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CSU-LSAMP

CALIFORNIA STATE UNIVERSITY LOUIS STOKES ALLIANCE FOR MINORITY PARTICIPATION

PROUD

PROGRAM RECOGNIZING OUTSTANDING
UNDERGRADUATE DISTINCTION

Making an impact on students, the state, and the nation.

2016

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INTRODUCTION



Welcome to the third edition of CSU-LSAMP PROUD, the annual publication of the California State University Louis Stokes Alliance for Minority Participation. This publication 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.

Over its 23 years of history, CSU-LSAMP has served more than 24,000 students, enhancing their academic and professional development through the national LSAMP model. On page 5, we map the activities on each of our campuses onto the national model. On page 6 we show the impact of our increased focus on increasing the number of CSU-LSAMP students that continue to graduate studies in STEM after completing the bachelor's degree. Research experiences for students are known to have a strong impact on retention, graduation, and continuation to graduate studies. On pages 8 and 9 we highlight 4 research mentors who have truly embraced the CSU-LSAMP mission, mentoring numerous LSAMP students and helping integrate them into the professional STEM world.

I hope you enjoy this year's edition of CSU-LSAMP PROUD and share the pride we feel in our students.

Lisa Hammersley, Ph.D.

Lead Project Director, CSU-LSAMP

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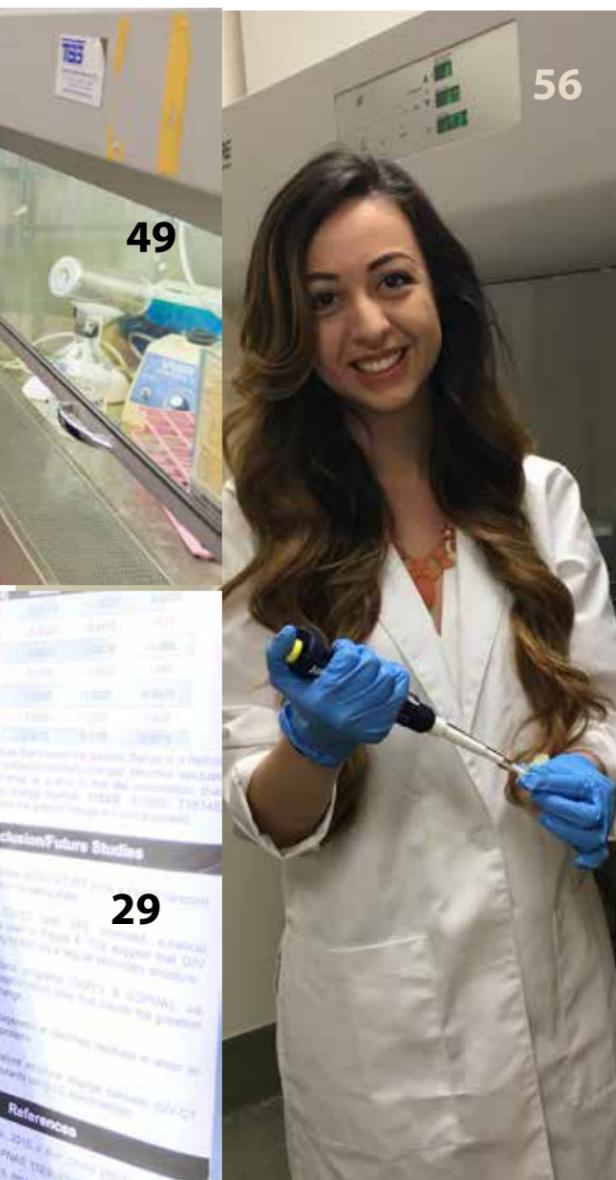
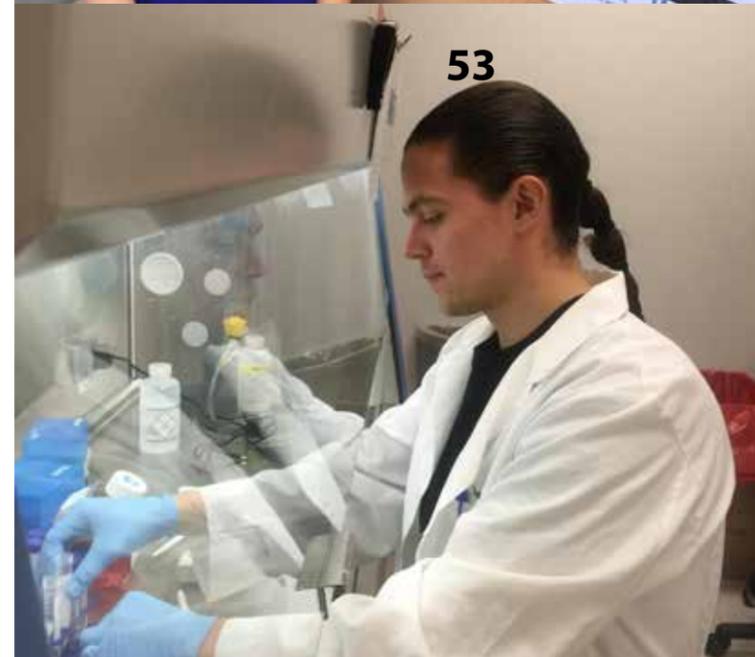
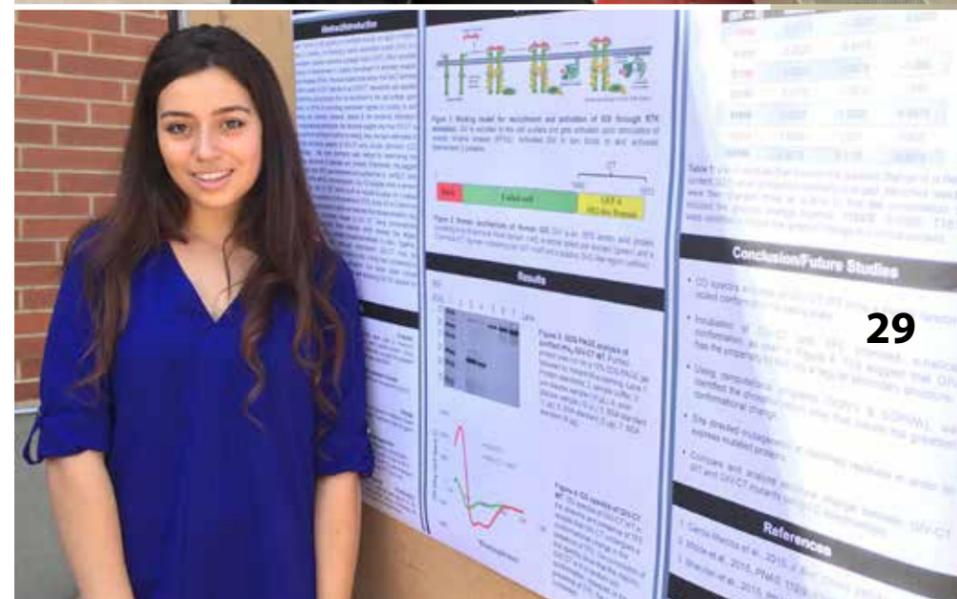
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CSU-LSAMP WELCOMES Dr. Robert S. Nelsen

**PRESIDENT OF CALIFORNIA STATE UNIVERSITY, SACRAMENTO AND
NEW PRINCIPAL INVESTIGATOR FOR THE CSU-LSAMP GRANT**



CSU-LSAMP is proud to welcome President Robert S. Nelsen as the new Principal Investigator for the grant. President Nelsen joined Sacramento State in July, 2015 and stepped in as the PI on the LSAMP grant in February, 2016. Dr. Nelsen has nearly three decades of experience in public higher education and served as President of the University of Texas – Pan American from 2010 to 2014.

Throughout his career, Dr. Nelsen has demonstrated a strong commitment to diversity, student access, and student success. In less than five years under his leadership, the total enrollment and six-year graduation rates increased at UTPA and in 2014, UTPA was named College of the Year by the National Hispanic Institute. President Nelsen led efforts to merge UT-Pan American with UT-Brownsville to create the new UT-Rio Grande Valley, which has a School of Medicine. Since arriving at Sacramento State, President Nelsen has focused on increasing graduation rates, improving access to required classes, and removing the need for remedial classes. He has also secured funding for a new science building on campus.

Dr. Semarhy (Sema) Quiñones-Soto LSAMP Fellow

Dr. Semarhy (Sema) Quiñones-Soto, Lecturer of Biological Sciences and SEE/LSAMP Research Coordinator at Sacramento State, has a deep passion for mentoring students, particularly students from underrepresented minority groups who are interested in STEM careers. She earned her undergraduate degree in Microbiology at the University of Puerto Rico in Humacao, where she participated in the PR-LSAMP and MARC programs. Her inspiring experiences in LSAMP and MARC led to her pursuit of a doctorate degree in Microbiology at the University of California, Davis where she was accepted into the NIH-IMSD program. After completing her graduate studies and a post-doctorate appointment in bacterial genetics, she joined Sacramento State, where she currently teaches biology courses and serves as the LSAMP Advisor and Research Coordinator for the Science Educational Equity (SEE) program.

Being an LSAMP undergraduate scholar herself, Sema is committed to diversifying the science workforce and promoting the advancement of underrepresented minorities into leadership positions. She strives to provide other underrepresented students with the same opportunities she had as an undergraduate by serving students to enhance their interest, retention, and persistence in STEM.



CSU-LSAMP: Working the National Model

The LSAMP program serves the dual goals of increasing URM retention through graduation and increasing the number of URM STEM majors who continue on to graduate programs in STEM. To achieve these goals, the LSAMP model combines activities that foster students academic and social integration (following the Tinto model), and activities that foster STEM-related professionalization.

