendly people I have ever met! I never believed I would get the chance to make new friends from another part of the world. I'm grateful for the opportunity to be able to go there since it was undoubtedly an experience not many people get to have.
- Christopher Meza, CSU Fullerton, Uzbekistan '22

My Uzbekistan experience was top notch, this was my first ever international travel, and I couldn't have asked for a different experience! From new, amazing and fresh food to meeting people of a whole new culture and ways of living, I would love to do this again in the future.
- Marco Hernandez, CSU Fullerton, Uzbekistan '22

CSU-LSAMP RESEARCH EXPERIENCE IN UZBEKISTAN

The IRES in Uzbekistan program is hosted by California State University (CSU), Fullerton in partnership with the Institute of Mathematics of the Uzbekistan Academy of Sciences, and supports international research experiences for U.S. students. The program is funded by the IRES program at the National Science Foundation, and gives U.S. students a 10-week summer research experience in Uzbekistan, the birthplace of algebra, under the mentorship of world-renowned mathematicians Shavkat Alimov, Shavkat Ayupov and Utkir Rozikov. In collaboration with their Uzbek peers and mentors, U.S. students conducted cutting-edge research in Leibniz Algebras (structure of derivations on operator algebras, derivations and automorphisms groups on algebras of unbounded operators on Hilbert spaces, structural theory of Leibniz algebras and superalgebras), Harmonic Analysis (numerical methods, Fourier transformation, spectral theory) and Mathematical Biology (DNA, Holliday junction, Cayley tree, Gibbs measure).

In addition to 6 IRES students chosen nationally, CSU-LSAMP funded 4 CSU-LSAMP students to attend the program during summer 2022, Austin Hoach (Stanislaus State), Tiffany Azusada, (Fullerton), Christopher Meza (Fullerton), and Marco Hernandez (Fullerton).

Students went to Uzbekistan from June 22 -August 12, 2022) to conduct research in mathematics. Both research and cultural components were successful. Students conducted research with their Uzbek mentors and peers, and as part of their cultural program, traveled to the silk road cities of Samarkand, Bukhara and Khiva.

My Uzbekistan experience was very exciting because I got to interact with a variety of people and expose myself to an entirely different culture. Moreover, I was introduced to many mathematical ideas at the conference and noticed the universality of mathematics when learning with my mentor.
- Austin Hoach, Stanislaus State, Uzbekistan '22

California State University, Bakersfield

OUTSTANDING ACADEMIC, RESEARCH IN STEM & TRIUMPH OVER ADVERSITY
KAITLIN MACARANAS · BIOLOGY

Kaitlin Macaranas, a recent graduate from CSU Bakersfield with a B.S. in Biology, was an exemplary student who excelled academically, in research and in her dedication to increase diversity and inclusivity in STEM. Kaitlin consistently made the Dean's List, was a member of the Alpha Chi National Honor Society, the CSUB Women in Science Club, the CSUB Biology Club, an active member of the McNeish Aquatic Ecology Research Lab for three years, all while maintaining a 3.81 GPA and working part-time. Kaitlin has given 5 research presentations at scientific conferences, served in a leadership role while mentoring students in the research lab, won over $20,000 to support her research, participated in two research internships, one of which led to her co-authorship on a technical report. Additionally, Kaitlin won the prestigious NSF Graduate Research Fellowship award. Kaitlin's academic and research interests were complimented by her passion to promote and increase diversity and inclusivity in the aquatic sciences. As a first-generation Filipino-American woman, Kaitlin has firsthand knowledge of the unique challenges that underrepresented groups in STEM must overcome in order to succeed. Kaitlin's participation in the Society for Freshwater Science's (SFS) Instars program allowed her to connect with fellow students from underrepresented groups, build relationships with them and learn about their own experiences. Kaitlin was also a member of the recently formed SFS Emerge program, which aims to broaden professional opportunities for graduate students and early career professionals from underrepresented groups in aquatic sciences. Kaitlin's perseverance and collective experiences bode well for her future successes as she pursues her chosen career path as an environmental scientist in graduate school.

Campus Coordinator(s):
Kathleen Szick, Ph.D.
Associate Professor of Biology
LSAMP Program Director
(661) 654-6165
kszick@csub.edu

OUTSTANDING ACADEMIC
MATTHEW GOULART · CHEMISTRY

Matthew Goulart is a bright and hard-working first-generation student who graduated from CSU, Bakersfield (CSUB) with a BS in Chemistry in Spring 2022. With a CSUB GPA of 3.90, Matt graduated Magna Cum Laude and was selected as the Outstanding Undergraduate in Chemistry for AY 2021-22. Matt also received the CSUB Chemistry Department's Outstanding Performance in Organic Chemistry Award (2019-2020), the Department's Outstanding Performance in Analytical Chemistry Award (2020-2021), and the American Chemical Society (ACS) Division of Organic Chemistry Undergraduate Award in Organic Chemistry. In addition to Matt's exemplary academic achievement, he also conducted research with Dr. Danielle Solano where he employed green chemistry methods to prepare inhibitors of the enzyme lysyl oxidase, an attractive therapeutic target for the treatment of metastatic cancers. Matt presented his research at several conferences including the 2021 SACNAS National Diversity in STEM Conference (where he was selected to receive one of the 2021 SACNAS Student Presentation Awards) and the Spring 2022 National Meeting of the American Chemical Society. During his time at CSUB, Matt also worked as a supplemental instructor for chemistry courses, a peer mentor, a lab teaching assistant, and a COPE Health Scholar. As a COPE Health Scholar, Matt helped his local community get vaccinated against COVID-19. After a gap year where he hopes to gain additional research experience, Matt plans to apply to graduate school and pursue a PhD in Chemistry.

OUTSTANDING SERVICE/LEADERSHIP
MONICA HINSON · GEOLOGY

Monica Hinson, a Geology major at CSU Bakersfield, has excelled in academics, distinguished herself in service, and has been involved in research. After graduating Summa Cum laude from Bakersfield College, Monica switched from a focus on English to a major in Geology at CSUB where she has maintained an overall GPA of 3.90. She has consistently been on the Dean's List, is an Honors Student in the Helen Louise Hawk Honors Program, and has won a number of awards, including the Kegley Family Merit Scholarship (2022). As a result of her academic abilities, a strong work ethic, her interpersonal skills, and her interest in education, she was chosen to be an instructional assistant for the Department of Geological Sciences (2022). Her interest in helping to educate others in science also extends to the community. Monica recently completed a 2-month docent training/education program at the BV Museum of Natural History and Science where she plans to volunteer to give guided tours. As a current Kern County STEAM camp group facilitator, Monica opted to organize educational activities for youngsters. Her interest in ocean geoscience, research in marine micropaleontology, maturity, and reliability are only a partial list of the reasons she was selected for a prestigious research internship that includes collecting research samples during an ocean voyage. Monica is a dedicated student with a helpful, can-do attitude and a pleasant personality. Her record of achievement, dedication to learning new things, willingness to help others, and her persistence combine to make her exceptional.

Channel Islands
CALIFORNIA STATE UNIVERSITY

OUTSTANDING RESEARCH IN STEM
ALEXIS ALCALA · CHEMISTRY

Alexis Alcala majored in Chemistry at CSUCI after transferring from a local community college. Raised by her grandmother who worked the fields of Oxnard, she chose chemistry as a major to understand how pesticides and other harsh agricultural chemicals affected the people who worked in the fields or lived in the surrounding areas. Alexis worked with Dr. Simone Aloisio at CSUCI before transferring testing different types of rice for the presence of a neurotoxin, methylmercury. Curious to explore other fields, she interned at the Smithsonian's Center for Conservation Genetics in Washington, D.C. working with Dr. Jesus Maldonado on a project related to the endangered San Joaquin Valley Kitfox. Alexis has presented her work at conferences like the Southern California Conferences for Undergraduate Research and the SAGE Student Research Conference. She has shown passion for science through her involvement in the SACNAS and the Chemistry clubs. She joined CSU-LSAMP, which she states has been an "integral component to her realizing how graduate school would give her the leverage to change the way people think about who can become a scientist." With her experience and versatility in various scientific field, she ultimately decided to pursue a doctoral program in Applied Physics and Materials Science at the Northern Arizona University. Alexis aims to become a researcher studying the fate and transport of environmental contaminants in low-income communities. As a first-generation college graduate and Mexican American woman in sciences, she vows to diversify the field of chemistry.

OUTSTANDING ACADEMIC
ROBERT TRUJILLO · MATHEMATICS AND COMPUTER SCIENCE

Robert Trujillo graduated with a double major in computer science and mathematics from CSUCI in May 2022. He attributes his success as a first-generation student to the guidance and encouragement of several key mentors on campus, along with his experience as a tutor. Tutoring his peers in upper-division computer science and mathematics courses further strengthened his fundamental understanding of these subjects and allowed him to better understand the process of learning itself. "Through tutoring, I was exposed to the worlds of learning science and peer mentoring. The skills I gained in note-taking, efficient studying, organization, and time management filled in the gaps in knowledge I had as a first-generation student and contributed to me reaching semester honors," said Robert. Robert's academic mastery spurred an intellectual curiosity fitting for a budding researcher. Robert worked on different projects that utilized his mathematical and programming experience. He worked with Dr. Cynthia Wyels on the effect service-learning courses have on student success metrics, learning and applying a variety of statistical methods and the R-programming language. He also worked with Dr. Alona Kryschenko and Dr. Malidi Ahamadi, from Amgen, using parametric, non-parametric, and machine learning methods to model how patients respond to drugs based on their physical characteristics. Robert will be pursuing a Ph.D. in Biostatistics at the University of Washington, where he hopes to continue using his statistical and computational experience to conduct interdisciplinary research in biology, medicine, and public health.

Campus Coordinator(s):

Caryl Ann Becerra, Ph.D.
Assistant Professor, Biology
(805) 437-2774
carylann.becerra@csuci.edu

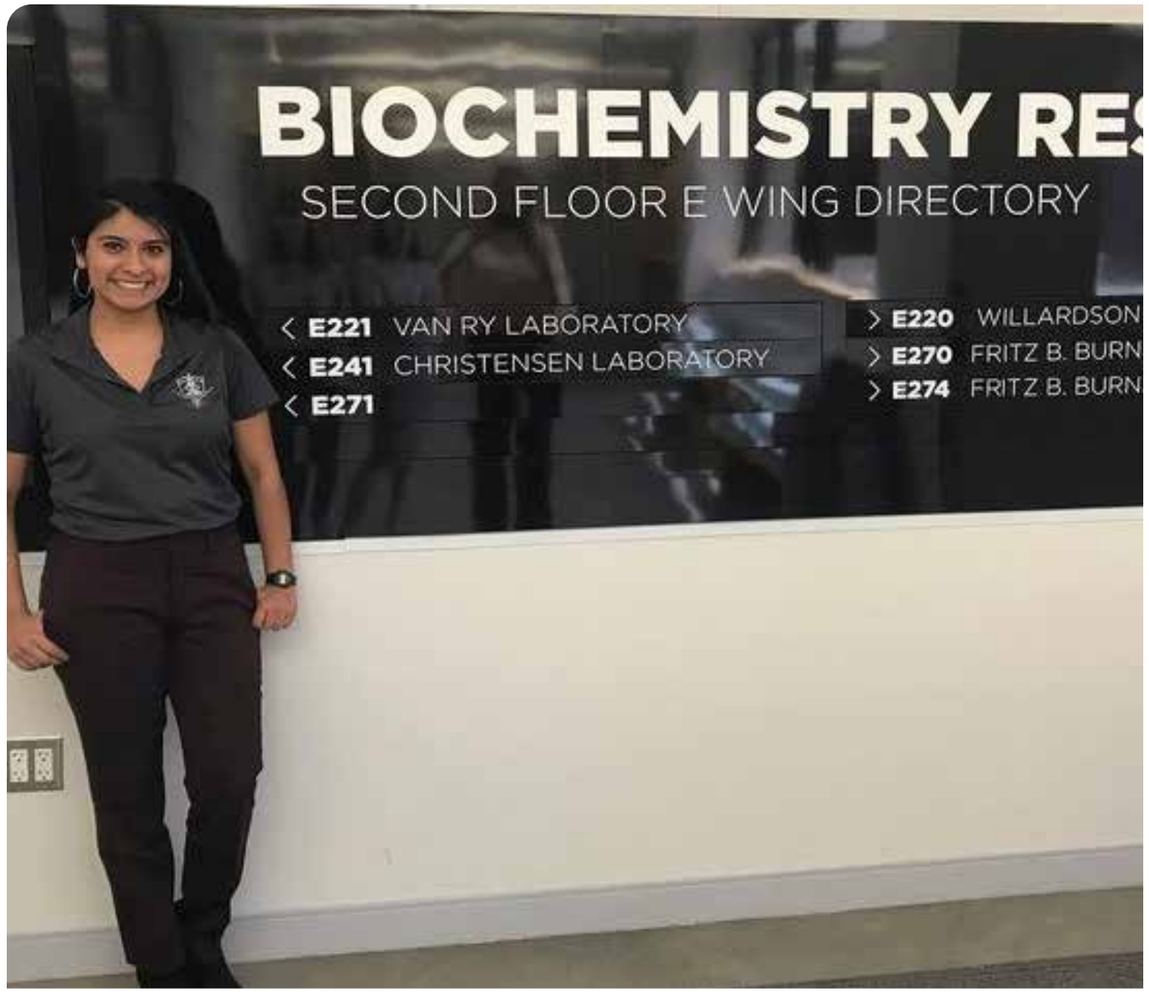
Christine (Chris) Opzeeland
CSU-LSAMP Coordinator
(805) 437-2641
christine.opzeeland627@csuci.edu