Just as no two LSAMP Alliances are identical, no two CSU campuses are the same. Maintaining a cohesive program that meets the needs of the variety of campuses and students in the alliance, CSU-LSAMP has developed a structure which allows each campus a fair degree of autonomy in deciding how their programs are structured, but that provides students with the three elements that make LSAMP successful on a national level: Academic Integration, Social Integration, and Professionalization. The figure below demonstrates the variety of activities offered by the different CSU campuses, clearly demonstrating that while no two programs are the same, all of the alliance partners offer services to students that fall into each of the key elements.

| | | CSU-LSAMP: ELEMENTS OF THE LSAMP MODEL ON ALLIANCE CAMPUSES | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--|---|----------------------|------------|----------------------|---------------|-------------|----------------|----------------|-----------------|------------------|-----------------------|-------------------|-----------------|------------------|-----------------|---------------------|-----------------|---------------------|----------------|---------------------------|-----------------|--------------|-----------------|---|
| | | Activity* | | | | | | | | | | | | | | | | | | | | | | | |
| | | CSU, Bakersfield | CSU, Channel Islands | CSU, Chico | CSU, Dominguez Hills | CSU, East Bay | CSU, Fresno | CSU, Fullerton | Humboldt State | CSU, Long Beach | CSU, Los Angeles | CSU, Maritime Academy | CSU, Monterey Bay | CSU, Northridge | Cal Poly, Pomona | CSU, Sacramento | CSU, San Bernardino | San Diego State | San Francisco State | San Jose State | Cal Poly, San Luis Obispo | CSU, San Marcos | Sonoma State | CSU, Stanislaus | |
| Academic Integration | Social Integration | Academic Advising | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | | Tutoring | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Summer Bridge | | | ✓ | | | | | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ |
| | | Peer Study Groups | | | ✓ | ✓ | | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Learning Centers | | | | | ✓ | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Professionalization | Research Experiences | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Mentorships | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | International Experiences** | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Internships | | | | | | | | | | ✓ | | | | ✓ | | | | | | ✓ | | ✓ | ✓ |
| | | GRE Test Preparation | ✓ | ✓ | | | | ✓ | | ✓ | | ✓ | | ✓ | | | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Professionalization | Conferences | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Publication/Presentation of Research** | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Career Awareness | | ✓ | ✓ | | ✓ | | | | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Grad. School Admissions Support | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |

* Strategies and Approaches: Elements of the LSAMP Model activities taken from "Revitalizing the Nation's Talent Pool in STEM", an Evaluation of LSAMP, Urban Institute, 2006
 ** Additional activities added to demonstrate a wider variety of student opportunities available through CSU-LSAMP.
 Source: WebAMP Louis Stokes Alliance for Minority Participation Online Reporting System, Alliance Data 2015

SPOTLIGHT ON SUCCESS:

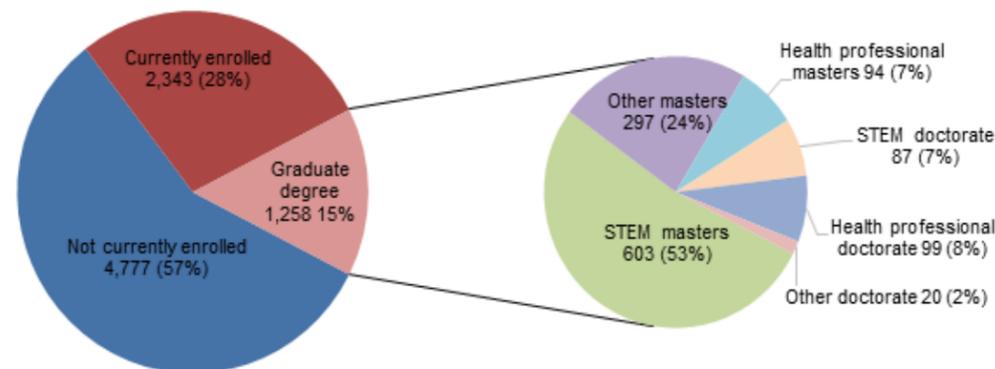
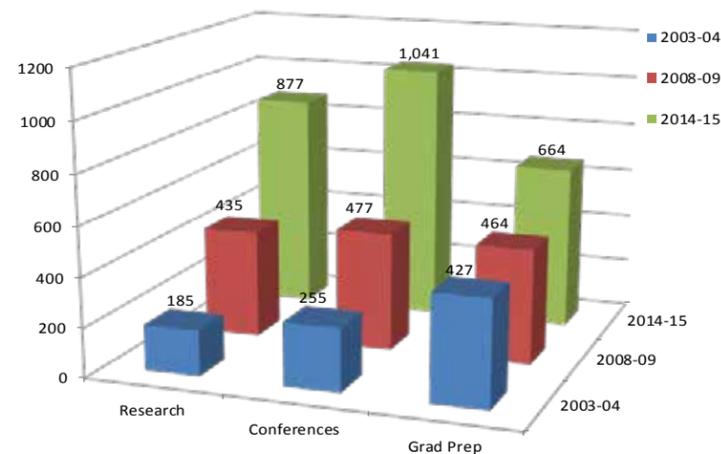
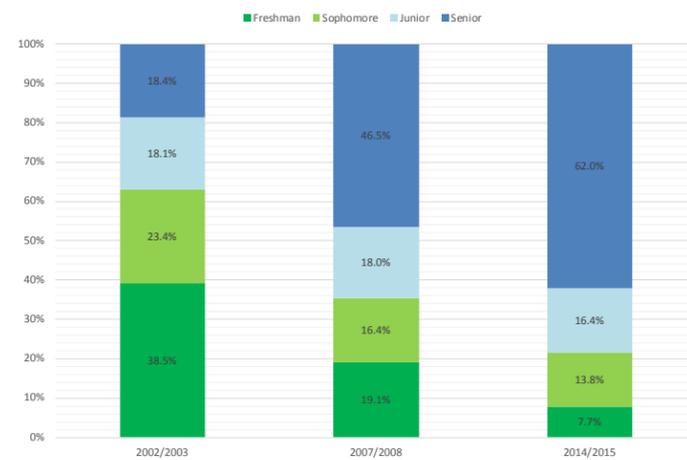
Motivating and preparing students to pursue graduate study and research careers in STEM

Over time, CSU-LSAMP has transitioned from a program that primarily supported lower division students in introductory science classes and pre-transfer activities to a program that provides support for students at all levels and that places on emphasis on engaging students in research and other activities designed to motivate and prepare them for graduate study. As a result, the proportion of juniors and seniors participating in CSU-LSAMP has increased.

CSU-LSAMP increased its emphasis on research and graduate school preparation activities starting in 2003. This change is reflected in the number of participants engaging in these types of activities over time. The number of students participating in research has more than quadrupled since 2003 and has almost doubled over the past five years. The number of students attending conferences has more than tripled since the start of Phase II and almost doubled over the past five years, and the number of students participating in graduate preparedness activities has increased by 50%.

The chart below shows estimated post-baccalaureate enrollment and degree attainment for CSU-LSAMP phase III, phase IV and phase V participants. Of the CSU-LSAMP graduates for whom tracking information was available, 43% either earned a post-baccalaureate degree or are currently enrolled.

For its current phase, CSU-LSAMP set a goal of 250 LSAMP graduates progressing to graduate study each year. We are proud to report that we have been successful meeting that goal.



CSU-LSAMP: SUCCESS WRITTEN IN THE NUMBERS

- Since 1994, CSU-LSAMP has served 24,245 participants, including 20,452 URM students
- The annual number of participants has increased more than five-fold, from 641 in 1994 to 3,473 in 2015
- From 1994 to 2014, CSU URM-STEM undergraduate enrollment increased 232%. STEM enrollment for non-URM students increased by only 23 percent over the same time period
- From 1994 to 2015, CSU URM-STEM baccalaureate degree production increased 318%
- CSU-LSAMP participants are 1.2-1.7 times more likely than non-participants to remain enrolled in STEM disciplines
- CSU-LSAMP participants are two times more likely than non-participants to graduate with STEM degrees
- In 2014-15, almost 900 CSU-LSAMP students engaged in research on their own campuses, at national laboratories, and internationally
- Hundreds of CSU-LSAMP students disseminated their research, producing journal articles and presentations at conferences regionally, nationally, and internationally



CSU-LSAMP NSF NATIONAL GRADUATE RESEARCH FELLOWSHIP AWARDEES -- 2016

Jacob Barrett (SSU)
Chemistry - Sustainable Chemistry
University of California,
Santa Barbara

Shawntel Okonkwo (SFSU)
Life Sciences - Systems and Molecular Biology
University of California, Los Angeles

Katrina Cable (SDSU)
Life Sciences - Developmental Biology
University of Colorado at Denver

Ismael Perez (SDSU)
Mathematical Sciences - Mathematical Biology
California State University, Los Angeles

Edgar Campbell (CSUSTAN)
Life Sciences - Systems and Molecular Biology
Stanford University School of Medicine

Dina Verdin (SJSU)
STEM Education and Learning Research - Engineering
Education
Purdue University

Elizabeth Carrillo (CSUMB)
Life Sciences - Genetics
California State University, Monterey Bay

Alicia Zamudio Montes de Oca (SDSU)
Life Sciences - Genetics
Massachusetts Institute of Technology

LSAMP FACULTY



DR. JAMES PARHAM
ASSISTANT PROFESSOR, GEOLOGICAL SCIENCES
CALIFORNIA STATE UNIVERSITY, FULLERTON

How many CSU-LSAMP students have you mentored? Have there been any significant results of the research for the students?

I have mentored six LSAMP students. These students have been responsible for nine presentations at six conferences, including oral presentations and prize-winning poster presentations. One of my LSAMP scholars recently submitted a paper, as first author, to a peer reviewed publication and I expect there will be at least one more in the coming months.

What makes LSAMP students stand out? Students today have so many pressures on their time, especially at CSU. LSAMP students are able to focus more of their energy on career building activities, such as research. They are empowered by LSAMP's investment in their time and this really helps them see science as a more viable career opportunity. Then instead of aiming for a degree, they start aiming for a career and all the activities that go along with that new mindset. LSAMP is more than just money for students, all of the attendant activities are workshops are calibrated to enhance student success.

What advice do you have for current CSU-LSAMP students?

Make it count. Take advantage of all that it LSAMP has to offer. I have seen firsthand how students that seize this opportunity can transform their future.

DR. KATHRYN LEONARD
PROFESSOR, MATHEMATICS
CALIFORNIA STATE UNIVERSITY, CHANNEL ISLANDS

How many CSU-LSAMP students have you mentored? Have there been any significant results of the research for the students? I have mentored 12 LSAMP students. We have published a few papers, one of which won Best Paper Award at a professional (i.e., not for students) conference. All of my students present their work at regional or national conferences. Several have gone on to PhD programs in mathematical fields or into industry.

What makes LSAMP students stand out? They care about and support each other, and they work to develop the skills they need to get where they want to go. Many of them are doing all the schoolwork the other students are doing, plus helping with family or working an extra job. Their dedication and tenacity are truly outstanding.

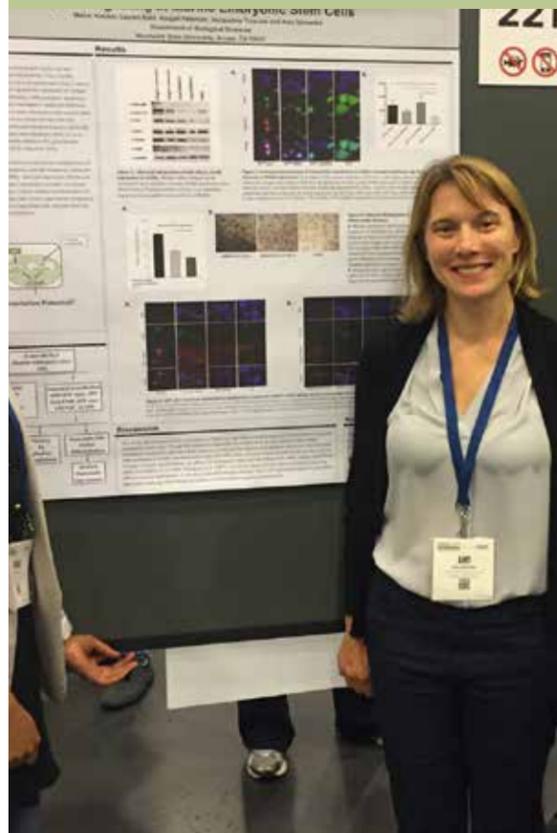
What advice do you have for current CSU-LSAMP students? Don't be afraid to dream big. Stay focused on what you want even if things aren't working out how you imagined. We all stumble and fall from time to time. The important thing is to get back up again (with help from some friends) and keep walking. No one, no matter what they say, became successful on their own. Everyone needs a helping hand at some point. Always offer a hand when you see an opportunity, and also take a hand when it's offered.



CSU-LSAMP Faculty Mentors

CSU-LSAMP relies on the strength and dedication of the faculty at all 23 campuses to provide meaningful research opportunities for the students. However, there are several Faculty Mentors who have gone above and beyond for CSU-LSAMP students, and have mentored students to go

onto competitive graduate programs, international research experiences, to present at national conferences, and to publish their research. CSU-LSAMP is PROUD to highlight the following four professors from Channel Islands, Fullerton, Humboldt, and Stanislaus.



DR. AMY SPOWLES
ASSISTANT PROFESSOR, CELLULAR & MOLECULAR BIOLOGY
HUMBOLDT STATE UNIVERSITY

How many CSU-LSAMP students have you mentored? Have there been any significant results of the research for the students?

I served as faculty research mentor to four LSAMP students. Two are now in graduate programs, the other two are currently in my laboratory. There have been three conference presentations to date, as well as on campus presentations.

I also I worked with eleven other LSAMP students through a Research Methods class funded through the HSU NSF URM Program. As the class instructor, I was responsible for helping these students design research proposals and perfect their scientific communication skills. Many of these students presented at research conferences and are currently enrolled in PhD programs.

What makes LSAMP students stand out? LSAMP students take full advantage of the opportunity the award affords them. They are dedicated to their projects, eager to learn, and enjoy working with others. They have all been enthusiastic, responsible, and devoted to seeing their work through to completion.

What advice do you have for current CSU-LSAMP students?

The joy of discovery is sweet, but it can take a long time to realize that goal. There are many rewards in process of research. Don't forget to enjoy them!

DR. ELVIN ALEMAN
ASSOCIATE PROFESSOR, CHEMISTRY
CALIFORNIA STATE UNIVERSITY, STANISLAUS

How many CSU-LSAMP students have you mentored? Have there been any significant results of the research for the students?

I have mentored 10 CSU-LSAMP students and they have presented their research work at the American Chemical Society National Meeting, the Western ACS Meeting, CSUPERB Symposium, CSU research Competition, and other regional meetings/conferences/symposia. They have participated in summer research programs at Kansas State University, Arizona State University, and UC Merced and summer internships at the Coroner's Facility in Modesto. One of the students also participated in the France/Belgium iREU program. Three students are pursuing graduate work in chemistry at institutions including UC Merced, UC Davis, and The Ohio State University.

What makes LSAMP students stand out? LSAMP students gain research experiences that help them to build a very competitive application for REU Programs, Research Internships, and Graduate Schools. They also are exposed to more seminars, workshops, and other professional growth activities, which are very important enriching experiences to accomplish their goals in science. I have found that our LSAMP students become more independent, faster learners, intellectually more adventurous, and willing to learn new things.

What advice do you have for current CSU-LSAMP students? Most LSAMP students work very hard to be role models for future scientists and to become leaders in science. I always advise them to keep reaching goals and help others to get there too.



CSU-LSAMP COSTA RICA PROGRAM



STEM students from CSU Sonoma, Fresno, Los Angeles, San Diego, Chico, and Monterey Bay campuses participated in the 5-week program, living with local rural families and experiencing Costa Rican culture and language first-hand, all while learning about tropical biodiversity.

CSU-LSAMP provides opportunities for students to obtain international research experiences in a number of ways, including participation in international REUs, study abroad programs, and travel with an individual research advisor.

CSU-LSAMP also typically funds two international experiences per year. Offered by individual campuses, these programs are open to CSU-LSAMP participants from any of our Alliance campuses, providing an opportunity for our students to build a broader network of peers.

CSU-LSAMP RESEARCH EXPERIENCE IN COSTA RICA

This year thirteen CSU students participated in the CSU-LSAMP Summer Research program in Costa Rica. A team from CSU Monterey Bay, consisting of College of Science faculty members Drs. Diana & Milton Lieberman along with Drs. John “Buck” Banks and Carla Fresquez, staff from CSUMB’s Undergraduate Research Opportunities Center (UROC), led the expedition. Students in STEM majors from CSU Sonoma, Fresno, Los Angeles, San Diego, Chico, and Monterey Bay campuses participated in the 5-week program, living with local rural families and experiencing Costa Rican culture and language first-hand, all while learning about tropical biodiversity, statistics and research methods. Field excursions exposed students to a full range of Costa Rica’s spectacular tropical ecosystems, including the lowlands and the coral reefs on the Pacific coast, the central highland coffee-producing region of Tarrazú, the rainforest village of Mastatal, and the cloud forests of the world-famous Monteverde region. In Mastatal, participants worked together to collect pilot data comparing the functional and phylogenetic diversity of forests and ground-dwelling arthropods that was incorporated into a grant proposal aimed at providing more research opportunities in the region. In addition to collecting data together as a class, students designed and carried out their own independent research projects, working solo or as part of a small group. As in past years, some of the students are planning to present their results in regional and national conferences this coming academic year. Pura Vida!



California State University, Bakersfield

OUTSTANDING ACADEMIC & RESEARCH SHEELA LEWIS • CHEMISTRY

Sheela Lewis is a Chemistry and Art major. Under the supervision of Prof. Danielle Solano, Sheela has been working on developing an environmentally benign, faster, one-pot formation of isoxazolines. As she continues her research, she aims to provide a more efficient and environmentally friendly method for the synthesis of isoxazolines and to advance the field of organic synthesis to utilize surfactants and develop greener methods. Sheela has presented her work at the 2015 American Chemical Society national conference and exposition, the 2015 and 2016 CSU Bakersfield Student Research Competition, the 2015 CSU Student Research Competition, and the 2016 Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics. Due to the strength of her work, Sheela received 2nd Place in the ERN undergraduate research competition in the category of Chemistry and Chemical Sciences, and she was awarded 1st and 2nd place at CSU Bakersfield Student Research Competition in the poster and oral competition, respectively. Sheela also received 1st Place at the 2015 CSUB student research competition in the category of Physical and Mathematical Sciences. In addition, Sheela was awarded the competitive ERN travel award.

While continuing her research work, Sheela has maintained an impressive GPA of 3.80 throughout her undergraduate career. Due to her hard work, Sheela has made the Dean's list for a majority of the quarters. Sheela is very grateful of the opportunities that LSAMP has provided, and she is enthusiastically looking forward to graduate school.



OUTSTANDING RESEARCH ALEJANDRO RAMIREZ • ELECTRICAL ENGINEERING

Alex Ramirez is an electrical engineering major. Since the fall quarter of 2014, Alex has been active in research under the guidance of Dr. Saeed Jafarzadeh and Dr. Yiannis Ampatzidis. Most recently, he has been developing home energy management systems (HEMS). His goal is to create affordable systems capable of monitoring and managing energy consumption within a small-scale micro-grid. Affordability is an important aspect of HEMS since the implementation of HEMS is expected to increase over time. In addition, Alex has presented his on-going work at various conferences, such as the 2014 Southern California Conferences for Undergraduate Research (SCCUR) conference, the 2015 North American Power Symposium, the 2015 World AG Expo, the 2015 Annual International Meeting of the American Society of Agricultural and Biological Engineers, the 2015 and 2016 CSU Bakersfield Student Research Competition, and the 2016 Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics. Alex also received 1st Place and 2nd place at the 2015 and 2016 CSUB student research competition, respectively, in the category of Engineering & Computer Science. Furthermore, Alex co-authored the paper "Low-Cost Self-Governing Energy Management System for Micro-Grids (GSA)" published in the International Journal of Emerging Trends in Electrical and Electronics. Alex is very grateful of the opportunities that LSAMP has provided, and he hopes that through this research he can make a positive contribution to the scientific community.



OUTSTANDING RESEARCH JOREN SALAZAR • BIOCHEMISTRY

Joren is a biochemistry major. For the past two years, under the guidance of Prof. Isolde Francis, Joren has been conducting research on thaxtomin A, which is a plant toxin that inhibits cellulose biosynthesis in the plant cell wall that is necessary for plant growth. Joren has presented his on-going work at the 2016 CSU Bakersfield Student Research competition and at the 2016 Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics. Due to the strength of his research, Joren was awarded first place at the 2016 CSU Bakersfield Student Research competition in the category of Biological and Agricultural Sciences. Most recently, Joren co-authored a recently submitted paper titled "The CebE/MsiK transporter is a doorway to the cellooligosaccharide-mediated induction of *Streptomyces scabies* pathogenicity."

Overall, Joren is grateful for the support of LSAMP because it has allowed him to conduct research that can be of benefit to the scientific community. As a result, the research experience has improved Joren's undergraduate experience, and he is now considering pursuing graduate school after graduation.