CALIFORNIA STATE UNIVERSITY, CHICO

Campus Coordinator:
Pablo Suarez, MESA Engineering Program (MEP)/Chico STEM Connections Collaborative - CSC2
Director, Louis Stokes Alliance for Minority Participation (LSAMP)
(530) 898-4887
psuarez@csuchico.edu

OUTSTANDING RESEARCH IN STEM

DIANA RAMIREZ · BIOCHEMISTRY & CHEMISTRY



Diana Ramirez' undergraduate career began at California State University, Chico (CSUC) as an Animal Science major which later became a dual option in Biochemistry and Chemistry. Her curiosity for research took off when she participated in a Research Experience for Undergraduates at Brigham Young University, where she conducted a protein engineering project with Dr. James Moody developing an approach to simplify protein crystallization. The studies on the TELSAM variant are still ongoing, but her contribution afforded her authorship on a publication in the RCSB Protein Data Bank and the under-review publication in the Open Biology journal. At CSUC, Diana worked with Dr. David Keller, where she investigated whether the micro-RNA miR-375 binds to a cAMP early repressor (ICER) mRNA; insight regarding the interaction between miR-375 and ICER could be necessary towards understanding diabetes development. This project was a tremendous experience for her; she received the Michael Abruzzo Outstanding Scientist Award for her poster at the 2021 CSUC Student Research Symposium. This project was also the basis for her developed research proposal, which earned her the CSU-LSAMP Summer Research Award in 2021. She served as the president of the Materials Research Society (MRS), was on the Dean's List, and is a proud member of Lambda Theta Nu Sorority Inc. Diana is enrolled at UC Davis pursuing a Ph.D. in Chemistry, and her goal is to become a Chemistry professor.

California State University
DOMINGUEZ HILLS

OUTSTANDING ACADEMIC
KEVIN MOSQUEDA · MICROBIOLOGY

Kevin Mosqueda is a microbiology major at CSU Dominguez Hills. Even though it has been challenging as a first-generation college student, he has remained motivated to finish his degree to represent persons who have been historically excluded by race and ethnicity who work in the STEM fields. Kevin joined the CSU-LSAMP program last year and he was awarded the CSU-LSAMP research grant and the CSU Council on Ocean Affairs, Science & Technology (COAST) Undergraduate Research Award. This funding supported his research project entitled Microplastics contaminate surface water and zooplankton in Southern California under the guidance of Dr. Samantha C. Leigh. The aim of this project was to determine how pervasive microplastics are in surface waters and zooplankton samples in the Southern California Bight. Kevin is a co-author on the manuscript, which has been submitted to the Marine Pollution Bulletin and is currently under review. He presented a poster of this work at CSU Dominguez Hills Research Day, winning 1st place in his division, and at the Southern California Academy of Science Conference (SCAS). Presently, he is studying two commercially important fish, the Pacific Anchovy (Engraulis mordax) and the California Halibut (Paralichthys californicus) to understand how microplastics are making their way through the marine food web. He plans to continue this research until his graduation in the spring of 2023. After obtaining his B.S. in Microbiology, Kevin plans to attend graduate school to get his master's degree and aims to pursue a career as a food or water microbiologist.

OUTSTANDING RESEARCH IN STEM
JESSICA LEDESMA · EARTH SCIENCE

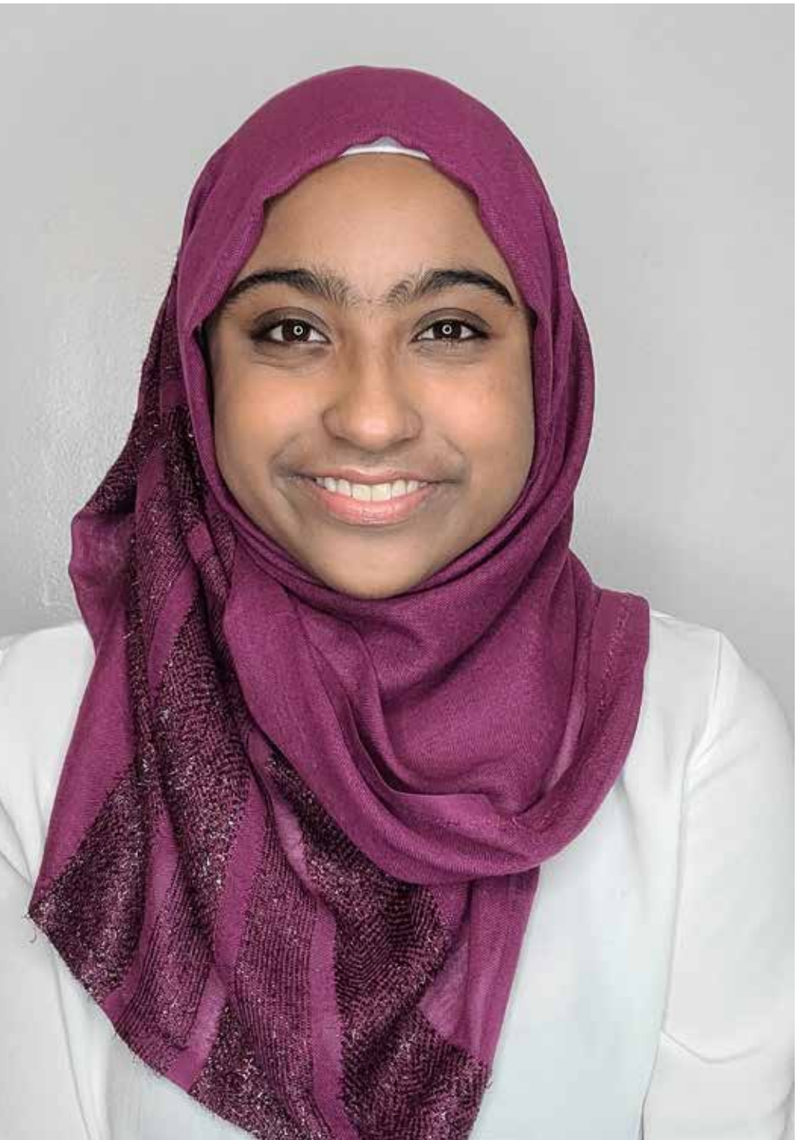
Jessica Ledesma is majoring in Earth Science at CSU Dominguez Hills and plans to graduate in fall 2022. She always had a great curiosity with how nature and its surroundings had influenced each other. Jessica enjoyed learning about the Earth's physical systems, but she wanted to get a deeper understanding in a local environment. Jessica began her research experience through CSU-LSAMP in fall 2021 with the help of her mentor, Dr. Parveen Chhetri. Together, they worked in understanding the impact of climate change on treeline ecotone of the White Mountains in California using geospatial technology. She presented her work at the California Geographical Society Conference and was Awarded the McKnight Professional Paper Award (Undergraduate – II place). She then presented her work on spatial pattern of treeline ecotone in the White Mountains, California at the Los Angeles Geographical Society Student Symposium. Jessica received an internship opportunity at the CSU Dominguez Hills Office of Sustainability and was awarded the Earth Day's 2022 Student Green Hero Award for her outstanding efforts in transforming the campus towards sustainability. After graduation, Jessica plans to pursue a master's degree with the possibility of continuing even further. For her future career she is interested in working with plant sciences with a focus on sustainability.

Campus Coordinator:
Alexander Stanoyevitch
Professor of Mathematics
(310) 243-3905
astanoyevitch@gmail.com

CALIFORNIA STATE UNIVERSITY EAST BAY

OUTSTANDING PERSONAL & PROFESSIONAL DEVELOPMENT

AA'ISHAH RIAZ
BIOLOGY & BIOCHEMISTRY



Aa'ishah Riaz is a double major in biology and biochemistry at Cal State East Bay and loves that studying these areas allows her to simplify the world around us by getting a better understanding of life and its processes. Aa'ishah notes she struggled academically, dating back to elementary school. She used to label herself as "not being the ideal student and perfect applicant for graduate school". After much self-reflection, she made an intentional change to her self-beliefs. She now believes she is more than just her grades, and no longer centers her self-worth on the numbers she achieves in the classroom. With this understanding, Aa'ishah has put in deliberate efforts to make the most of her time at Cal State East Bay and diversify her development experiences during her undergraduate career. She has been engaged in research for the last few years with Dr. Kathryn Hayes, working on a science education project since its inception. She presented a paper at the 2022 American Educational Research Association Annual Meeting, the premier educational research conference. Their work was lauded by presentation attendees. Very few undergraduates attend this conference, and Aa'ishah was able to attend other presentations and participate in a full team research retreat. Aa'ishah is currently debating between becoming a cardiologist and pursuing a Ph.D. related to science education at the high school level to increase diversity in STEM. To future CSU-LSAMP students, Aa'ishah offers this piece of advice: "sometimes your life does not turn out the way you hoped. Instead, acknowledge the opportunities in front of you and go in with your best foot forward."

OUTSTANDING RESEARCH IN STEM

LISA OUYANG · BIOLOGY

Lisa Ouyang is a Biology major (Microbiology and Biomedical Lab Sciences) with minors in chemistry and psychology at Cal State East Bay. Growing up, Lisa's parents stressed the importance of education and doing things outside of her comfort zone. This developed a love for learning and a curiosity about life. Her family attended many volunteer and community events, which exposed Lisa to different social, economic, and cultural backgrounds within her community. Later, she learned how prevalent diseases and illnesses were among the lower-income, first generation, and immigrant families that were due to stress, restricted access, and barriers to better health choices. She decided she would pursue a field where she could contribute findings to create better, safer, and more affordable medical treatments. Research allows Lisa's curiosity and wonders to run wild, to get hands-on experience, and to apply theoretical knowledge to real life. As a freshman, Lisa represented Cal State East Bay in the CSU Student Research Competition and placed first in her category. She was the only freshman from Cal State East Bay to ever place in this competition and did so in a category that included both undergraduate and graduate students. She followed up with another first-place finish at the same competition the following year and is the first author of a submitted review article. Lisa has presented her work at several conferences and meetings. She is also the President of the Women in STEM Club. Lisa plans to pursue a Ph.D. in pharmaceutical sciences. Lisa advice to future LSAMP students: "choose something you love and stay consistent. There is not one road that is smooth."

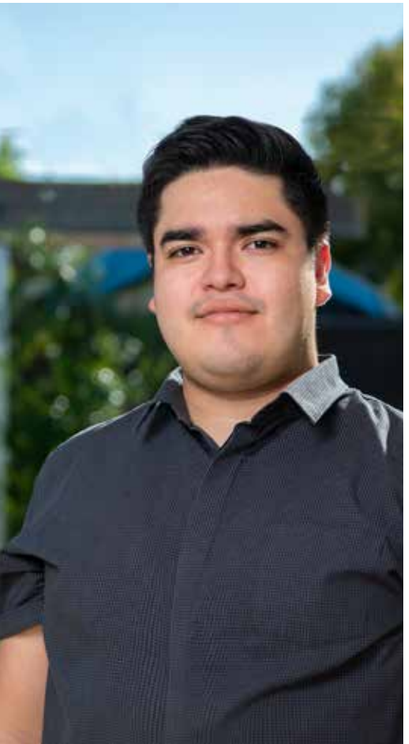
Campus Coordinator:
Jenny O Ph.D.
Associate Professor, Kinesiology
(510) 885-2907
jenny.o@csueastbay.edu

FRESNO STATE

Discovery. Diversity. Distinction.

OUTSTANDING RESEARCH IN STEM
ELINORE ALMS · BIOCHEMISTRY

Elinore Alms completed her B.S. in Biochemistry from Fresno State in May 2022. Elinore's journey began when her parents were both diagnosed with bipolar disorder and losing her father to the opioid epidemic at a young age. Inspired to serve as a role model for her younger siblings, Elinore began to work with children diagnosed with autism and enrolled at Fresno City College. While attending community college, she was awarded the Math, Science, and Engineering Division Dean's Medallion and the Tony Cantú President's Medallion, Elinore began conducting research in behavioral neuroscience under the mentorship of Dr. David Lent after transferring to Fresno State. During her undergraduate journey, she participated in CSU-LSAMP supported research. Elinore was also supported by the NIH RISE program and was accepted into the Chemistry and Biochemistry Honors Program. Her independent undergraduate research project focused on the developmental morphology and sexual behavior of Drosophila melanogaster mutants with fragile x syndrome, a leading genetic cause of autism. Elinore's abstract was accepted by the Society for Neuroscience 2021 Neuroscience Conference. At Fresno State, Elinore was a recipient of several scholarships and student research awards. Elinore is pursuing her Ph.D. at University of California, Los Angeles in the field of neuroscience. She hopes to bridge gaps in research between autism/ADHD, bipolar disorder, and addiction. Elinore's long-term goals include serving as a mentor, becoming a Board Certified Behavior Analyst involved in the development of ethics guidelines, and a Principal Investigator.



OUTSTANDING ACADEMIC, RESEARCH IN STEM
JESUS GUTIERREZ PLASCENCIA
MECHANICAL ENGINEERING

Jesus Gutierrez Plascencia completed his B.S. in May 2020 and his M.S. in mechanical engineering from Fresno State in May of 2022 and was nominated as a Graduate Dean's Medalist. Jesus began his research journey as an undergraduate CSU-LSAMP student, after Dr. Zhi Liang invited him to join his research group. This research opportunity helped shape Jesus' early interest in the role of heat and mass transfer in micro/nanoscale systems. His work as an undergraduate and graduate student centered on the study of heat and mass transfer applied to liquid-vapor systems, with a particular interest in modeling the evaporation of water nano-droplets under the presence of an interfacial thermal resistance at their surface. Jesus presented his findings at the 2021 ASME International Mechanical Engineering Congress and Exposition and the 42nd Annual Virtual Central California Research Symposium, where he was awarded the Outstanding Graduate Oral Presentation in 2021. Additionally, Jesus published articles in the International Journal of Heat and Mass Transfer and the Journal of Chemical Physics. As a master student, Jesus was awarded CSU-LSAMP Bridge to Doctorate Fellowship. Jesus is pursuing a Ph.D. at the University of California, Davis, in the department of mechanical and aerospace engineering with support from the NSF Undergraduate Preparation Fellowship. Through his passion for research related to heat and mass transfer in small systems, Jesus hopes to positively impact the electronics industry by advancing the development of energy-efficient devices.

OUTSTANDING RESEARCH IN STEM
EMELINE PANO · BIOLOGY

Emeline Pano earned her M.S. in Biology from California State University, Fresno in fall 2022 after completing her B.S. in Biology in May 2018. She conducted her thesis project under the mentorship of Dr. Alija Mujic. Emeline graduated with an impressive overall 4.00 GPA. Her project compared the methylome of two ectomycorrhizal sister species of fungi and conducted an intraspecies assessment of methylation of fungal isolates from different populations of the Western US. This study provided insight into use of DNA methylation as a proxy to describe divergence of species and the evolution of species of the fungal genus Rhizopogon. Throughout her graduate studies, Emeline gained various academic awards and fellowships to support her studies. She was awarded the competitive CSU Pre-Doctoral Fellowship 2020-2021 to explore and prepare for doctoral programs and she was also selected for the Outstanding Graduating Biology Student Award for spring 2022. As an undergraduate CSU-LSAMP student, Emeline was actively involved in research including international research experiences. Additionally, Emeline served as a role model for incoming undergraduate CSU-LSAMP students. Emeline will begin her Ph.D. at the University of Florida in the field of botany with the support of the McKnight Graduate Fellowship. She plans to study the speciation of flowering plants and identifying morphological diversification patterns in flowers. Emeline is fascinated by the diverse morphology and physiological processes of plants and hopes to share her great appreciation with others as an herbarium curator at a natural history museum.

OUTSTANDING RESEARCH IN STEM
SOPHIE JIMENEZ · BIOCHEMISTRY

Sophie Jiménez earned a B.S. in biochemistry from Fresno State in May 2022. She began her student research career as an entering student in the College of Science and Mathematics BOND program, working in a group of students to create a research proposal on bat biodiversity throughout California national parks and how temperature affects emergence patterns. Motivated by her new-found interest in research, Sophie actively participated in the CSU-LSAMP Summer 2019 and 2019-2020 Academic Year Research Program. While participating in the program, Sophie studied the life-span of C. elegans when exposed to various forms of chalcone stress and presented an ePoster at the 2020 ABRCMS Virtual Conference. Sophie then continued her research, under the mentorship of Dr. Masaki Uchida, with the support of the NIH RISE program, focusing on the development of positively charged ferritin protein cages as building blocks for highly ordered protein array materials. Dr. Uchida's lab collaborated with Purdue University for the attempted assembly of small Heat shock proteins via Decoration protein linker mediated assembly. Sophie was able to present her research at various virtual research symposiums. Sophie is continuing her studies as a PhD student in Chemistry and Biochemistry at the University of California, Santa Cruz. With her educational background, Sophie hopes to teach and mentor individuals from diverse backgrounds who are interested in pursuing careers in STEM.

Campus Coordinators:

Lilia De La Cerda, M.P.H.
Coordinator/Director, CSU-LSAMP
(559) 278-4748
liliad@csufresno.edu

Joy Goto, Ph.D.
Professor, Chemistry & Biochemistry
(559) 278-2103
jgoto@csufresno.edu

CALIFORNIA STATE UNIVERSITY
FULLERTON™

OUTSTANDING ALUMNA
LEEZA-MARIE RODRIGUEZ · BIOLOGY

Leeza-Marie Rodriguez majored in biology at California State University, Fullerton, where she investigated the effects of the non-indigenous spaghetti bryozoan, Amathia verticillata on the recruitment of the native Olympia oyster, Ostrea lurida. The main objective of her study was to understand the role of facilitation non-indigenous species may have on native species and how to apply these findings to achieve conservation efforts on coastal and intertidal environments. She learned the importance of conducting science as well as communicating it to broader audiences. She presented her research at the Western Society of Naturalists Conference and received the honorable mention for best undergraduate research poster. She presented a talk as the only undergraduate in the Olympia Oyster Session at the National Shellfisheries Association Conference. Leeza-Marie interweaves this research with environmental justice, to address and inform marginalized communities about the issues associated with climate change through education and outreach. She is committed to increasing diverse participation and safe spaces for marginalized groups in science. She is a 2021 Ecological Society of America-Environmental Justice Vice Chair, a Strategies for Ecology Education, Diversity, and Sustainability alumni, and a 2022 National Science Foundation Graduate Research Fellowship Program awardee. She is pursuing graduate studies in ecology, evolution, and marine biology at UC Santa Barbara. Leeza-Marie is eager to become more aware while also educating others about environmental justice. She will utilize everything she learned from her undergraduate studies, advisors and mentors at CSUF, in her graduate career and beyond.

OUTSTANDING RESEARCH IN STEM
MARLO RAMO MORALES · PHYSICS

Marlo Ramo Morales graduated from California State University, Fullerton in spring 2022 with a bachelor's degree in physics. Marlo worked at CSUF's Gravitational Waves Physics and Astronomy Center with Dr. Geoffrey Lovelace's numerical relativity group. His research involved contributing code to calculate the horizon quantities of a black hole in SpECTRE (a new numerical relativity code). His work added new capabilities necessary to measure the properties of the black holes' horizons, such as their surface areas and the measures of mass and spin angular momenta. Marlo also participated in Cornell University's 2021 Remote Research Experience for Undergraduates in Astrophysics and Planetary Science and worked with Prof. Saul Teukolsky and Senior Research Associate Dr. Larry Kidder implementing a gauge transformation in SpECTRE designed to increase the efficiency of high-spin binary black hole evolutions. Marlo was also involved in computing black-hole horizon quantities. He completed the computation infrastructure to calculate quantities like the surface area, mass, and spin magnitude, and performed convergence tests comparing numerical results at different resolutions to provide error estimates to check if the results were accurate enough for use by gravitational-wave detectors. Marlo is co-author in the publication, *Simulating Magnetized Neutron Stars with Discontinuous Galerkin Methods.* Marlo was accepted to the graduate program at Washington State University, where he will pursue a Ph.D. degree in physics and will continue research in numerical relativity.

OUTSTANDING ACADEMIC
NOORA GHADIRI · PHYSICS

Noora Ghadiri earned her bachelor's degree in physics with Magna Cum Laude from California State University, Fullerton, and was awarded the Louis and Sara Shapiro Scholarship. She values mentorship and was a Supplemental Instructions Leader. Noora also was a research assistant at Nicholas and Lee Begovich Center from Gravitational-Wave Physics and Astronomy, where she worked on using numerical relativity to model gravitational-wave sources with Dr. Geoffrey Lovelace. Noora's research interests included modeling gravitational waves emitted by extreme astrophysical events, such as merging black holes or neutron stars, by using numerical relativity. Her research involved implementing and testing a calculation of the vorticity of a spacetime to measure the twisting an observer would experience near a black hole because of differential frame dragging. Noora used a next-generation numerical-relativity code called SpECTRE, with the goal to help explore the behavior of warped spacetime with high-accuracy simulations of binary black holes. Noora also participated at the 2021 Summer Research Experience for Undergraduates program at Washington State University. Noora presented her work at different venues, including the American Physical Society and the Southern California Conferences for Undergraduate Research conferences. Noora is pursuing a Ph.D. in Astrophysics at the University of Illinois, Urbana-Champaign.

OUTSTANDING SERVICE & LEADERSHIP
THUAN TRUONG · COMPUTER ENGINEERING

Thuan Truong graduated from California State University, Fullerton in spring 2022 with a bachelor's degree in computer engineering. Thuan distinguished himself through academic achievement, service, and leadership. He obtained several honors and awards, including the ECS Showcase and receiving Best Project in Computer Engineering. As a member of the senior design project, Thuan worked with team members to produce an innovative and affordable Remotely Operated Underwater Vehicle (ROV) that can be used for marine expeditions and research. He also worked with students in the Computer Engineering program regarding the handover of the ROV project. He also was an active member of the Titan Rover Club's Controls team since 2020. Financial support provided from the CSU-LSAMP program allowed Thuan to focus and dedicate more time to his research with Dr. Rakesh Mahto. Researching a memristor based pixel cell using Ledit has provided Thuan with invaluable experience as an engineer. Thuan is perusing his M.S. degree in Electrical Engineering at CSULB.

Campus Coordinator:
Zair Ibragimov, Ph.D.
Professor of Mathematics
657-278-2741
zibragimov@fullerton.edu

Cal Poly Humboldt.

OUTSTANDING ACADEMIC, RESEARCH IN STEM, & SERVICE/LEADERSHIP

ANGEL ORTIZ · ENVIRONMENTAL RESOURCES ENGINEERING

Angel Ortiz is first-generation college student and Environmental Resources Engineering major at Cal Poly Humboldt, with a minor in Native American Studies: Law and Policy. Angel participated in the Hardware, Embedded Software, and Analytics for Environment Quality Monitoring REU at Marquette University. With Dr. Kaushik Venkiteshwaran and Dr. Daniel Zitomer, they researched pre-treatments for the anaerobic co-digestion of Polylactic acid and food waste to increase bioenergy production. In a separate project at Humboldt, Angel worked with Dr. Margaret Lang and Dr. Jasper Oshun to develop a groundwater model to increase understanding of water availability in fractured rock designed to meet irrigation needs in the agrarian community of Zurite, Perú. To culminate this research, Angel traveled to Perú to collect field measurements. In the summer of 2022, Angel participated in research to determine the effectiveness of meadow restoration to groundwater and ecosystem adaptation to wildfires in the Plumas National Forest. In addition to her research, Angel has worked as an Instructional Student Assistant for the Engineering department and is a member of the Indian Natural Resources, Science & Engineering Program (INRSEP) and the Society of Hispanic Professional Engineers. She has also spent time working with K-12 students, designing an instructional desalination device for a science classroom, providing music instruction, and serving as a camp counselor. Angel plans to pursue a PhD combining Indigenous Environmental Science and environmental engineering to increase the understanding of environmental issues through existing local knowledge.

OUTSTANDING ACADEMIC & RESEARCH IN STEM

DAVID LOPEZ· CELLULAR AND MOLECULAR BIOLOGY

David Lopez is a Cellular and Molecular Biology major and chemistry minor at Cal Poly Humboldt. David was born and raised in South Los Angeles. He is the first member of his large Chicano family to attend a university, and the first to move away (600mi) for school. Growing up, David always had a love for sports. A hands-on Sports Medicine program in high school kindled his love for science. Once he began work with Dr. Jenny Cappuccio in her lab at Cal Poly Humboldt, he found his passion for research. David conducted research in the Cappuccio Lab as a CSUPERB Presidential scholar, where he worked to develop synthetic membranes to study membrane bound G-protein Coupled Receptors. Mr. Lopez also conducted research in the Jewett Lab at Northwestern University, focused on engineering biological systems involved in protein synthesis and metabolism, as part of the Synthetic Biology REU. David served as Associated Students Administrative Vice-president, resident hall advisor, and Biology mentor at Cal Poly Humboldt. David is a member of the Indian Natural Resources, Science and Engineering program (INRSEP) and American Society for Microbiology. Mr. Lopez plans to pursue an MD/PhD. In his free time, David enjoys going to farmers market, long distance hikes in the redwoods that surround his home institution, watching sunsets from any vista point -- usually the ocean, and spending long breaks with his family. He is a caffeine enthusiast and fur father to his 14lb kitty cat, who he rescued near his university.