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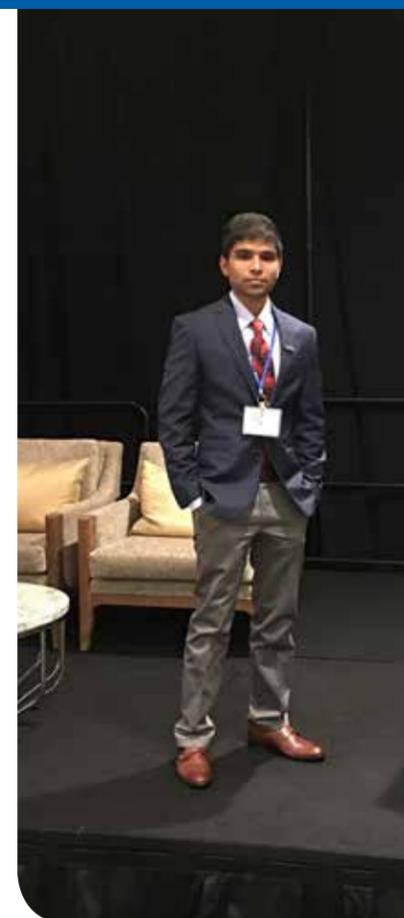
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OUTSTANDING RESEARCH SHERIFF SADIQBATCHA • COMPUTER ENGINEERING

Sheriff Sadiqbacha is a Computer Engineering major. Under the supervision of Prof. Saeed Jafarzadeh, Sheriff has been working on using fuzzy logic for sparse matrices with applications to power system state estimation. He has presented his research at the 2015 Southern California Conferences for Undergraduate Research (SCCUR) conference, the 2015 and 2016 CSU Bakersfield (CSUB) Student Research Competition, the 2016 CSU Student Research Competition, the 2016 IEEE Word Congress on Computational Intelligence (WCCI), and the 2016 Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics. At ERN, Sheriff's received 1st Place in the undergraduate research competition in the field of biomedical, nano and electrical engineering. Sheriff also received 1st Place at the CSUB student research competition in the category of Engineering and Computer Science, and was nominated for the Best Paper and Best Student Paper Awards at WCCI 2016. Furthermore, Sheriff co-authored the paper "An Affordable Brain-Computer Interface for Electrical Energy Applications" published in the International Journal of Emerging Trends in Electrical and Electronics and co-authored a recently submitted paper titled "An Analytical Approach for Solving Type-1 and Type-2 Fully Fuzzy Linear Systems of Equations."

In addition, Sheriff is the current President of the Computer Science & Engineering club, a researcher at the Precision and Automated Systems Laboratory, and an active member of the IEEE Student Branch of Bakersfield. Sheriff is appreciative of the support LSAMP has provided, and the research experience has improved Sheriff's undergraduate experience. He is now considering pursuing graduate school in the field of computer engineering.

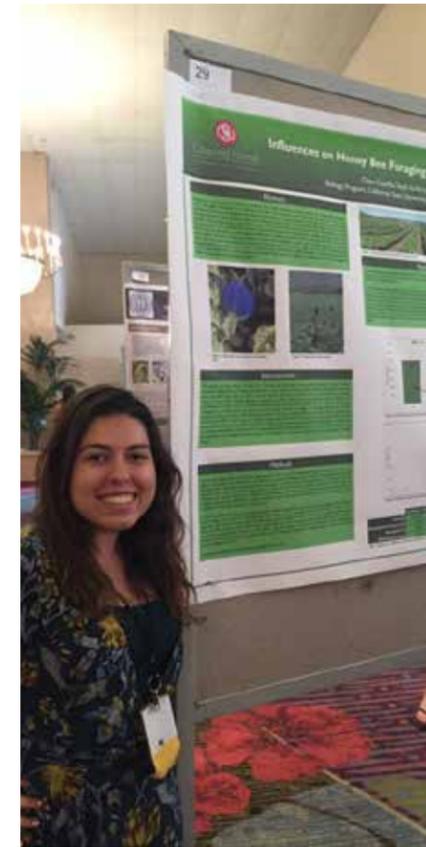




OUTSTANDING RESEARCH COURTNEY LUCKY • BIOLOGY

Courtney Lucky credits LSAMP with exposing her to research, an activity with which she was immediately intrigued. After her initial exposure to research, Courtney joined Dr. Erich Fleming's undergraduate research team and spent two years studying how different soil conditions affect strawberry plant yield, then examining how the yield of bean and beet plants varied when exposed to the soil bacteria *Bacillus Subtilis*. This work, together with Courtney's developing interest in Psychology – aided by an academic-year research project studying the effects of mood on attentional biases, led her to apply for REUs in Neuroscience. In summer 2015 she joined the Summer Program in Neuroscience at the University of Alabama, Birmingham. Here Courtney studied astrocyte morphology and complexity in a neurodevelopmental disorder called Rett Syndrome. Courtney spent her final undergraduate year conducting research under the guidance of Dr. Beatrice de Oca to design and carry out a psychophysiology experiment to test heart rate, skin conductance and respiration rate after listening to repetitive drumming and shaman instructions.

Courtney has firmly established her next steps, and is actively encouraging others to forge similar paths. She explicitly recognizes LSAMP as having triggered her interest in research, pushed her to apply for REUs, helped her go to conferences and on graduate school visits (as she says, she benefited from every single one), and exposed her to Ph.D. scientists full of advice and encouragement. She gives back to LSAMP by example and by action. Courtney will enter a Ph.D. program in Neuroscience in fall 2016.



OUTSTANDING RESEARCH CLAIRA CASTILLO • BIOLOGY

Claira Castillo entered CSU Channel Islands in fall 2011 as an undeclared major. After doing well in her Calculus and Biostatistics courses, she realized she could turn her passion for the environment and curiosity about the world into a lifelong adventure in STEM. Claira served as a Peer Leader and a STEM tutor and enjoyed helping other students succeed. In fall 2014, Claira joined LSAMP and knew she could turn her enthusiasm for science into advanced degrees.

Under the supervision of Dr. Alarcón, Claira worked on a three-year research project studying native pollinators in local pepper fields and discovered her passion for pollinator health in the wild as well as in agricultural systems. Claira plans to use her research to better inform the public about the importance of pollinator conservation and the dangers of climate change. She is an active member of the Entomological Society of America and has presented posters at numerous conferences across the western United States. Claira enjoys collaborating with scientists from different disciplines to gain a better understanding of how to maximize agricultural output while minimizing risks to the environment. She is currently working on two publications with her research advisor and working as a part time entomology research assistant at Driscoll's Berries.

Claira graduated in May, 2016, with a BS in Biology: Emphasis in Ecology, Evolution, and Organismal Biology and plans to apply for Ph.D. programs in Entomology. She is determined to continue her journey in science and hopes to encourage others to pursue higher education.

OUTSTANDING RESEARCH LESLY HUERTA • BIOLOGY

While Lesly Huerta's parents always emphasized the importance of education, they themselves had to leave school at an early age and didn't speak English. Lesly had to educate herself and her family about the college application process and what it takes to succeed in college. Lesly started learning about the importance of conducting research and the research opportunities available to her when she joined LSAMP. She writes "With the help of LSAMP I was able to educate myself about opportunities available not only in my school but also great programs that allowed me to travel and explore the world around me." In just a few months, Lesly gained admission to two programs that stretched her in ways she hadn't previously imagined.

In summer 2015, Lesly participated in the Research Experience for Undergraduates (REU) hosted by the University of New Mexico, working with scientists from the Fish and Wildlife Service, learning how to write a permit and conduct permit review research. Lesly then took flight for the CSU-LSAMP research and cultural immersion Fall semester program in Costa Rica. Here she conducted two research projects, including one focused on the presence of leaf mines on four host plant species, studying the density of mines, length of mines, and success of miners in relation to canopy conditions, presence of epiphylls and presence of herbivory. What's next for this newly minted world traveler? Possibly graduate school and more research!



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OUTSTANDING RESEARCH
MARIBY CRUZ • BIOLOGY

Mariby Cruz has had passion for education, especially Biology, from an early age. In ninth grade she made a model of a rod cell with scrap material found around her house. Since then Mariby has continued to learn as much as she can about plants and animals and their interactions. In the 2014 Summer Calculus Boot Camp, Mariby quickly established herself as a group leader and distinguished herself as an inquisitive and energetic scholar. She spent Fall 2015 in Costa Rica as a participant in the CSU-LSAMP research and cultural immersion Fall semester program where she learned to map trees and collect data. She was excited to “get her hands dirty” in the field. Mariby is interested in wildlife and ecological biology and wrote two research papers in Central America focusing on the development stages of coconuts and leaf water retention in three plants of the Genus Piper. She also did a service learning project in Costa Rica, documenting local people singing and playing music in order to archive their traditions and customs. Now she is back and doing very well in her academics. She is generous with her time, helping her peers with Biology, Chemistry, and Calculus.

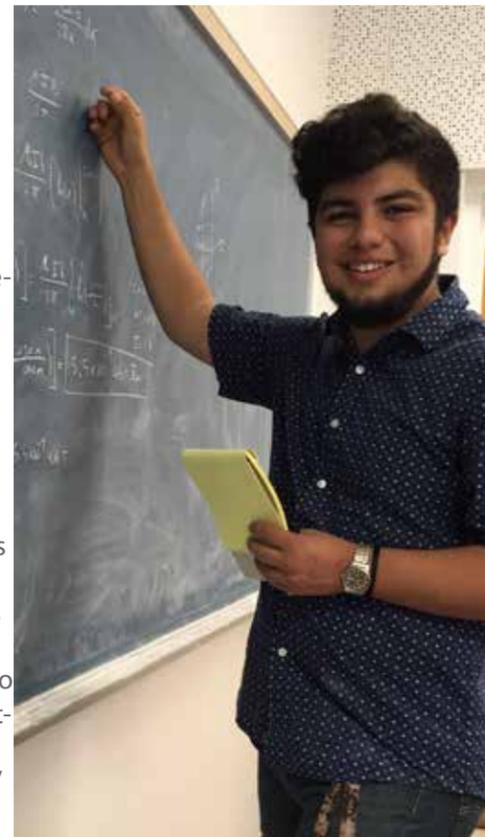
This summer Mariby was chosen to intern in Costa Rica, as a teacher assistant. Her long-term goal is to earn her Ph.D. and become a wildlife researcher. She is excited about her future. She is a star and will continue to shine.

OUTSTANDING ACADEMIC
GIOVANNI ZEPEDA • CIVIL ENGINEERING

Giovanni Zepeda is majoring in Civil Engineering. He is the oldest of 3 brothers and the first in his family to attend college. His parents are very supportive as he is a great example to his younger siblings. In high school Gio was involved in a Regional Occupation Program (ROP) engineering class getting some early experience in engineering. His class designed and built two large school gates, which are still standing today. This project began his fascination with engineering.

Gio excels in mathematics having demonstrated mastery in every single one of his math classes so far. He credits the LSAMP Calculus Boot Camp for being a “huge boost” for him. From his first semester, he has participated in all of the Academic Excellence Workshops that parallel his math classes. He has learned to form academic learning communities, often leading deep mathematical collaborations looking into broader applications of the topics. The Merit Awards he has earned every semester motivate him to even greater successes. Besides taking a full class load, Gio now facilitates the CSU Chico LSAMP Precalculus Academic Excellence Workshop.

Gio is passionate about engineering: “Whenever I go to San Francisco and cross the Golden Gate Bridge, I’m awed by the work that went into creating that spectacular engineering feat. I want to be able to create something like that. I want to leave my footprint on this world for generations to come.” He is looking forward to an exciting career in engineering.