OUTSTANDING RESEARCH IN STEM & SERVICE/LEADERSHIP

CHRISTINA WINTERS · FORESTRY (RESTORATION)

Cristina Winters is a Forestry major at Cal Poly Humboldt with a concentration in restoration. After working seasonal jobs with the National Park Service, US Forest Service, California State Parks, and AmeriCorps in Southern California and in Humboldt County, she returned to school at College of the Redwoods and transferred to Humboldt. She earned a place in the Outdoor Leadership in Forestry scholarship program, where she learned leadership skills, took recreation administration classes, and engaged in service-learning projects on campus and in the community; completing the Outdoor Assistantship program at Humboldt in addition to Forestry coursework. In 2021-2022, she worked as a research assistant in the Restoration and Applied Ecology lab on a project focused on the effects of prescribed fire in old-growth pines in the southern Sierra Nevada with Dr. Kerry Byrne and Dr. Harold Zald. In summer 2022, she completed the Summer Research Program in Ecology at the Harvard Forest, under the direction of Audrey Barker Plotkin, where she studied and presented her work on underground carbon cycling under warming temperatures, with a focus on maple root exudation and respiration. She also served as the secretary for the Cal Poly Humboldt Forestry Club, and earned the Robert Cary Forestry Scholarship, Gayleen Smith Memorial Scholarship, and Charles G. & Helen W. Schoeber Scholarship. Cristina is a member of the Indian Natural Resources, Science & Engineering Program (INRSEP), Society of American Foresters, and Xi Sigma Pi forestry honor society. She is a proud first-generation college student and first-generation American.

OUTSTANDING ALUMNUS

RYAN MATILTON · WILDLIFE

Ryan Matilton is a descendant of both the Na:tinixwe (Hupa) and Pueleeklaa (Yurok) peoples of Northern California. He was raised along the Trinity and Klamath Rivers and holds a deep connection to his study area. Ryan's research on bat diversity and activity in the Klamath River Basin gives insight on the impact of dams to riverine ecosystems before and after their removal. Ryan monitors bat species along the Klamath River using ultrasonic detectors, recording bat calls and analyzing them with software which identifies individuals down to species. Ryan began his research as an undergraduate LSAMP scholar. After receiving his Wildlife degree in Fall 2021, he moved directly into the Wildlife graduate program. He is eager to involve undergraduate students in his fieldwork and data analysis with the hope of inspiring a love for a wildlife species typically viewed with malice. His values heavily reflect the traditions of the Hupa and Yurok tribes. Ryan feels it is his privilege, as well as his duty, to cater to the natural world in the same way it has catered to us since time immemorial. By recommendation from the Indian Natural Resources, Science & Engineering Program (INRSEP) Ryan presented at the Native Youth Climate Adaptation Leadership Congress (NYCALC) in Shepherdstown, West Virginia about his research and how it relates to Traditional Ecological Knowledge (TEK). Ryan's research is supported by grants from Humboldt Research and Creative Projects for Equity and Justice (RCPEJ), and the California North Coast Chapter of The Wildlife Society (CNCCTWS).

Campus Coordinator:
Nievita Bueno-Watts, Ph.D.
Director, INRSEP & Diversity in STEM Program
(707) 826-5641
nievita.bueno.watts@humboldt.edu

CALIFORNIA STATE UNIVERSITY **LONG BEACH**

OUTSTANDING ACADEMIC, RESEARCH IN STEM
JOSEPH GUTIERREZ · GEOLOGY

Joseph Gutierrez graduated Magna Cum Laude with a B.S. in geology from California State University, Long Beach (CSULB) in 2018. His love for earth sciences started early during his undergraduate years when he received the 2016 HSI-STEM summer funding to determine clay composition in Miraloma Basin, Anaheim, California, Department of Geological Sciences, CSULB. At CSULB, he earned the President's Honor List in F16, F17 and S18 and received the Department Honors Award for his academic achievements. In 2017, Joseph was recruited to the CSU-LSAMP research program. As an undergraduate researcher, Joseph was involved in determining how different igneous rocks were formed from the Peruvian Coastal Batholith. He collected and interpreted stable isotope data from igneous rock samples and conducted petrographic analyses of samples through optical microscopy. He attributes his success to the CSU-LSAMP program, which prepared him for graduate school and contributed towards formulating his future career plans. He was accepted into the graduate program at the Department of Geological Sciences at CSUF where he focused on geoscience education, experimenting with 3D-printed geological block models to help students with their spatial visualization skills. He received several travel awards to present his research at the American Geophysical Union and the Geological Society of America annual meetings. He received the South Coast Geological Society Outstanding Graduate Proposal Award for his graduate work. He graduated with an M.S. in Geology in 2020. Joseph's passion for teaching was recognized when he received the National Association of Geoscience Teachers Outstanding Teaching Associate (TA) Award and the department's Outstanding Graduate TA award. Currently, Joseph is a geology instructor at both CSULB and CSUF where he brings his passion in earth sciences to the classroom and plays a role in preparing the next generation of K-12 science educators.

Campus Coordinators:
Vasanthy Narayanaswami, Ph.D., FAHA
Professor, Biochemistry
(562) 985-4953
vas.narayanaswami@csulb.edu

CAL MARITIME

OUTSTANDING RESEARCH IN STEM & SERVICE/ LEADERSHIP

IVY PORRAS · MECHANICAL ENGINEERING

Ivy Porras graduated from CSU Maritime Academy in May 2022 with a B.S. in Mechanical Engineering. She joined CSU-LSAMP at Maritime in her first year on campus, and since has been an integral member, always giving back to the program with her time and mentorship. Ivy also volunteered through the Office of Community Engagements, supporting the campus and surrounding community in several events and volunteer opportunities. Ivy's mentorship to CSU-LSAMP students greatly aided their transition and flourishment in adapting to university studies. While completing her internships, Ivy saw how engineering concepts she used in the classroom could apply to real world applications, and was motivated to move towards renewable, clean energy. Her senior research project involved creating a solar powered boat that was raced in a regatta hosted by the Sacramento Municipal Utility District shortly after graduation. Ivy helped with the design and implementation of the electronics systems on the vessel, ensuring that the boat had the correct specifications and safety measures. After graduation, Ivy plans to work as an HVAC design engineer, and obtaining her Professional Engineers license.

OUTSTANDING SERVICE/LEADERSHIP & PIONEERING SPIRIT

OLIVIA MUÑOZ · OCEANOGRAPHY

Olivia Muñoz graduated in May 2022 as part of the first cohort of oceanography majors at CSU Maritime. Olivia holds a deep passion for the ocean and watershed science, and she capitalized on the unique opportunity to gain hands-on experience working on research vessels. Olivia worked with faculty to design and conduct new field studies of the San Pablo Bay and nearby Napa River. As a transfer student with some background in civil engineering with an environmental emphasis, Olivia's experience and creativity helped drive the oceanography research projects at many levels. In addition to her research endeavors, Olivia also served as a campus leader with positions on the Diversity, Equity, and Inclusivity committee, the Gender Equity Committee, the Indigenous People's Committee, and as President of the Oceanography club. She is a first-generation Native and Mexican college student, an older student, and a female. These identities provided substantial leadership and mentorship to many students in CSU-LSAMP. After graduating, Olivia seeks to further her study in oceanography and environmental policy in graduate work and aspires to one day work for the United Nations representing the United States.

OUTSTANDING ACADEMIC

PAUL CHAVEZ · MECHANICAL ENGINEERING

Paul Chavez graduated from CSU Maritime with a B.S. in mechanical engineering and a minor in mathematics in May 2022. Paul also earned a 3rd Assistant Engineering License from the U.S. Coast Guard and a Fundamental of Engineering certification. Over the course of his undergraduate studies, Paul actively participated in CSU-LSAMP. Paul held several leadership positions during the school year as well as on CSU Maritime's training ship for their summer cruises. In these capacities, and as an CSU-LSAMP peer mentor, he helped guide other students towards success in their academic and leadership endeavors. For his senior capstone project, Paul worked with a team of two other seniors in designing and creating a self-leveling platform to be used for maritime applications. His group was successful in building and controlling the platform attached to a miniaturized billiards table and delivered a working product to be used aboard the CSU Maritime's training ship. After spending three summers at sea, Paul has enjoyed the freedom and adventures of being in open waters, as well as the engineering applications and challenges as a marine engineer. Paul's goal after completing his degree is to serve as a 3rd assistant engineer on commercial ships.

OUTSTANDING ACADEMIC & RESEARCH IN STEM

ELLANORA ANASTASI · MARINE ENGINEERING TECHNOLOGY

Ellanora Anastasi completed a B.S. in Marine Engineering Technology in spring 2022 from CSU Maritime Academy and attained an Unlimited Third Assistant Engineers License. She has been a member of CSU-LSAMP since 2019. Ellanora has served her campus by taking on student leadership roles such as tutor, peer mentor, and the women's cross country team captain. While being an active participant in many extracurricular activities and a contributor to the CSU-LSAMP at Cal Maritime program, Ellanora maintained a high academic output, earning Magna Cum Laude honors at graduation. Beginning in her first year, Ellanora also participated in extracurricular research with faculty from the Oceanography department, working with a senior student to construct a device for tracking current and wave activity. Ellanora presented this research at the first Undergraduate Student Research symposium held at Cal Maritime in 2019. Among her many accolades are the Dedicated Engineers Award, the Coaches Award for the 2019 season, the NAIA Champions of Character Award in 2021, and MVP in Cross Country for the 2021 season.

Campus Coordinator:
Frank Yip, Ph.D.
Professor of Chemistry
(707) 654-1723
fyip@csum.edu

California State University
MONTEREY BAY
Extraordinary Opportunity

OUTSTANDING SERVICE/LEADERSHIP
WENDY FENG · ENVIRONMENTAL STUDIES

Wendy Feng (she/her) identifies as a proud first-generation, Chinese American woman majoring in environmental studies and minoring in pre-law at CSU Monterey Bay. Wendy is dedicated to building community through advocacy and education, used her positions to teach about environmental justice education, and was a strong leader in Asian representation on campus. In addition to CSU-LSAMP, she participated in several other campus programs and organizations, including the McNair Scholars program with the Undergraduate Research Opportunities Center. Alongside another CSU-LSAMP member, Wendy helped co-create the first in-person CSU-LSAMP at Monterey Bay student event since the pandemic to boost participation in LSAMP. While at CSUMB, she participated in two different undergraduate research projects. One project explored the history of Asian Americans in the Environmental Justice movement with guidance of Dr. Phuong Nguyen. The second project focused on understanding fog patterns in the Monterey Bay region with faculty mentor, Dr. Daniel Fernandez. Wendy was an active student leader on campus and created, designed, and facilitated thirty events through the Otter Cross Cultural based around identity, culture, and storytelling. She was awarded the Outstanding Senior Award for Social Justice for 2022, which recognized her dedication and contributions to fostering equity and inclusive spaces on campus. Wendy is continuing her education at the University of Oregon with a fully funded master's degree in the Environmental Studies program.

OUTSTANDING RESEARCH IN STEM & SERVICE/LEADERSHIP
MARIA GUADALUPE ROCHA CASTILLO · MARINE SCIENCE

Maria G. Rocha Castillo graduated as a marine science major and a biology minor from CSU Monterey Bay in spring 2022. In fall 2019, Maria became a CSU-LSAMP participant and joined the Undergraduate Research Opportunities Center as a Ronald E. McNair Postbaccalaureate Achievement Program. Maria conducted research with Dr. Corey Garza analyzing drone data to determine optimal methods for monitoring specific habitats. She has presented her research findings at eight different conferences including the Pacific Ecology and Evolution Conference, Stanford Research Conference, and the Ocean Science Meeting. While conducting undergraduate research, she has maintained a cumulative GPA of 3.3 and became the CSUMB Chapter President of the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). In her senior year, Maria joined the Learners Engaged in Advocating for Diversity in Science (LEADs) program associated with San Francisco State University. Maria hopes to pursue a Ph.D. in marine science and become a marine conservation biologist researching the impacts of climate change on coastal marine ecosystems. Her goal is to work with a government agency or a nonprofit organization to research climate change impact and mentor students from underrepresented groups who are interested in marine science.

OUTSTANDING RESEARCH IN STEM
GLORIA GREENSTEIN · BIOLOGY

Gloria Greenstein received her degree in biology with a concentration in molecular biology from CSU Monterey Bay in fall 2021. At CSUMB, she studied greenhouse gas emissions under various on-farm management practices in Dr. Arlene Haffa's lab. She quickly became a leader in the field and lab, and now supervises students, scheduling, and various aspects of general lab function as a post baccalaureate. In spring 2021, she studied how SARS-CoV2 might impact the liver, later contributing to a manuscript on the topic, and presenting her research at her Senior Honors Capstone Festival, the 2021 SACNAS NDiSTEM Conference, and the 2021 Southern California Conference for Undergraduate Research Annual Conference. Due to her interest in effective science communication, she was awarded a California State University Agricultural Research Institute Hispanic Serving Institute Journalism Award. Prior to transferring to CSUMB from Santa Barbara City College, Gloria was a research intern with Cloudbridge Nature Reserve in Costa Rica, where she studied the relationship between cloud forest regeneration and species distribution. She also spent time as an exhibit interpreter at the Santa Barbara Museum of Natural History Sea Center. Gloria plans to pursue a career in genetic counseling.

Campus Coordinators:

John Banks, Ph.D.
Director, UROC
(831) 582-3576
jebanks@csumb.edu

Jessica Bautista, Ph.D.
Research Associate, UROC
jbautista@csumb.edu

California State University Northridge

OUTSTANDING RESEARCH IN STEM
DAVID WARD · COMPUTER SCIENCE

David Ward completed his degree in computer science at California State University, Northridge. He spent his last three semesters participating in four research projects with two professors, including novel protein analysis web app for bioinformatics researchers, parallelizing structural bioinformatics simulation software, machine learning assisted satellite image analysis, and data center workload scheduling algorithms analysis. The latter two were presented at the CSUN Senior Design Showcase and the CSU-LSAMP research symposium, respectively. While at CSUN, David also participated in CSUN's 2018 accessibility challenge, CSUN's 2019 AI Jam, and the 2022 hackathon hosted by the Intelligent Systems for Molecular Biology international conference. The AI Jam project's group won both first place prizes for their proof of concept for a biometrically triggered intervention based anti-panic attack app and the ISMB project matured into the web app that was first mentioned. Before transferring to CSUN, David attended Santa Monica College, where he participated in a few research projects both on and off campus, including prototyping a large capacity, non-electric bicycle centrifuge, "green" organic solvent and food fortification research, and interned at a UCLA electrical engineering lab. where he calibrated a tumor identifying fluorescence lifetime imaging microscopy camera. The last two projects included presentations at the SMC Global Citizenship Symposium, and SMC STEM Program's Science Research Symposium. David admits that none of this would have been possible if it were not for all the mentorship he's had along the way, and thanks all his mentors for their commitment.

OUTSTANDING RESEARCH IN STEM
ANDREW HENESS
MECHANICAL ENGINEERING

Andrew Heness earned his degree in mechanical engineering from California State University, Northridge in 2021. During the 2020-21 academic year, Andrew was part of the Smart Morphing Wing research-based senior design project under the supervision of Dr. Peter Bishay as the lead designer of the wing sub-team. The team designed a fully morphing unmanned aerial vehicle (UAV) with innovative camber-morphing wings and tail stabilizers. The team placed second at the American Institute of Aeronautics and Astronautics (AIAA) regional student conference and competition. Andrew also worked at NASA's Jet Propulsion Laboratory for 13 months in an R&D team developing a sampling system that collects surface samples from Enceladus, the Icy Moon. He also worked on developing a microwave sensor to measure the mass flow rate in the pneumatic tube, and successfully created a vacuum chamber implementing the sampling system that went into a series of zero-g flights to be tested in Enceladus conditions. Andrew is a co-author of an Institute of Electrical and Electronics Engineers (IEEE) paper presented at the 2021 IEEE Aerospace Conference. In summer 2021, Andrew became a CSU-LSAMP Summer Research Fellow, working on a research project with Dr. Bishay to develop a multi-morphing composite skin that enables both camber and twist morphing. Andrew is currently pursuing a master's degree in mechanical engineering.

OUTSTANDING RESEARCH IN STEM
JUSTIN ARBAIZA
MECHANICAL ENGINEERING

Justin Arbaiza is a mechanical engineering senior at California State University, Northridge and is a lifetime member of the Society of Hispanic Professional Engineers (SHPE). As a person with a disability known as autism spectrum disorder or ASD, Justin has faced barriers beyond his control. However, he has striven to overcome the educational barriers presented by pursuing a university degree in a demanding major like mechanical engineering. Justin has encountered many challenges, including struggling in classes from elementary to high school. Over the years, with proper support from teachers, mentors, and a speech therapist, Justin was able to improve his skills, like social cues and peer-to-peer interactions. Last year, he presented research findings at the Annual Student Research and Creative Works Symposium (CSUNposium), and he wishes to present at this year's National SHPE Convention in Charlotte, NC. During the COVID-19 lockdown, Justin combined his skillset using mathematical tools, analytical tools (Matlab & Solidworks) to design and build a test-apparatus. During summer 2022, Justin worked in research with Dr. Boyajian. Justin hopes to pursue a master's and Ph.D. degrees in the areas of vibrations and dynamics.

OUTSTANDING RESEARCH IN STEM
KRIST GRIGORAKIS · CIVIL ENGINEERING

Krist Grigorakis is a civil engineering major in the Department of Civil Engineering and Construction Management at California State University, Northridge. Krist came from Greece and went through a challenging adjustment period when moving to the United States. High school was difficult for him, but he managed to achieve high grades and an admission to CSUN. In his sophomore year, he started working as a math tutor and continued to achieve high grades in his classes. Krist has successfully maintained a 3.95 GPA. He has worked in math and engineering programs by tutoring and helping other students to achieve academic success. Krist has done systematic research on the seismic performance of structures. Following the development and verification of a MATLAB code, he performed case studies to investigate the effects of structural mass and stiffness on the fundamental periods of multi-story buildings. His research resulted in provision of practical design recommendations for practicing engineering and researchers. Krist presented his results in a symposium and has a journal paper prepared for submission. After completing his undergraduate studies, Krist plans to pursue doctoral studies in structures and earthquakes to help his community develop safer structures to save people's lives. Krist's outstanding academic performance and achievements, fruitful and effective research, commitment to serve other students and efficiently lead senior design projects, disciplined and meticulous personality as well as high professional and ethical standards have separated him from many other students within the department, college, and university.

Campus Coordinator(s):

Houssam Toutanji, Ph.D., P.E.
Dean, College of Engineering
(818) 677-4501
houssam.toutanji@csun.edu

Xudong Jia, Ph.D., P.E.
Associate Dean, College of Engineering
(818_ 677-2183
xudong.jia@csun.edu

CAL POLY POMONA

OUTSTANDING SERVICE & LEADERSHIP
CAROLINA MATA · CHEMISTRY

Carolina Mata graduated in spring of 2022 from California State Polytechnic University, Pomona (CPP) with a degree in chemistry and an American Chemical Society accreditation. Her favorite part of being at CPP was participating in biochemical research with Dr. Kathryn McCulloch and attending an REU at Clemson University. Her work focused on bile acids and their role in digestion by assisting in the absorption of fats and oils entering the body. She performed large-scale overexpression of the enzyme, BaiK, and obtained large quantities of the protein for purification via column chromatography. Throughout her academic career, Carolina served on the executive board of a variety of organizations including Alpha Pi Sigma Sorority Inc., Multicultural Greek Council, and Student Members of the American Chemical Society. Other organizations she was an active member of was the Kellogg Honors College, Science Educational Enhancement Services (SEES), and NSF Scholars Program in Research Education and Science (SPIRES). She worked as a chemistry workshop facilitator, science camp counselor, and mentor. She volunteered in Pomona facilitating park clean ups, food drives, toy drives, and volunteering with the Prison Education Project. In addition to her extracurricular activities, Carolina often worked two to three part time jobs to help support herself. She chose to continue her education at Clemson University to pursue a PhD in analytical chemistry. She plans to find a career that would benefit underserved communities in the US or abroad.

OUTSTANDING ALUMNUS
TOY LEMMONS · CHEMISTRY

Toy Lemmons IV is a first-generation student who graduated from California State Polytechnic University, Pomona (CPP) with a degree in chemistry, option in biochemistry, in spring 2021. At Citrus College, Toy overcame a three-year period of depression while beginning his path of discovery as a biomedical researcher, successfully discovering a ubiquitous antibiotic producer against a safe relative of multidrug resistant and virulent Enterococcus faecium with Dr. Nora Sullivan. Upon transferring to CPP, Toy researched with Dr. Sean Liu on a cost-effective, highly sensitive clinical biomarker sensing device. In collaboration with Dr. Jimmy Risk, Toy successfully mathematically modeled the device, showing 6% discrepancy vs. commercial contemporaries. Toy shifted gears his senior year to biochemical thermodynamics research. Working with Dr. Timothy Corcoran, he successfully developed code that optimized the computation involved in analyzing select physical properties of proteins. In 2019, Toy took his parents love of feeding the community to heart, volunteering at NewLife Pomona Church's Food bank. Toy later served Sylvan Learning Centers of America as a K-12 multi-subject tutor. Toy holds three Associates degrees, has been a Citrus College Dean' List awardee and Tutor of the Year co-recipient, CPP Chemistry Department Erika B. Memorial Scholar, and a National Science Foundation Research Fellow. Often noted for thanking Jesus Christ, Toy received admissions to PhD programs in chemistry at UCLA, UCR, Kansas, and UT-Dallas. In 2022, Toy entered UCLA as a University Fellow and Eugene Cota-Robles teaching fellow where his post-graduate plans entail both STEM mentoring, National Laboratory research and Missionary work.

OUTSTANDING ACADEMIC
PATRICIA RODRIGUEZ · BIOLOGICAL SCIENCES

Patricia D. Rodriguez graduated Cum Laude from California State Polytechnic University, Pomona (CPP) in 2022 with a degree in biological sciences. She is a first-generation Mexican American student who began her education at Citrus Community College and transferred to CPP in 2019. Patricia graduated with a 3.93 GPA and was named to the Dean's and President's list every semester. Patricia took an active role in organic chemistry research under the guidance of Dr. Thomas J. Osberger. Her research consisted of synthesizing a library of cyclobutane-containing molecules to be screened for biological activity against E. coli and other potential targets. She contributed 20 novel cyclobutane molecules to the library, including derivatives based on the pharmaceutical amantadine, which is known for its ability to treat Parkinson's disease. She also explored new transformations that could be implemented in the lab such as Grignard reactions, Nitro group additions and Oxime transformations. She presented her research at numerous conferences such as SCCUR, CSUPERB, RSCA, CARS and the College of Science Research Symposia. Patricia was awarded an NSF SPIRES research fellowship and was also accepted into the McNair Scholars Program. Patricia found a passion for organic chemistry and was accepted to the PhD program in chemistry at the University of Minnesota to pursue drug discovery. She aspires to become a community college professor and mentor focusing on outreach to help low-income students better understand the sciences and pave the road to their own higher education success stories.

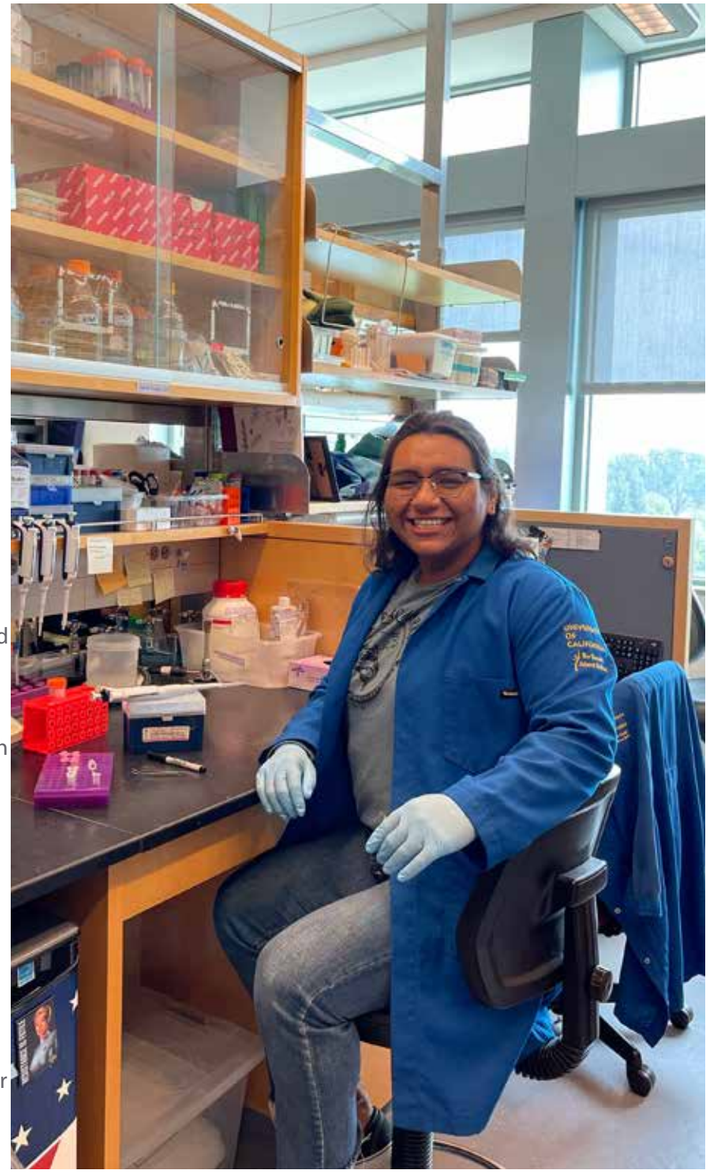
OUTSTANDING RESEARCH IN STEM
PATRICK RUIZ · MECHANICAL ENGINEERING

Patrick Ruiz is a first-generation college graduate who completed his degree in mechanical engineering from California State Polytechnic University, Pomona (CPP) in the spring of 2022. During his time at CPP, he participated in two research programs. One program involved creating a device which harvested and safely stored biogas. In the second, he created a large database containing thermodynamic properties of a wide range of liquids and gases on Amazon Web Service's cloud computing for the use of future mechanical engineering students. His accomplishments led him to be accepted by two of the top biomedical engineering schools in the nation, Columbia University and Johns Hopkins University. He decided to pursue a master's degree in Columbia's Biomedical Engineering Program and has expressed an interest in furthering his education by achieving a PhD degree. His interest lies strongest within the medical device industry, specifically in surgical products. This rapidly growing field of biomedical engineering has led him to pursue a focus in Controls and Robotics. In his spare time, his hobbies mirror some of the skills he's acquired in his academic and professional career as he frequently enjoys projects involving the creation of bioinspired models or robotic devices. He currently works as a Medical Device Engineer while finishing his master's degree.