OUTSTANDING SERVICE/LEADERSHIP
JORGE ALVARADO • MECHATRONIC & ELECTRICAL ENGINEERING



Jorge Alvarado is studying Mechatronic Engineering and Electrical Engineering. As the first in his family to attend college, he is leading the way for his younger siblings. Jorge is motivated to excel knowing that in a few short years, he will be working on important projects and solving significant problems.

Jorge’s CSU-LSAMP experience began with the Summer Calculus Boot Camp in 2011. Since then he has served as an Academic Excellence Workshop facilitator, EOP Math Facilitator, Facilitator Mentor, Summer Resident Advisor, and Webmaster. He designed an activity for pre-freshmen to engage in mini-research experiences. He earned a Merit Award for mastering Calculus III. LSAMP has connected Jorge with like-minded peers and provided him with opportunities to assist and mentor other students in STEM courses. He has led student groups to conferences supported by LSAMP. He demonstrated his research in Neumorphic Hardware Electronic Devices at the 2013 CSU Chico Natural Science Poster Session and won the People’s Choice Award.

Jorge also finds ways to support the community. He began an Aerial Robotics Team to learn more about the engineering and autonomy behind a drone system and he has held offices with Latinos in Technical Careers (LTC). He led a workshop for the STEM Academy, focusing on inspiring K-8 students to pursue STEM. He challenged them to apply new technologies to sustainable community practices, another of his interests. Jorge was awarded MEP Senior of the Year. After graduation, he hopes to find a career that will bring together sustainability and autonomous systems.

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California State University Dominguez Hills



OUTSTANDING ALUMNA & RESEARCH

ASHLEY POTTER • BIOLOGY (ECOLOGY & ENVIRONMENTAL SCIENCE)

Ashley Potter transferred to Dominguez Hills from Scottsdale Community College, in Arizona, as an ecology & Environmental Biology major, with a special interest in Marine Biology. Ashley is an amazing student researcher with great passion for the field of marine biology. She attended a semester course in Santa Catalina Island, Ca where she had the opportunity to learn about and explore the marine world and develop an independent research project on the effects of thermal stress on sea anemone physiology and behavior. Ashley won first place in the CSUDH student research day competition and second place in the CSU statewide competition in 2015. She has been a valued member of the Padilla-Gamino lab team and a mentor for other students. Ashley did lab and field work in Hawaii for a project related to coral reproduction and climate change. Her work ethic was spectacular and she was a critical part of the success of the mission. She also presented her research last year at the 44th Annual Benthic Ecology Meeting in Quebec City, Canada, and presented a poster at the Western Society of Naturalists in November in Sacramento, CA.

Ashley has been accepted to the MS in Marine Biology program at CSU Northridge under Dr. Peter Edmunds and will be studying coral biology and ecophysiology. This program is very competitive and is one of the best MS Biology programs for coral biology in the nation. We are very PROUD of Ashley's accomplishments, and know that she will be a great marine biologist!

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INSPIRATIONAL LEADERSHIP RICARDO VARGAS, JR. EARTH SCIENCES

Ricardo Vargas transferred to Dominguez Hills in Fall 2014 as an Earth Sciences Major. Of all of the LSAMP students at CSUDH, Ricardo Vargas stands out for having the most significant impacts on the program over the past year. On his own, he approached the campus LSAMP director to offer to make a presentation to all LSAMP students and possible new recruits on the many research-related opportunities that are available during the summer break, along with practical advice on how to successfully apply for such opportunities. Such a presentation fit in well with the annual LSAMP Open House, which is a social/informational event designed to recruit new LSAMP scholars. Ricardo single-handedly organized this event and it was a huge success. The previous open house events tended to be very small with no main agenda. This past year's was standing room only. Ricardo gave a wonderful presentation and also arranged for a USC professor guest speaker to talk about her REU at Catalina Island and encouraged CSUDH students to apply (since none ever had in past years). The repercussions were many: a big surge in enthusiastic new LSAMP applicants, many of whom, during their interview with the campus coordinator, praised the impact of the open house. Also, that the USC REU did receive applications from CSUDH students this year and two were awarded the summer fellowship.

In future years, due to the overwhelming success of Ricardo's event, the coordinator has decided to always have upper-level LSAMP students (and perhaps guest speakers) to present at the annual open house events. But of course, Ricardo's shoes will be difficult to fill. Ricardo is greatly interested in continuing his education and is applying to the M.S. in Environmental Science at CSULA, and also hopes to become a mentor in his community, especially helping underrepresented minorities.

OUTSTANDING ACADEMIC NICHOLAS PFAU MATHEMATICS

Nicholas (Nick) Pfau is a Math Major, who transferred to Dominguez Hills from Long Beach City College in Fall 2013. Nick is an outstanding student; his CSUDH GPA is over 3.95, the highest of all the current LSAMP scholars. The CSU-LSAMP coordinator has had Nick as a student in one of his upper-level classes, so has seen firsthand Nick's outstanding math skills and proactive participation. During lectures, when a difficult question is raised, Nick's hand invariably shoots up, often the only one, and he is typically able to give great, eloquent, and insightful explanations that the whole class understands. He is figuratively able to run circles around the rest of the class. So this nomination contains much more than simply earning high grades, Nick's participation contributes much to the whole class's benefit. Other colleagues have given similar assessments of Nick, included a math colleague who initiated last year an LSAMP-funded project working with Nick.

Due to his high academic grades, Nick is in high demand for tutoring jobs. He tutors from basic math up to calculus, and physics. This semester, he is the teacher's assistant for the MAT 131 class, Statistics. Nick has been conducting research with Dr. Wai Yan Pong on a project titled "Twisted Differential Homomorphisms and Differential Algebraic Independence". Nick's ultimate career goal is to obtain a Ph.D. in Computer Science. He is in the process of applying and preparing for this challenging goal.



CALIFORNIA STATE UNIVERSITY

EAST BAY

OUTSTANDING ALUMNA & ACADEMIC TRACY CHAN • CHEMISTRY

Tracy Chan majored in Chemistry at California State University, East Bay and graduated Summa cum Laude in Spring 2016 with a 3.9 GPA. As a first generation college student, she was the first in her family to graduate from college and will be the first to ultimately earn a graduate degree. Tracy has been accepted into doctoral programs at six different universities and will be pursuing her Ph.D. at the University of Illinois starting Fall 2016. In addition, Tracy has been very active working with Dr. Marlin Halim at CSUEB on developing an imaging tool for small organic molecules. Her research focused on developing a galactosemia home detection kit that would be used to diagnose and monitor potentially toxic levels of galactose in people that lack the enzyme to metabolize the sugar. Her mentor Dr. Halim says that Tracy is a “highly dedicated and self-motivated scientist who, during her time in our laboratory, has worked on a new project and advanced it to the final stages.” Tracy credits her academic success and achievement in research to her LSAMP faculty mentor Dr. Marlin Halim who provided academic support and advising. She said that her relationship with her mentor was a great experience and helped Tracy to consider her options and ultimately led to her decision to pursue a graduate degree. Tracy’s career goal is to work in industry as a research scientist in the development of new drugs and diagnostic tools.



OUTSTANDING ACADEMIC & RESEARCH DREW YORK • GEOLOGY

Drew York is a major in Geology with minor in Mathematics. Drew conducts research in Dr. Jeffery Seitz’s Molecular Astrobiology Laboratory. The research focuses on experimentally determining the volumetric properties of aqueous solutions of organic molecules and biomolecules at hydrothermal conditions with applications to developing a chemical model for the origin of life on Earth and other solar system bodies. The results of their research have been presented at two international conferences. In addition, Drew’s research team is currently working on a manuscript on the amino acid glycine for submission to the Journal of Chemical Thermodynamics. His mentor, Dr. Seitz, says that “Drew is a brilliant and dedicated student.” During Summer 2015, Drew participated in the CSU-LSAMP international research program at Chiang Mai University in Thailand where he collaborated on a project that studied flow modeling of groundwater in the Chiang Mai basin. Drew says that this was a significant life event where he was able to experience a different culture and was immersed in the academic and research culture at a different university. More recently, Drew received an internship at Lawrence Livermore National Laboratory where he is collaborating in a group studying flow and transport modeling across activated carbon units to investigate the efficiency of a groundwater remediation technology. Drew credits his participation in research for putting him on his career path and helping him apply his coursework in a meaningful way. Financial support from the program enabled him to stay in school and focus on research.



OUTSTANDING RESEARCH & SERVICE/LEADERSHIP ALEXANDER PENAFLORE • PHYSICS

Alex Penaflore is a transfer student from Guam where he was born and raised. Currently, Alex is a Physics major with a minor in Mathematics at California State University, East Bay and has applied to a Ph.D. bridge program at Columbia University. In the laboratory of his mentor, Dr. Jennie Guzman, Alex has been very active in helping in the development of a magneto-optical trap to test the spin-statistics theorem. Under the mentorship of Dr. Guzman, Alex has gained valuable practical experience in optics, lasers, programming and electronics that he would not be able to get in his coursework. He believes that his experiences have helped to prepare him to pursue graduate studies and, ultimately, a career in industry. Alex presented the results of his research at the American Physical Society Far West Section meeting at CSU Long Beach in 2015.

Alex has been very active in community service, giving back to help other students. For example, Alex has been a tutor for mathematics, including differential equations and multivariable calculus, for over three years at the Student Center for Academic Achievement at CSUEB. Alex admits that he did not do well in mathematics in High School and now enjoys providing encouragement for other students in math courses and helping to show them that they can succeed. In addition, Alex helped to establish the Society of Physics Students at CSUEB and currently serves as its President. One accomplishment that he is particularly proud of is the establishment of “study lockdowns” that are organized study events that incorporate peer mentoring and tutoring in Physics, Engineering, and Mathematics.



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OUTSTANDING ALUMNA & ALL-AROUND STUDENT EMILY NGUYEN • BIOLOGY

Emily Nguyen, a Biological Sciences major with a Chemistry minor, has been an active researcher with Drs. James Murray and Chris Baysdorfer in the Department of Biological Sciences. The LSAMP program provided her with a scholarship that helped her to stay in school, and a research supply grant that supported her project. The main objective of Emily’s research is to quantify gene expression in sea slugs. She isolated RNA from sensory organs of sea slugs and, after conversion to cDNA, sequenced the samples using Next-Generation Sequencing technology. Her involvement in research provided her with invaluable skills and experience with techniques such as sequencing and PCR. Her mentor indicated that the “level of technical expertise is almost unheard of in an undergraduate and indicates how truly exceptional she is.” Emily states that she “learned to adopt a more inquisitive approach that relies on critical thinking, an attribute most companies are looking for in hiring new recruits.” Emily hopes to work in biotech or as a Clinical Laboratory Scientist. In addition to her research achievement, Emily has excelled in her coursework and maintained a 3.7 GPA. Lastly, Emily has been active in service to her community. She volunteers as a tutor for students taking microbiology and in the Biology Department where she supports instruction by preparing media and inoculating samples for lab courses. Emily also volunteers at Good Samaritan Hospital where she interacts with patients in the cardiology department and makes rounds to check on patient comfort. Emily graduated in June 2016.