Campus Coordinator:
Steve Alas, Ph.D.
Professor, Biological Science
(909) 869-4546
alas@cpp.edu

SACRAMENTO STATE

OUTSTANDING RESEARCH IN STEM
CHRISTINA GARCIA-GODOS • BIOLOGICAL SCIENCES



Christina Garcia-Godos is a biological sciences major with a concentration in biomedical sciences at Sacramento State. Christina was raised in Stockton, CA and graduated from Lincoln High School in 2018. Upon taking AP biology during her junior year of high school, Christina fell in love with applied sciences and decided to enroll at Sacramento State. After her first year, she secured a research position at the UC Davis Genome Center where she continues to work with Dr. Siobhan Brady. Her research aims to provide the plant science community with a detailed study of genetically associated variants that are responsible for differences in root phenotypes in Solanum lyccopersium (tomato). She then joined Sacramento State's Science Equity Education and CSU-LSAMP programs. At the start of the pandemic, Christina was awarded the NIH-RISE fellowship and the Biology Laureates Scholarship, which covers her full tuition and fees. Through shared mentorship, Christina has had the opportunity to present her work at multiple conferences including regional, national, and international research conferences. Last year, she was awarded a spot in the NSF-funded Inclusivity Scholars Program which allowed her to attend her first international conference. At the International Conference on Arabidopsis Research, Christina was one of seven undergraduate students in attendance and presented her on-going work. Aside from research, Christina has also dedicated her time holding various leadership positions and volunteering throughout the Sacramento community. Christina values her Peruvian culture and relates her success on the support of her entire family.

OUTSTANDING RESEARCH IN STEM
AMANDA CROTEAU • EARTH SCIENCE

Amanda Croteau graduated Magna Cum Laude from Sacramento State in May 2022 with a degree in earth science and a minor in biology with a 3.88 GPA. As a CSU-LSAMP Scholar, she worked in Dr. Amy Wagner's Paleoceanography lab conducting isotope analyses on foraminifera species identified within sediment cores collected along the California Coast. Amanda's goal was to analyze oxygen and carbon isotopes to interpret global ice volume and sea level changes during glacial-interglacial transitions. Amanda is continuing this work as a master's students in biological sciences at Sacramento State with the goal of interpreting past ocean conditions to predict its future. During her time at Sacramento State, Amanda was also a four-time National Aeronautics and Space Administration (NASA) intern, completing a scientific paper that is undergoing peer-review. This work included a numerical model for predicting suspended sediment load within the San Francisco Bay via satellite and analyzing the ECOSTRESS satellite's ability to measure drought stress in plants within California. Amanda also presented at multiple scientific symposiums including for the American Geophysical Union (AGU) and Society for the Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS). In addition to beginning graduate school in the fall, Amanda was accepted into the United States' Fish and Wildlife Service Directorate Fellowship Program (DFP) working on creating strategic plans to save species listed on the Endangered Species List. Amanda accredits her academic success to the support of CSU-LSAMP, Dr. Amy Wagner, Dr. Christopher Potter (NASA), her supportive family and her Indigenous Peers from the ENIT club.

Campus Coordinator(s):
Enid Gonzalez-Orta, Ph.D.
Professor, Biological Sciences
(916) 278-6519
gonzalezorta@csus.edu

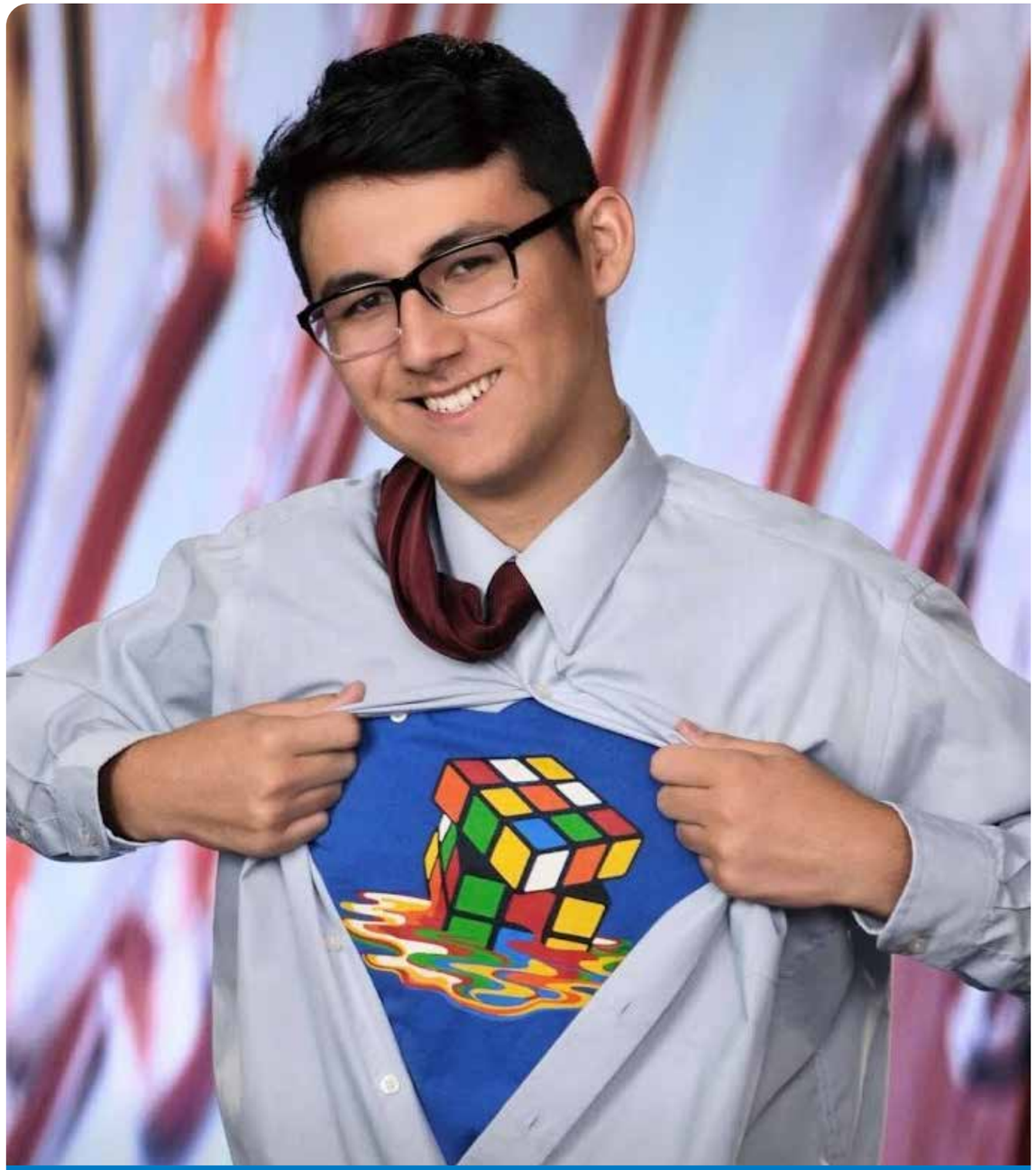
Mary McCarthy-Hintz, Ph.D.
Professor, Chemistry
(916) 278-6438
mccarthy@csus.edu

CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO

OUTSTANDING ACADEMIC & RESEARCH IN STEM

BRANDON CASTILLO · MATHEMATICS

Brandon Castillo graduated from California State University, San Bernardino in spring 2022 with a degree in mathematics. He graduated Cum Laude with Mathematics Department Honors. He maintained a GPA of 3.64 and was in the Dean's List both semesters during the 2021-22 academic year. Besides excelling academically, he did outstanding research, both in the 2021 Math REU program at CSU San Bernardino, and in an independent study course under the guidance of Dr. Bronson Lin. His research in the REU program was in Knot Theory, while his research in the independent study course was on the Octonions. During summer 2022, Brandon participated in the CSU-UCLA Summer Program, a bridge program to prepare students for future Math PhD studies. Brandon was accepted into the master's program at CSU San Bernardino. His career goal is to obtain a PhD in mathematics and work as a university professor.



Campus Coordinator:
Belisario Ventura, Ph.D.
Professor, Mathematics
(909) 537-5406
bventura@csusb.edu

SDSU | San Diego State University

OUTSTANDING ACADEMIC
DAISY ULLOA · MATHEMATICS

Daisy Ulloa graduated with a degree in mathematics with an emphasis in computational science from San Diego State University in May 2022. In spring 2021, Daisy joined Dr. Uduak George's lab, where she used data and image analysis for various projects. Daisy researched in various fields, including plant biology, environmental science and public health, and morphology biology. Due to the support provided by the CSU-LSAMP program, Daisy was able to prioritize her time in the research lab while also dedicating time to her academics. Daisy presented her research into mammary gland branching morphogenesis at the 2022 Student Research Symposium at SDSU. Daisy was highlighted with a student spotlight interview from the College of Sciences at SDSU. Daisy earned Dean's List and Semester Honors every semester. Daisy graduated with distinction in her major and Summa Cum Laude, graduating with a cumulative GPA of 3.87. After graduating, Daisy continued working with Dr. George to publish a paper on their research.

OUTSTANDING SERVICE & LEADERSHIP
FIDEL MARTINEZ MUNOZ · CIVIL ENGINEERING

Fidel Martinez Munoz graduated with a degree in civil engineering from San Diego State University in summer 2022. Throughout Fidel's college career, he had multiple experiences that allowed him to foster leadership skills, including Engineers Without Borders (EWB), whose mission is to help underserved communities using engineering skills. Fidel joined EWB as it sounded fun, and its principles aligned with his. However, he was shocked to see that in the first club meeting, it was just two executive officers, him and a friend in attendance and the projects had stalled. Still, he became the Vice President of EWB on his second year. To better understand and serve the club, Fidel participated in EWB-USA's national conference, which was sponsored by CSU-LSAMP. This conference was a catalyst in helping him create a better organization. During his final college semester as President of EWB, Fidel was told by peers that he had set up a good foundation for the club. During his term, he brought many changes, including growing the leadership team to over a dozen individuals. EWB successfully partnered and built garden boxes for a neighboring tribe. They held multiple networking events with professionals from the industry and increased their communication with the EWB parent and professional chapters. These changes were brought because Fidel invested in his team and in turn this multiplied with their dedication to projects. During various CSU-LSAMP group meetings, Fidel shared his leadership experiences with others and encouraged them to get involved.

OUTSTANDING SERVICE & LEADERSHIP
NICOLE HURTADO-SAVIN · CIVIL ENGINEERING

Nicole Hurtado-Savin completed a degree in civil engineering from San Diego State University in May 2022. As a first-generation female Hispanic college student, Nicole impressed everyone that she encountered. Nicole started in the CSU-LSAMP program the summer before her freshman year, which allowed her to experience SDSU before starting in the fall. She also met peers who would become her closest friends, who all graduated this past May with degrees in civil engineering. Nicole participated in a summer research program at UCSD, worked part time and held various internships in her field with WSP and Kimley-Horn & Associates. After graduation, Nicole began a full-time position with Kimley-Horn and Associates. Nicole credits the mentors, co-workers, and other students that she shared her struggles with and depended on to get through the difficult times. Through her involvement in programs like CSU-LSAMP and the MESA program, Nicole was able to learn how to not only become a civil engineer, but moreover become successful in her major. She served 2 years on the executive board of the Institute of Professional Engineers (ITE), and she was an active member of WTS Advancing Women in Transportation. Nicole also volunteered with the Femineer Program as a Student Leader, where she provided personal experiences for students transitioning from high school to college. These programs enriched her college experience by interacting with future generations of STEM. Nicole hopes to continue to give back to the community around her.

OUTSTANDING ALUMNUS
PHILLIP WEBSTER · CELL & MOLECULAR BIOLOGY

Dr. Phillip Webster earned his bachelor's degree in cell and molecular biology from San Diego State University in 2012. Phillip shared that his most impactful moment as an undergraduate was when Thelma Chavez, the CSU-LSAMP at San Diego State Campus Coordinator, helped him find the lab that would give him lifelong colleagues, friends, excellent training and his first publication. After graduation, Thelma helped him connect with the coordinator of a post-baccalaureate program at the University of New Mexico, where he studied neuroscience, was involved with mentoring students in the lab, and critiquing other's research until he was accepted into the Ph.D. program at the University of Texas Health Science Center San Antonio. Phillip was awarded an Initiative for Maximizing Student Diversity (IMSD) grant, which gave him the opportunity to teach science to underprivileged and underrepresented students at least once a year. Currently, Phillip works in biotech as a Genomic Scientist, where he develops tools for personalized medicine. "Why would I let you fall in the same ditch I did if I know the way around" is a phrase Phillip's mother used to say that echoes in his head to this day when he speaks to students and trainees. "It's easy to fall in love with research and forget about the world, so programs such as these are excellent ways to make you look up every once in and while".

CAMPUS COORDINATORS

Estralita Martin, Ph.D.
Assistant Dean for Student Affairs
College of Sciences
Director of CASA
(619) 594-4009
esmartin@sdsu.edu

Thelma Chavez
Coordinator, LSAMP-MARC-MESA
College of the Sciences
(619) 594-7195
thelma.chavez@sdsu.edu

San Francisco State University

Outstanding Research in STEM and Service/Leadership
Judy Especial Abuel · Cell & Molecular Biology

Judy Especial Abuel obtained her degree in biology with a concentration in cell and molecular biology with a minor in chemistry from San Francisco State University. She graduated in May 2022. As an immigrant to the US, the eldest English-speaking child and with her father's passing, Judy was the major caregiver in her family. Judy worked two jobs while going to school, still maintaining a 3.48 major GPA and graduating on the Dean's list. She also did research under the supervision of Dr. Blake Riggs. In the lab, she worked to identify genes involved in asymmetric partitioning of the endoplasmic reticulum during mitosis using a dominant modifier screen in the fruit fly, Drosophila melanogaster. She presented her work at the SFSU Student Project Showcase, where she won 2nd place in her research category, as well as at a national Drosophila Research Conference. Judy also participated in multiple volunteering efforts such as a Peer Mentor Ambassador for incoming freshmen, as well as more broadly at the American Red Cross and the UCSF Ronald McDonald House. As a result of her exceptional service to others within her community, she received the Presidential Volunteer 'Bronze' Award. Her goals are to become a research scientist with emphasis on diseases affecting communities of color, and to be a positive role model for other women of color in the biomedical community.

Outstanding Research in STEM
Leslie Flores · Biology

Leslie Flores graduated with a degree in biology with a concentration in physiology from San Francisco State University this past May. As a first-generation Latina, she navigated much of her education on her own, helping her family while working and taking classes. Leslie acquired the prestigious NIH MARC Fellowship, allowing her to conduct research with Dr. Megumi Fuse. She maintained a 3.41 GPA and graduated on the Dean's list. In the lab, she conducted independent research as part of a team of three undergraduate students studying the effects of tissue damage on body allometry in an insect model of tissue regeneration. This involved a significant amount of image analysis, where she participated in the Summer Coding Immersion Program (SCIP) at SFSU for two summers, to gain training in image analysis through ImageJ. She presented much of this work at numerous conferences, including SACNAS, the Society for Integrative and Comparative Biology conference (SICB), the Annual West Coast Biological Sciences Undergraduate and the in-house Student Showcase. She is currently enrolled in the master's program at SFSU as a Genentech Foundation Scholar, where she continues the work started as an undergraduate.

Campus Coordinator:
Megumi Fuse
Professor, Biology
Director of Student Enrichment Opportunities
(415) 405-0728
fuse@sfsu.edu

SJSU SAN JOSÉ STATE UNIVERSITY

OUTSTANDING ALUMNUS
YAWO EZUNKPE
AEROSPACE ENGINEERING

Dr. Yawo Ezunkpe joined San Jose State University as an Assistant Professor in the Department of Aerospace Engineering; the same the department he graduated from in 2011 with a BS. While at SJSU, he went on to receive his M.S. in Engineering Sciences with specialization in Aerospace, and a Ph.D. in Engineering Sciences with emphasis in thermofluids, and applied and computational mathematics, both degrees from the University of California, San Diego. His research interest lies in the area of Fluid Mechanics/Applied and Computational Mathematics. Yawo's work addresses some of the unresolved theoretical and practical questions concerning differential equations defined on random domains. It has significant impact on biological flows and could be extended to other areas where surface roughness affects fluid flows, such as environmental engineering and nanoscale devices. Before returning to SJSU, Dr. Ezunkpe taught a variety of course in mathematics and in engineering at community colleges and universities. Among other organizations and honor societies, Yawo is an LSAMP alumni and fellow of the Edward Alexander Bouchet honor society.

OUTSTANDING ACADEMIC & RESEARCH IN STEM
FABIOLA BRISENO
BIOLOGICAL SCIENCES

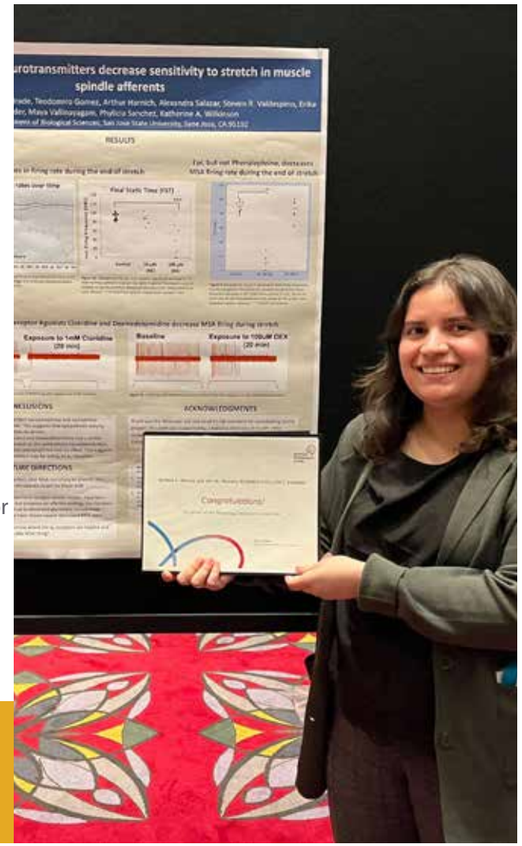
Fabiola Briseno is a senior pursuing a B.S. in Biological Sciences with a concentration in Molecular Biology, and minors in Chemistry and Bioinformatics at San Jose State University (SJSU). As a CSULSAMP student, Fabiola worked in Dr. Miri VanHoven's neurogenetics research laboratory where she is learning more about biomedical science and its application in understanding neural circuit formation and modulation. Her research aims to discover the role of genes linked to neurological disorders in normal development, with the ultimate goal of enabling the design of therapeutics. Fabiola presented her research at CSUPERB (2021 and 2022) and ABRCMS (2021). In addition to research, Fabiola also served as a Learning Assistant for the Genetics and Physics courses at SJSU. As a Learning Assistant, Fabiola promoted student participation and facilitated deeper class discussions during lectures. Fabiola presented her experiences as a Learning Assistant at the International Learning Assistant Conference (2021). Fabiola was also the treasurer of the Biological Students Association at SJSU, where she helped biology students learn about educational and career opportunities. For her academic excellence in biology and experimental laboratory work, she was awarded the Albert and Dorothy Ellis Scholarship during Fall of 2020. Fabiola has remained academically competitive, with a 3.97 GPA, and will be graduating summa cum laude from SJSU this May 2022. Fabiola aspires to become a primary care physician and, ultimately, improve the delivery and accessibility of healthcare to underserved communities.

OUTSTANDING ACADEMIC & RESEARCH IN STEM
MELISSA GRIFFIN
CHEMISTRY

Melissa Griffin is a B.S. Chemistry major at San Jose State University who began in Fall 2019 and expects to graduate Spring 2023. As a RISE trainee, Melissa joined Dr. Madalyn Radlauer's research group in the Fall 2020, and has been an active member since. With the funding provided by RISE to do research, Melissa no longer had to work two jobs to support herself financially. Her research work focused on the synthesis of structured polymers, such as star polymers and single-chain nanoparticles, of N-isopropylacrylamide (NIPAM) through reversible addition-fragmentation chain transfer (RAFT) polymerization. Melissa was also awarded the ACS 2021 Undergraduate Award in Analytical Chemistry. Melissa came into the lab as many as 12 hours a week during the semester while balancing a very large course load and maintain a 3.6 GPA. With a future in pursuing a higher degree in mind, Melissa wanted to use the opportunity given to her by the research group to not only further her knowledge and technical skills, but to also network in meetings such as ABRCMS 2022 and ACS 2023.

OUTSTANDING RESEARCH IN STEM
SERENA ORTIZ
BIOLOGICAL SCIENCES

Serena Ortiz graduated in May 2022 with a degree in Biological Sciences with a concentration in Systems Physiology. Serena spent two summers as a Gavilan College summer undergraduate research intern at SJSU before transferring in the Fall of 2019. She became a member of the RISE program and has been an active member in the Wilkinson Neurophysiology lab ever since and has even assumed the role of lab manager since 2021. Serena has contributed to many projects in the lab that are focused on understanding how sensory neurons in the muscle sense stretch. Serena has won multiple awards for her research, including an ABRCMS Poster Presentation Award and the Barbara A. and John M. Horowitz Undergraduate Research Award for her poster presentation at the 2022 Experimental Biology conference. Serena is a co-author on two laboratory publications and will be continuing in the lab for a Masters in Biological Sciences in order to continue the research she is passionate about. Serena's career goals include pursuing a PhD in neurophysiology and eventually a career in academia where she can guide students just as all her amazing mentors have guided her.



Campus Coordinator:
Karen Singmaster, Ph.D.
Professor of Chemistry
(408) 924-4980
karen.singmaster@sjsu.edu

Cal Poly

SAN LUIS OBISPO

OUTSTANDING CONTRIBUTIONS TO COMMUNITY & HEALTH

BIANCA ALEMAN · BIOMEDICAL ENGINEERING

Bianca Aleman graduated from Cal Poly, SLO with a B.S. and M.S. in biomedical engineering in 2020 and 2022. A first-generation student that was born to Mexican immigrant parents and raised in the small town of Santa Maria, CA, she first transferred to Cal Poly in 2018 from Allan Hancock College where she earned nine degrees and two certificates. She was involved in the NIH-Bridges to the Baccalaureate program that allowed her to conduct research in the Microcirculation and Vascular Regeneration Laboratory and the Polymers and Coatings Laboratory at Cal Poly SLO while still attending community college. At Cal Poly, Bianca became involved with EMPOWER (previously QL+), Society of Women Engineers, Society of Hispanic Professional Engineers, and Kappa Alpha Theta Sorority. She served as a leader and mentor to K-12 students in underserved communities through outreach in SHPE, SWE, and during her time as an Edwards intern. She is passionate about helping young students explore STEM careers and higher education, and the importance of mental health while in school. She was first employed as a co-op at Edwards Lifesciences in 2019 where she designed, tested, and developed a heart disease implant. Bianca earned an invention record for her design and contributions on the device. She went back to Edwards in 2021 where she worked on manufacturing and cleaning delivery system components. She earned a Lean Six Sigma Yellow Belt for her proposed and implemented solution on the manufacturing line. Bianca works as a Quality Engineering for Edwards Lifesciences.

OUTSTANDING COMMITMENT TO CREATING A MORE EQUITABLE WORLD THROUGH RESEARCH

MAYA AVENDANO · ENVIRONMENTAL MANAGEMENT & PROTECTION

Maya Avendano graduated with a B.S. in Environmental Management and Protection, concentration in Wildlife Biology, and a minor in Land Restoration and Rehabilitation Ecology at Cal Poly, SLO in June 2022. They knew they were interested in and excited about environmental sciences and ecology since high school, but had to push through many societal barriers that convinced them they were incapable of excelling in STEM. As an undergraduate, they developed research in soil biology in the field of ecological restoration. Maya created and performed a literature review using a systematic search approach to explore trends and knowledge gaps in the methodology of published literature. The review seeks to point towards using a soil-centered perspective for successful restoration experiments. Beyond undergraduate research, Maya harbors a passion and interest in botany, specifically ecophysiology, evolution, and plant-soil linkages. They are aiming to continue their studies in a graduate program and obtain their PhD, continuing on through academia and a research-focused career. Because being an immigrant shaped many of their experiences in navigating the field of science, they also have a drive to continue to find ways to deconstruct barriers that inhibit people from access to science. They aspire to unpack topics like inaccessible language in scientific publications and outreach, and promote access to knowledge beyond those in privileged positions. Maya hopes to continue to explore the use of intersectionality in scientific approach, such as the relationships and use of art and literature in science, and ways to make the scientific community more inclusive.

OUTSTANDING RESEARCHER AND EXCELLENCE IN CONTRIBUTIONS TO EQUITY & INCLUSION

HECTOR DELGADO MARTINEZ · AEROSPACE ENGINEERING

In Spring 2022, Hector graduated cum laude with a B.S. in Aerospace Engineering and concentration in astronautics at Cal Poly, SLO. He is a first-generation and low-income (fgli) student, and was raised in the Central Valley of California where he interacted and embraced his Mexican heritage. During his time at Cal Poly, Hector has served every year on the executive board of the Society of Hispanic Professional Engineers, where he focused on student engagement, professional development, and community outreach. Hector's interest in scientific research developed during his study abroad experience at the University of Navarra in San Sebastian, Spain, where he assisted in additive manufacturing research for diabetic patient footwear. Upon return from his foreign studies, Hector joined the Cal Poly CubeSat Laboratory where he studied small satellite thermal and vacuum testing and systems engineering. In his last year, Hector led the structural design of a 3U conceptual mission in collaboration with NASA's Jet Propulsion Laboratory and the University of California, Irvine. Aside from extracurricular involvement, Hector focused his studies on astrodynamics (celestial mechanics) for Earth and Sun orbiting satellites, and human-centered spaceflight mission design. Hector spent his summers interning for Under the Oaks Ranch, the Air Force Research Laboratory, Lawrence Livermore National Laboratory, and the Massachusetts Institute of Technology. Hector works as a test engineer for the avionics division at SpaceX supporting the Falcon-9 launch vehicle, and Dragon capsule.