OUTSTANDING RESEARCH & SERVICE/LEADERSHIP CHRISTIAN SARABIA • BIOCHEMISTRY

Christian is pursuing a B.S. in Biochemistry and two minors, Physics and Mathematics, at Fresno State. Cristian has overcome numerous obstacles as a first generation Hispanic college student who spent his early childhood in Mexico and later moved to Los Angeles, CA. After joining LSAMP, he began conducting research in organic medicinal chemistry under the supervision of Dr. Qiao-Hong Chen. His research involves prostate cancer, analyzing the molecular structure of curcumin, the main component of turmeric, a type of ginger. His work includes synthesizing curcumin analogs, which have higher potency and bioavailability than curcumin, by testing their antiproliferative activity in different prostate cancer cell lines. Cristian has presented his research at the CSU Program for Education and Research in Biotechnology (CSUPERB) Symposium and the Central California Research Symposium. In addition to his research, Cristian was elected to serve as the Senator for the College of Science Mathematics representing students' needs in the college through the student government Associated Students Incorporated (ASI). He meets with campus faculty, administration, and student organizations on a weekly basis. He has also held leadership roles in various student organizations including the Fresno State Premedical Club, SACNAS chapter, Chemistry Club, and AMSA. Furthermore, Cristian serves as a CSU-LSAMP Peer Mentor, Academic Excellence Workshop Facilitator and chemistry tutor. He has served on numerous CSU-LSAMP student panels encouraging entering students to participate in research and campus involvement. After graduating, Christian's goal is to pursue a M.D/Ph.D., ultimately serving the needs of the disadvantaged as a provider and researcher.



Campus Coordinator:

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OUTSTANDING ACADEMIC & RESEARCH MONET GOMES • BIOLOGY

Monet is pursuing a degree in Biology at Fresno State. She has always had a strong love for animals, which inspired her to pursue a career as a wildlife biologist. Monet has maintained an impressive overall GPA of 3.89, all while conducting research and working on and off campus. Monet has assisted with various wildlife biology projects through the California Department of Fish and Wildlife including interning for the Central California Regional Manager, Dr. Jeff Single, and assisting with a Kangaroo rat population survey. She has participated in electrofishing population surveys and trout fry release through the Kings River Conservancy. During her sophomore year, Monet began working under the mentorship of Dr. Steve Blumenshine and his aquatic ecology research lab, which works with the San Joaquin River Restoration Program, to restore the health of the river. She has conducted research on the practice of using stable isotope signatures as tracers for different regions of the San Joaquin River, with the support of CSU-LSAMP Summer and Academic Year Research Programs. She has presented this research at the Central California Research Symposium. Monet has also been involved with the Fresno Chaffee Zoo, working as an Interpretive Guide and Educator. Monet interned in South Africa during summer 2016, with Indlovu West Conservation Research, gaining experience managing wildlife on a private reserve, conducting wildlife population research, and learning about predator-prey dynamics on the African Savanna. Monet plans to pursue a graduate degree in wildlife biology to conduct research in the field of wildlife conservation.



OUTSTANDING RESEARCH NATSINET GHEBRENDRIAS • BIOLOGY

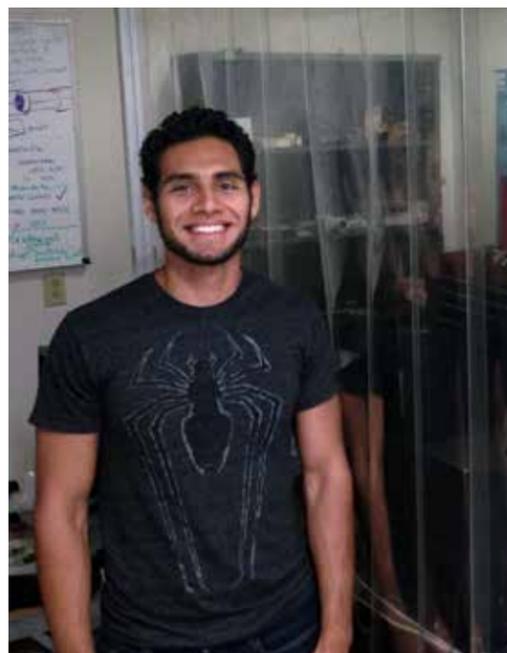
Natsinet is pursuing a B.S. in Biology at Fresno State and has a passion for the field of public health and a deep interest in infectious diseases. Under the mentorship of Biology professor Dr. Mamta Rawat, Natsinet has been conducting research on Mycobacterium smegmatis transposon mutants which are generated through transposon mutagenesis to investigate gene and protein function and cellular processes. Mycobacterium smegmatis is a non-pathogenic model organism for the study of Mycobacterium tuberculosis, a bacterium that causes tuberculosis, which allows for these insertional mutants to be used to identify how resistance to anti tuberculosis drugs occurs. Natsinet has been awarded multiple undergraduate research grants and faculty-sponsored student research awards and her research has been presented at multiple conferences, such as the 2015 CSU Program for Education and Research in Biotechnology (CSUPERB) Symposium. Natsinet also participated in the LSU iREU 2016 France/Belgium 7-month research experience in Toulouse, France where she performed immunology research at the Institute of Pharmacology and Structural Biology (IPBS) under the guidance of Dr. Geanncarlo Lugo-Villarino in the lab of Dr. Olivier Neyrolles. Her research focus dealt with mycobacterial interactions with host cells and her goal was to identify microbiota-derived metabolites that modulate the macrophage response to Mycobacterium tuberculosis. In addition to research, Natsinet has been an active member in CSU-LSAMP and has an officer leadership role in the Fresno State SACNAS chapter. Natsinet aspires to use the knowledge and experience she has gained to obtain her Ph.D. degree in the area of Global Health and work internationally.





CALIFORNIA STATE UNIVERSITY FULLERTON™

OUTSTANDING RESEARCH ADRIAN AVILA-ALVAREZ • PHYSICS



Adrian Avila-Alvarez is a Physics major at California State University, Fullerton. Adrian's research at Fullerton's Gravitational Wave Physics and Astronomy Center (GWPAAC) has focused on characterizing the optical scattering of state-of-the-art optics for the Laser Interferometer Gravitational-Wave Observatory (LIGO). Through this work he has developed experimental skills and knowledge in the areas of optics, Fourier methods, lab equipment and procedures, automation with LabView, and analysis with Matlab/Python. He has presented his data at the SACNAS National Conference in San Antonio and has also prepared a technical document for LIGO entitled, "Imaging Scatterometer Characterization of Advanced LIGO Optic ITM06."

During the summer of 2014, Adrian took part in the University of Florida's International REU in Gravitational-Wave Physics, spending ten weeks at the Virgo detector site near Pisa, Italy. For his project, he made measurements of magnetic fields and used Matlab to model how those fields would behave inside of Virgo's large metal vacuum chambers. He presented a talk about this project to his peers and faculty from the IREU. Adrian is an excellent researcher and a very good student. His ultimate goal is to earn a Ph.D.

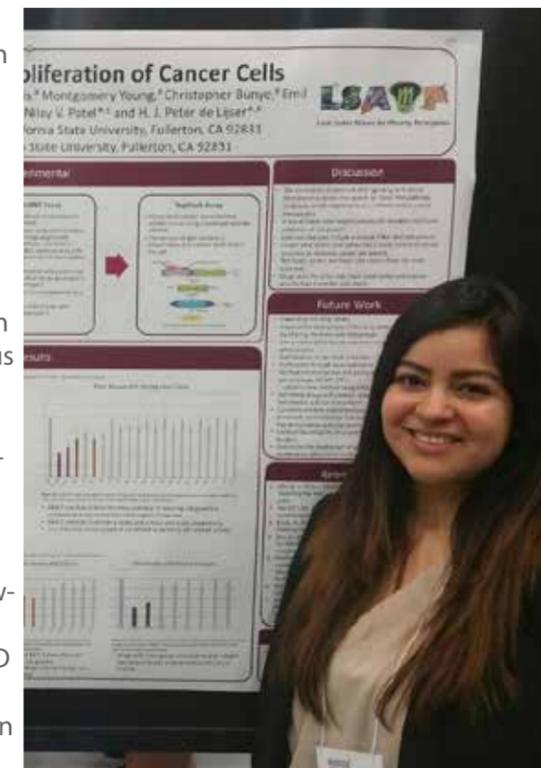
OUTSTANDING RESEARCH ALYSSA GARCIA • PHYSICS

Alyssa Garcia is a senior Physics major at California State University, Fullerton and was first involved in LSAMP during her freshman year. She is currently working with Dr. Geoffrey Lovelace in the Gravitational Wave Physics and Astronomy Center (GWPAAC) running simulations of binary black holes and hybridizing their gravitational waves. This research is of importance to Alyssa because she has always had a passion for astrophysics and cosmology, and being able to work in that field fulfills a life-long dream. Alyssa's research has now progressed into creating and studying the hybridized waveform, then injecting the waves into LIGO (Laser Interferometer Gravitational-wave Observatory) data in order to test if she can get the signal back out again. Alyssa has excelled in her research at the Gravitational Wave Physics and Astronomy Center over the past two years. Her efforts were even used to help aid in the recent gravitational wave discovery made by the LIGO Scientific Collaboration. She is currently in the process of writing a paper with collaborators from the Rochester Institute of Technology about comparing numerical methods for running simulations. Additionally, she has presented her work at many conferences including the American Physical Society Meeting, Pacific Coast Gravity Meeting, and the Southern California Conference for Undergraduate Research. Alyssa's career goals include obtaining a Master's and a Ph.D. in physics, and she hopes to continue doing interesting and groundbreaking research



OUTSTANDING RESEARCH STACY GUZMAN • BIOCHEMISTRY

Stacy Guzman is a first-generation student majoring in Biochemistry at California State University, Fullerton and was accepted as an LSAMP scholar during the Fall 2015 semester. She has conducted research in Dr. de Lijser's drug discovery laboratory since the summer of 2015. Her research focuses on designing and synthesizing small organic molecules to modulate the Wnt signaling pathway, which can act to maintain cancer cell lines. In the absence of Wnt signaling, several proteins participate in a multiprotein "destruction complex" that targets the proto-oncogene beta-catenin for ubiquitin-mediated proteolysis. However, in the presence of Wnt signaling, this destruction complex is no longer formed, translocating beta-catenin to the nucleus to target Wnt genes. Evidence has indicated that there is an abnormal up-regulation of this protein in the Wnt pathway of many types of cancer. Thus, disruption of Wnt/beta-catenin represents a great opportunity to develop therapeutic compounds. Stacy has presented her research at various conferences and recently received an Outstanding Poster Presentation Award at the Southern California Conference for Undergraduate Research. She is also a recipient of the prestigious Howard Hughes Medical Institute EXROP award, conducting research at Harvard and MIT's Broad Institute. Stacy's career goal is to obtain a PhD in medicinal chemistry or chemical biology. Stacy recognizes that a PhD will allow her to work in breakthrough research to improve human health and make discoveries that will positively impact the world.



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HUMBOLDT STATE UNIVERSITY

OUTSTANDING ACADEMIC & RESEARCH

THIEN CRISANTO • CELL & MOLECULAR BIOLOGY



Thien Crisanto, a Cellular and Molecular Biology major, had a unique upbringing. Her mother is from Vietnam and her father is African American and Honduran. At the age of seven Thien had a passion for sewing and continued this passion, graduating from the Fashion Institute of Design and Merchandising in Los Angeles – starting her own clothing line at 21. Thien had a desire to keep learning and transferred to HSU where her primary interests were photosynthesis, endosymbiosis and genetics. She became particularly interested in photosynthetic sea slugs (Sacoglossans) because they bridge the gap between plants and animals and also give insight to the early stages of endosymbiosis. In the summer of 2015, Thien studied sea slugs at the Institute for Molecular Evaluation at the University of Heinrich Heine in Dusseldorf, Germany. She conducted her own feeding experiment using genetic techniques on *Elysia timida* and analyzed how fast chloroplasts can be incorporated into the slug's cells. Thien presented her research at the Emerging Researchers National Conference in Washington DC. At HSU, Thien has been working on local photosynthetic sea slug, *Alderia modesta*, and local algae, analyzing the chloroplast uptake of various distantly related coenocytic algae. This summer Thien participated in the Plant Genomics REU at Michigan State, working with a team researching cyanobacteria and designing hybrid strains with *E. coli* in order to maximize their photosynthetic capabilities for biofuels, pharmaceuticals and remediation. Thien plans to enter a MS/PhD program in Plant Genomics and pursue a career in research and genetics.

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OUTSTANDING SERVICE/LEADERSHIP

DANIEL DIAZ
ZOOLOGY & CELL & MOLECULAR BIOLOGY



Daniel Diaz has used his experiences on a path to excellence in the sciences to help inspire other students. He struggled with academics early on in life, almost not graduating high school, and dropped out of community college in his early 20s. After multiple jobs in retail and a part-time job as an apprentice dockworker, Daniel enrolled at Los Angeles Harbor Community College in an evening program catering to working adults. He quickly found that he was far more engaged in school than he has ever been and felt a sense of harmony with students who were on a similar life path. Daniel then transferred to HSU and in Fall 2015, he graduated with a double major in Zoology and Cellular and Molecular Biology. Daniel worked as student leader in HSU's supplemental instruction program for six semesters, providing tutoring and assistance to students in the sciences. Daniel was also actively involved in HSU's STEM program providing mentoring and guidance to fellow students. After graduating, Daniel began work for HSU's Gaining Early Awareness and Readiness for Undergraduate Programs (GEARUP), conducting outreach to local middle and high school students – particularly underrepresented students – inspiring them on a path to college. Daniel also had a great academic and research record while at HSU. He developed his own research project investigating the role of hedgehog signaling during regeneration in the cnidarian model, *Nematostella vectensis*. Daniel will be entering the Applied Bioinformatics and Genomics Master's program at University of Oregon in Fall 2016.

OUTSTANDING RESEARCH & SERVICE/LEADERSHIP

LAURA HERNANDEZ • ENVIRONMENTAL BIOLOGY



Laura Hernández has made her mark on the HSU community through her record of research and service. She is an Environmental Biology major with Watershed Management and Soil Science minors. Her family is native to regions of North America. In the summer of 2014 Laura participated in the Graduate Preparation Institute at the University of Utah as a laboratory research assistant in Dr. Ramesh Goel's Civil and Environmental Engineering laboratory. She conducted research on phage therapy, working with sludge samples from wastewater treatment plants in Utah. Laura was selected to participate in the summer 2015 CSU-LSAMP Global Awareness Program at Chiang Mai University, Thailand where she worked in Dr. Somporn Chantara's Environmental Chemistry laboratory. During summer 2016 Laura participated in the REU on Sustainable Land and Water Resources at the Salish Kootenai College on the Flathead Reservation in Pablo Montana. She has also presented her summer research at the Emerging Researchers National Conference in Washington DC for two consecutive years.

Laura also has a strong record of service to HSU and the broader community. She was an active student employee at the HSU Indian Natural Resource Science and Engineering Program (INRSEP). In that role she helped administer house functions and provided mentoring and tutoring to fellow students in the sciences. She volunteered her time to sit as a student representative and advocate on the search committee looking for a director of the program. She has played an active role in creating a welcoming learning community within the INRSEP house.

OUTSTANDING ACADEMIC & RESEARCH

YULIANA ROWE-GADDY • WILDLIFE BIOLOGY



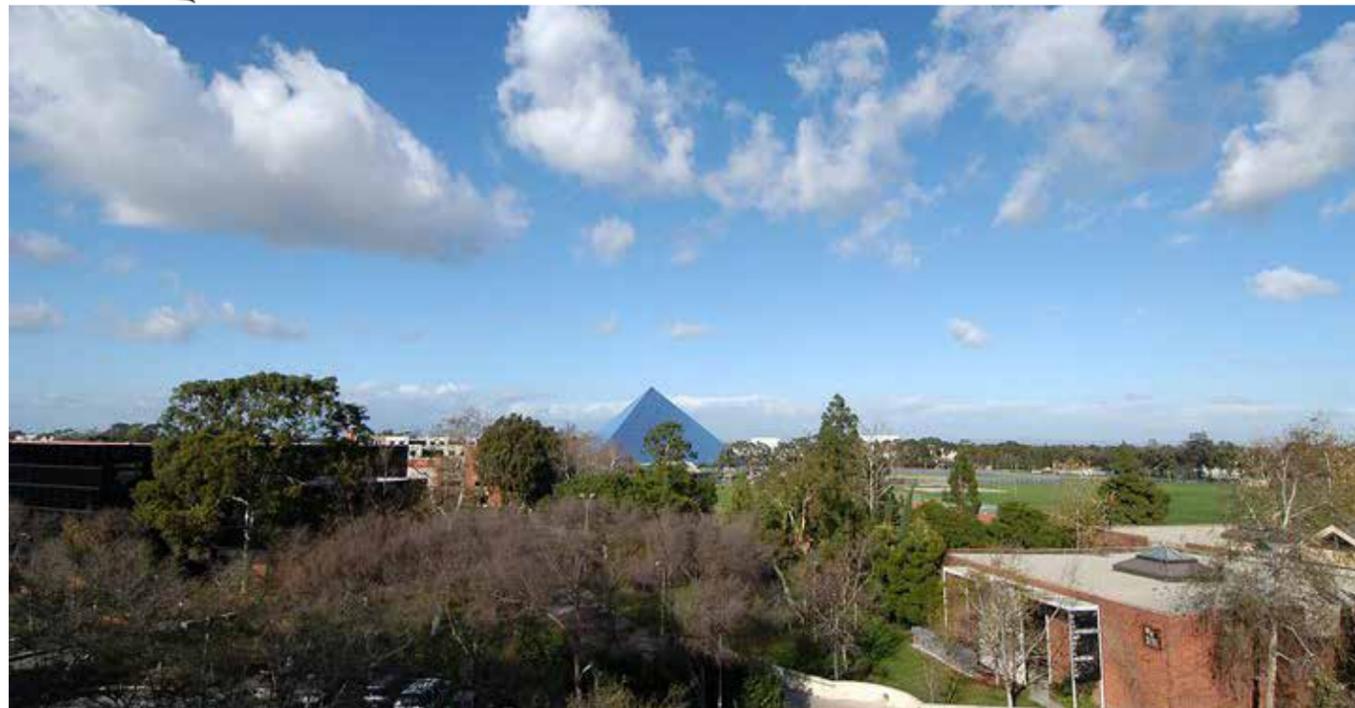
Yuliana Rowe-Gaddy is a Wildlife Biology major with a minor in Applied Statistics. Before transferring to HSU, Yuliana attended Northern Virginia Community College where she graduated Magna Cum Laude with a 3.7+ GPA. Yuliana is a proud member of HSU's Indian Natural Resources, Science and Engineering Program (INRSEP). Yuliana has served as a statistics tutor for undergraduate and graduate students and was the co-founder of the Statistics and Probability Club.

At a young age Yuliana was diagnosed with ADHD/OCD/bi-polar disorder which has presented challenges in her educational career. Despite these challenges, Yuliana participated in several REUs and undergraduate research projects. In 2014, she participated in an REU in Puerto Rico at the El Verde Field Station studying the effects of simulated acid on tropical forest spider assemblages. Yuliana spent summer 2015 at the University of Michigan Biological Station studying the effects of climate-induced forest disturbances on spiders in Michigan. In the summer of 2016, Yuliana participated in an REU with the California Academy of Sciences studying the biogeography of Caribbean Arthropods.

Yuliana has presented her research on numerous occasions, including at HSU's IdeaFest, INRSEP's Poster Symposium, and the Emerging Researchers National (ERN) Conference. At the 2016 ERN Conference Yuliana received second place in the category of Ecology, Environmental, and Earth Sciences for her presentation on forest disturbances on spiders in Michigan. Yuliana plans to enter a Ph.D. program in environmental entomology to study the potential of spiders as biological controls of disease-vectoring mosquitoes and forest pests.