OUTSTANDING ACADEMIC & RESEARCH IN STEM

JUSTIN SELF · AEROSPACE ENGINEERING

Justin began his academic journey at Clark College in Vancouver, WA, where he started a business degree before changing his mind and completing his EMT certification. Justin developed a reputation for leadership and organization during a 7-year career in hemodialysis and as the chief financial officer for a 501(c)(3) organization. Finally, Justin went back to school and settled down on working toward a mechanical engineering degree. During this time, he and his growing family prayerfully decided to "go all in" on his old childhood dream–it was aerospace engineering or nothing. In 2021, Justin graduated from Cuesta Community College with High Honors with associates transfer degrees in mathematics and physics, where he also earned multiple scholarships and was awarded the 2021 Engineering and Physics Student of the Year awards. Now at Cal Poly, Justin is a lead contributor for a novel upper-atmospheric hypersonic research project and has presented his concept at several conferences. He and his family wish to thank the ENGAGE scholarship program that has, through generous funding, allowed him to pursue his academic career full-time. Justin, his wife Jenny, and their two sons, live in Morro Bay, California. When Justin has a break from studying, he and his family enjoy hiking, family beach walks, cooking, and playing strategy games together. Justin also maintains a blog, a podcast, and has recently published his first book, Face to Face (2021).

Campus Coordinator:

Jane Lehr, Ph.D.
Associate Professor, Ethnic Studies
(805) 756-2859
jlehr@calpoly.edu

California State University
SAN MARCOS

OUTSTANDING RESEARCH IN STEM
ELI MURGUIA · BIOLOGY

Eli Murguia is a community college transfer student pursuing a BS in Biology at Cal State San Marcos. Eli began her research endeavors as a Bridges to the Future scholar at Palomar College in Fall 2019 and began working in Dr. Elinne Becket's microbial genomics lab January 2020. Eli has conducted research in this lab as a Bridges scholar, McNair Scholar, and as an Undergraduate Research Initiative for Scientific Enhancement (U-RISE) scholar; her research project focuses on antibiotic resistance gene abundance and taxonomic changes within the coastal microbiome following seasonal rainstorms. She has received the COAST Undergraduate Research Award to continue this project, became a finalist at the Symposium on Student Research, Creative Activities, & Innovation, and published a coastal microbiome sampling and metagenomic sequencing protocol in GEN Protocols with her as first author. She has presented her work in 7 poster and 2 oral presentations at a variety of conferences and presented at ASM Microbe 2022. She plans to expand her microbiology research at Scripps Research in their Summer Undergraduate Research Fellows (SURF) internship program this year. She has also been involved in student organizations from the Women in STEM Network at Palomar College, to leading the Out in Science, Technology, Engineering, and Mathematics (oSTEM) chapter at CSUSM as president. Eli plans to pursue a PhD in a related microbiological field, with the goal of becoming a professor at a primarily undergraduate minority-serving institution.

OUTSTANDING RESEARCH IN STEM
SERENA FARRELL · BIOLOGY

Serena Farrell is a Biological Sciences major at Cal State San Marcos. Serena came to CSUSM from Mission Viejo High school in 2018. Serena became a URISE scholar in 2021 during the COVID-19 pandemic and has been leading a research group in Dr. Dennis Kolosov's laboratory working on understanding how osmoregulatory tissues work in aquatic larvae of Aedes aegypti Yellow Fever mosquitos. This species of mosquitos is one of the most significant disease vectors worldwide and transmits diseases such as malaria and yellow fever. Examining how osmoregulatory tissues, the Malpighian tubules and anal papillae, of this insect work allows for discovery of molecular components that allow these mosquitos to adapt to new habitats at the larval life stage. Serena has also presented this research at several campus, regional and national conferences as well as securing a spot at the statewide 2022 CSU Research competition. Not only has Serena been working diligently in the laboratory, but she has also been accepted to a position of CSUSM's ASI as the CSTEM ambassador with hopes of expanding the diversity, equity and inclusion in CSTEM. Serena continues the research on the osmoregulatory tissues of mosquitoes, and is working on publishing a first-author manuscript outlining her work in Dr. Kolosov's laboratory to date. Serena has been on the Dean's list continuously and will graduate in spring of 2023 with a B.S in Biology with hopes of being accepted into a PhD program in Zoology.

OUTSTANDING RESEARCH IN STEM & ALUMNUS
TERRANCE HAANEN · BIOCHEMISTRY

Terrance Haanen was a Biochemistry major at CSUSM who graduated magna cum laude in 2019. During his time at CSUSM, he worked in the genome instability laboratory of Dr. Jane Kim. He investigated factors that contribute to instability in simple tandem repeats of DNA, which contributes to the onset of neurodegenerative diseases like Huntington's disease, such as chromosomal location, distribution of origins of replication, and deficiencies in the mismatch repair pathway. He was awarded several research related scholarships for his work in the Kim lab including The LSAMP Promising Scholar Award, Quinby STEM Leadership Scholarship, and the Maximizing Access to Research Careers-Undergraduate Student Training Research Fellowship. Terrance is currently completing his dissertation thesis in the laboratory of Dr. Goutham Narla at the University of Michigan, Ann Arbor, where he is deciphering the functional role of recurrent point mutants in the scaffolding subunit of PP2A (PP2A Aa) on high grade endometrial cancer disease progression. He is currently writing his first author manuscript regarding this work and has a review highlighting the mechanisms of PP2A inactivation and its current therapeutic approaches in cancer awaiting publication at the Journal of Biochemistry. In recognition of his work in the Narla lab, he has been awarded several fellowships including the National Cancer Institute's T32, the Rackham Merit and the Eleanor Lewis Fellowships. Terrance is very involved in the recruitment of diverse students into the STEM fields through his work with the Association of Multi-cultural Scientists (AMS) where he serves as President.

OUTSTANDING RESEARCH IN STEM
YOSIRIS HAGAN · BIOLOGICAL SCIENCES

Yosiris Hagan graduated from California State San Marcos in Spring 2022 with a B.S. in Biological Sciences. She is a Mexican immigrant and a first-generation college graduate. She held a professional internship with the San Diego Zoo Wildlife Alliance collecting baseline data for the Whole-Body Prey Project aimed to reduce stereotypic behaviors in captive tigers. Yosiris served as an Ecological Monitoring intern for the San Diego River Park Foundation creating field guides and collecting data on endangered plant species native to California. After transferring from Palomar Community College, she applied to competitive program such as Undergraduate Research Initiative for Scientific Enhancement and CSU-LSAMP at CSU San Marcos and was accepted to both. She committed herself to becoming a researcher in the Jameson Lab where she focused on the autoimmune disease, Alopecia areata. She aimed to determine the role that epidermal T cells expressing BST2 play in the progression of the disease. Taking every opportunity, Yosiris presented her findings at numerous research showcase events and advanced to statewide competitions. Recently, she presented her research at The American Association of Immunologists conference in Portland, Oregon alongside Ph.D. students. Her dedication to her education showed when she made the Dean's list for three consecutive semesters at CSU San Marcos. Passionate about membership, she joined the Latin@/x Center Student Advisory Council to guide her fellow immigrants and Latinx students through higher education. Yosiris will continue her education at Sanford Burnham Prebys as a Ph.D. student.

Campus Coordinator:
Richard Armenta, Ph.D.
Associate Professor, Kinesiology
(760) 750-7364
rarmenta@csusm.edu

SONOMA
STATE UNIVERSITY

OUTSTANDING DEDICATION

SALVADOR OCHOA ZAVALZA · MATHEMATICS

Salvador Ochoa Zavalza is a first-generation mathematics major at Sonoma State University. He was raised in Mexico, and through hard work, sacrifice and dedication, Salvador became the first in his family to attend college, enrolling at Santa Rosa Junior College (SRJC). He grew deeply interested in Applied Mathematics for its practicality, and was excited to learn how differential equations could be used to help understand the world. At SRJC, Salvador was the Mathematics Club Treasurer, and a student tutor, for which he received the Cheryl Hanson Tutorial Award. Salvador graduated SRJC with Highest Honors and transferred to Sonoma State University (SSU) where he immediately enrolled in LSAMP and MESA and participated in the Putnam Mathematical Competition. Through guidance from the CSU-LSAMP and McNair programs Salvador joined the Mathematical Epidemiology Research Group led by Dr. Omayra Ortega, and with his cohorts he employed a modified ODE based SEAIRV model to study the outcomes of COVID-19 on different age and racial groups within SSU. This first experience in research drove him to apply and be accepted into an NSF funded 2022 Summer REU at Fairmont State University, West Virginia. Salvador's passion for mathematics has also led him in the direction of pure mathematics. He has begun preparations for a research project on graph theory under SSU professor Dr. Izabela Kanaana, and is now pursuing both a B.S. in Applied Mathematics and a B.A. in Pure Mathematics. Salvador's ultimate goal is to become a college mathematics professor, hoping to inspire future generations.

Campus Coordinator:
N. Sam Brannen, Ph.D.
Professor, Mathematics
(707) 664-2591
brannen@sonoma.edu

California State University | Stanislaus

OUTSTANDING RESEARCH IN STEM
LAURA PLASCENCIA · BIOLOGICAL SCIENCES

Ms. Laura Plascencia is a first-generation college student. She transferred from Modesto Junior College and joined CSU Stanislaus in Fall 2018 as a Biological Sciences major, with a minor in Chemistry. Laura joined the AmeriCorps SWAM program where she mentored freshman and sophomore STEM students. In Spring 2020, she shortly interned with the Fish & Wildlife Service surveying anadromous juvenile fish in the Sacramento-San Joaquin Delta until in-person interaction was canceled. During Summer 2021, Laura participated in a Directorate Fellowship Program in the Lower Colorado Basin in Arizona with the Fish & Wildlife Service, where she expanded her knowledge on biological surveying and Geographic Information Systems (GIS). Not enough for her, Laura looked for a paid Research Position at the Center for Applied Spatial Analysis (CASA) using GIS and remote sensing where she worked on a project evaluating the green space distribution in Turlock and the tree canopy benefits under the supervision of CASA's co-Director, Dr. José Díaz-Garayúa. This project is being supported by Drs. Avwunudiogba (Geography) and Gardner (biology). Laura's career goals include contributing to the conservation and sustainable use of natural resources. She dreams to share beneficial scientific knowledge and inspire other Latina women to pursue careers in STEM. After graduation, Laura plans to work for 1-2 years until she decides on what area to focus her graduate work.

Campus Coordinators:	Melanie Martin, Ph.D. Professor, Computer Science (209) 667-3787 mmartin@csustan.edu	Marina Gerson, Ph.D. Professor, Biological Sciences (209) 664-6547 mgerson@csustan.edu

OUTSTANDING ACADEMIC & SERVICE/LEADERSHIP
JASMIN RODRIGUEZ · MATHEMATICS

Jasmin Rodriguez graduated Summa Cum Laude in Spring 2022 with a BA in Mathematics. The second youngest of eight children, she is a first-generation underrepresented college student. Despite college attendance being atypical in her family, Jasmin applied herself to her studies, earned a place on the Dean's List from 2018-2022, and graduated in just four years. In addition to excelling in her coursework, Jasmin enjoyed being a math peer tutor and supplemental instruction leader for several math courses; she was able to effectively assist students develop their understanding of mathematical concepts. Furthermore, Jasmin participated in numerous semesters of research under Dr. Jessica De Silva, covering a wide range of topics that included creating machine learning algorithms and analyzing the mean shift clustering algorithm within Python. In addition, in Summer 2021, Jasmin participated in the virtual PolyMath Jr. REU, which was directed by Dr. Seoyoung Kim, Queen's University (Canada), to explore Diophantine m-tuples and elliptic curves. Collectively, these experiences helped solidify her decision to become a professor of mathematics. In Fall 2022, Jasmin started a Ph.D. program in mathematics at the University of Colorado Boulder to explore research in number theory.

OUTSTANDING ACADEMIC & SERVICE/LEADERSHIP
RAYMOND DUEÑAS · COMPUTER SCIENCE & MATHEMATICS

Raymond Dueñas joined the CSU Stanislaus community in the Fall of 2019 to pursue a bachelor's degrees in Computer Science and Mathematics. While maintaining a 4.0 GPA, Raymond consistently encouraged his peers to excel in their studies. Raymond developed a culture of encouragement and success. Raymond was a Math Club officer for three years and President for two. As President, Raymond coordinated opportunities for professionals and graduate students to present at CSU Stanislaus; he encouraged networking and increased support to cultivate the success of his peers. While President, Raymond accepted a nomination as a founding officer for the emerging Computer Science Club. In addition, Raymond helped develop success principles in athletes as a volunteer wrestling coach at James C. Enoch's High School. Further spreading the awareness of STEM, Raymond volunteered at community outreach events. In the Fall of 2021, Raymond submitted his first research proposal under his mentor Dr. Yanhong Wu. In the Spring of 2022, Raymond joined Dr. Kyu Han Koh's Learning Data Analytics lab, where he focused on data analytics and visualization research. In Summer 2022, Raymond participated in an REU led by Dr. Adham Atyabi at the University of Colorado, Colorado Springs working on machine learning and cognitive robotics. Building on his research experiences, academics, and leadership, Raymond plans to pursue graduate studies in Computer Science.

issue nine
January 2023

CSU-LSAMP STATEWIDE OFFICE

6000 J Street, Sequoia Hall 226
Sacramento, CA 95819-6124
(916) 278-3838
csus.edu/csu-lsamp