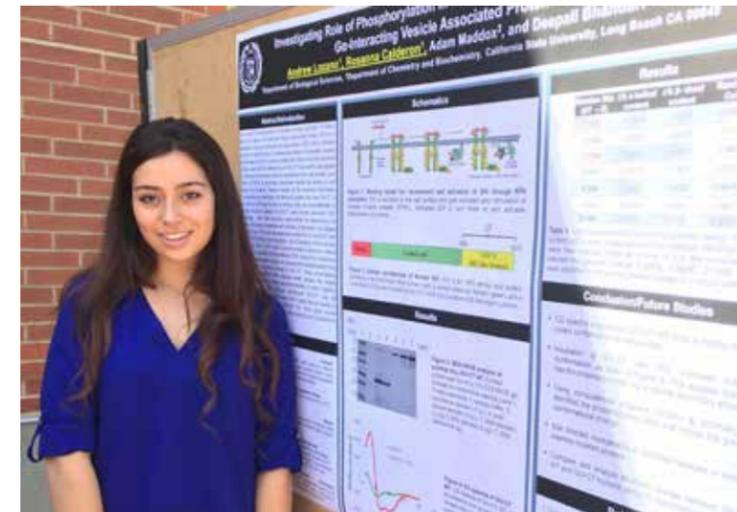


CALIFORNIA STATE UNIVERSITY LONG BEACH



OUTSTANDING RESEARCH AMBER CAMACHO CHEMICAL ENGINEERING

Amber Camacho is a senior at California State University, Long Beach, majoring in Chemical Engineering. She has been conducting research in Dr. Roger C. Lo's microfluidics laboratory for over a year. She first joined the lab when she was accepted into the 2015 Hispanic Serving Institution-Science Technology Engineering and Mathematics Winter Research Experience (HIS-STEM WRE) program for 10 weeks. For the duration of the program, Amber was awarded with a research grant. She continued her research at the conclusion of the program, where she used computer-aided design programs to create original designs for microfluidic reactors. She eventually was able to manufacture her designs in lab with the use of 3D printers. She has also collaborated with a team of student researchers in conducting experiments investigating the physical properties of several thermoplastics used in 3D printing. She was accepted into the National Science Foundation-funded California State University-Louis Stokes Alliance for Minority Participation (CSU-LSAMP) Fellowship for the summer of 2015 and the 2015-2016 academic year. Her experience as a research fellow has allowed her to develop strong skills in designing, conducting, and troubleshooting experimental procedures. She was invited to present her research findings at two symposiums and was awarded a travel grant to present at the 2015 Annual Biomedical Research Conference for Minority Students in Seattle Washington. She plans on continuing her research in the microfluidics until graduation. Her goal is to provide mentorship to students from underrepresented groups in the STEM field.



OUTSTANDING RESEARCH ROSANNA CALDERON • MOLECULAR CELLULAR BIOLOGY & PHYSIOLOGY

Rosanna Calderon graduated in Spring 2016 with bachelor's in Molecular Cell Biology and Physiology from CSU, Long Beach. After being accepted to the RISE M.S.-to-Ph.D. program she has decided to continue her education at CSULB to pursue her M.S. in Biochemistry and continue her current research with Dr. Deepali Bhandari's research group, which is focusing on a protein called Ga-Interacting Vesicle associated protein (GIV). GIV is a non-receptor guanine nucleotide exchange factor that activates heterotrimeric G proteins downstream of activated receptor tyrosine kinases (RTKs). Rosanna's project focuses on the regulation of GIV's activity. She will generate mutations on GIV at specific amino acid residues in order to determine the role in regulation and function of GIV on the cell's ability to migrate. She was an LSAMP Fellow for two years. She is also peer mentor and tutor as a Promotora for the HSI-STEM, which is intended to help support undergraduate students in STEM majors. Rosanna was able to present her research multiple times, presenting at the closing ceremony of the HSI-STEM Winter Research Experience and at the University's annual Undergraduate Research Symposium, the LSAMP-Binghamton University 2015 Research Symposium & Grad School Application Retreat, the Alliance for Diversity in Science and Engineering Young Researchers Conference at UCLA, and the Southern California Undergraduate Research Conference at CSULB. After completing her M.S. at CSULB, Rosanna plans to continue to a Ph.D. program where she would like to conduct biomedical research and focus in the field of pharmacology.

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OUTSTANDING RESEARCH ALICE PIEPLOW • MOLECULAR CELL BIOLOGY & PHYSIOLOGY

Alice Pieplow is a graduating senior, majoring in Molecular Cell Biology and Physiology. Alice is a CSU-LSAMP fellow working with Dr. Elizabeth Eldon in her Drosophila Melanogaster Laboratory. Alice has spent the last year developing and conducting a research project to elucidate the effects of a high-fat diet on the development and lifespan of Drosophila on a genetic level. Alice compares expression levels of conserved lipid metabolism genes in third instar larvae raised on normal or high-fat food utilizing dig-labeled antisense RNA probes and qPCR. Thus far, Alice and her mentor have presented at numerous symposia, demonstrating the effects of diet on lifespan, pupation timing, and female fertility as well as the successful probe design for several genes. Their results will demonstrate whether or not Drosophila is a suitable disease model for liver-related conditions, and in the future may generate opportunities for further epigenetic studies on diet, lifespan, fertility, and viability of offspring. Since her admission into the LSAMP program, Alice has presented her research at two CSULB research symposia, to the Chancellor of the CSU system, at the CSUPERB meeting, and at ABRCMS, where she won an award for an outstanding presentation. Her mentor, Dr. Elizabeth Eldon has also given many presentations about their research. Together, Alice and Dr. Eldon will be presenting more of their findings in August at the SDB National meeting in Boston. They look forward to finishing the project and hope that their results will aid further research into obesity related conditions.





CAL STATE LA

CALIFORNIA STATE UNIVERSITY, LOS ANGELES

OUTSTANDING RESEARCH, & SERVICE/LEADERSHIP FABIOLA JUÁREZ JARAMILLO • BIOLOGY

Fabiola Juárez Jaramillo moved to the United States at the age of fifteen not knowing any English. Despite this, Fabiola's motivation and perseverance led her to transfer to Cal State LA in 2012. She joined LSAMP in 2013 and then the LSAMP Undergraduate Research Training Program. Participation in this program increased her desire to engage in more independent research that culminated in an Undergraduate Honors Thesis. Fabiola received a 4-year scholarship from the Santa Barbara Scholarship Foundation, as well as multiple conference travel awards from LSAMP and from the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). She presented her research at national conferences such as Emerging Researchers National Conference (ERN) and Annual Biomedical Research Conference for Minority Students (ABRCMS). As a first-generation college student, who understands the need to expose others to various STEM opportunities, Fabiola was actively involved in the SACNAS Chapter at Cal State LA, serving as treasurer and vice president. She planned and executed various workshops including the Writing in STEM Series, and Conversation with Scientists and Undergraduate Research Workshop for Cal State LA students. Additionally, she worked part-time as a student assistant where she designed and implemented leadership development workshops for Cal State LA students. Fabiola graduated with her B.S. in Biology June 2016 and wants to enter a Ph.D. program after the completion of her postbaccalaureate program at UC Santa Cruz. CSU, Los Angeles takes great pride in recognizing Fabiola Juárez Jaramillo as a CSU-LSAMP PROUD Scholar.



OUTSTANDING ACADEMIC & RESEARCH RIGOBERTO ARENAS • CHEMISTRY

Rigoberto Arenas grew up in Los Angeles and overcame a disadvantaged school system to be where he is today. Rigoberto started at Cerritos College and struggled to adapt, leading to low academic performance. Opportunities like the Puente program that helps under-represented students earn college degrees, and summer research programs that exposed him to research, helped Rigoberto developed the self-confidence needed to earn his A.A. in both Mathematics and Natural Science with a GPA of 2.920. Rigoberto transferred to Cal State LA in 2013 as a Chemistry major and joined the LSAMP program and the Minority Access to Research Careers (MARC-U*STAR) Honors Program. He received the Familia Gonzalez Reynosos Foundation Scholarship in 2013 and 2015, and the Student Award in the Chemistry Department, which is awarded to an undergraduate who demonstrated an aptitude for chemistry through courses and research. At Cal State LA, Rigoberto worked with Dr. Yong Ba focusing on a homologous model of P-glycoprotein and using solid-state NMR studies to complement computational work. Rigoberto has presented his work at numerous scientific meetings, including the American Chemistry Society national meeting, Society for Advancement of Chicanos and Native Americans in Science meeting, and the International Chemical Congress of Pacific Basin Societies (Pacific Chem). He graduated in June 2016 with a B.S. in Chemistry and a GPA of 3.420. Rigoberto has been accepted into several Ph.D. programs, and will attend UC Davis in fall 2016. Cal State LA takes great pride in recognizing Rigoberto Arenas as a CSU-LSAMP PROUD Scholar.



OUTSTANDING ALUMNA NADINE RACHEL MARTINEZ, PH.D. • MOLECULAR, CELLULAR, & DEVELOPMENTAL BIOLOGY

Nadine R. Martinez transferred to Cal State LA from East Los Angeles Community College. She completed a B.S. in Microbiology in 2007 and an M.S. in Biology with an emphasis in Innate Immunology in 2009. She joined the LSAMP Undergraduate Research Training Program in 2006 and participated in the 2007-2009 LSAMP-BD program. One of Nadine's greatest accomplishments was the completion, in 2014, of her Ph.D. in Molecular, Cellular, and Developmental Biology at UC Santa Barbara, while raising five beautiful children under the age of ten. They were her driving force and motivation through her Ph.D. She is currently a recipient of the Child Health Research Institute Grant and Postdoctoral Award from the Department of Obstetrics and Gynecology at Stanford University School of Medicine. Nadine's undergraduate and M.S. research on using innate immunology to understand how Paneth cells found in the small intestinal crypts contribute to mucosal intestinal first-line defense resulted in a journal article. Her Ph.D. research focused on the marine mussel adhesive system, which served as inspiration for the development of next-generation wet adhesives and resulted in nine journal articles and a book chapter. Her postdoctoral research aims to understand how the maternal immune system is impacted during preeclampsia pathogenesis and how extracellular vesicles are implicated in this disease in order to develop strategies for saving the lives of women and infants. Nadine has participated in numerous outreach activities that have helped K-12, undergraduates, and teachers pursue STEM careers. Nadine currently serves as a science writer for the podcast *Goggles Optional*.

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OUTSTANDING ACADEMIC, RESEARCH & SERVICE/ LEADERSHIP

KHEDER ALRAZAA • CIVIL ENGINEERING

Kheder Alrazaa entered Cal State LA as a first-time freshman, civil engineering major in 2011. He quickly became engaged in his major by joining MESA and the Concrete Canoe Project of the American Society of Civil Engineers. He participated in the Society of Women Engineers, where he served as the public relations officer, organizing outreach activities for girls in K-12. In 2013, he joined the LSAMP program and participated in the 2013-2014 LSAMP Undergraduate Research Training Program. His team project focused on developing cost-efficient alternatives to reinforce non-ductile concrete buildings in the Los Angeles basin. Kheder has played a leadership role in the Earthquake Engineering Research Institute at Cal State LA, serving as secretary in 2013-2014, treasurer in 2014-2015, and vice president since 2015. The LSAMP program sent Kheder and his teammates to participate in the 2014 Undergraduate Seismic Design Competition, held in conjunction with the U.S. National Conference on Earthquake Engineering and the EERI Annual Meeting in Anchorage, Alaska. Of the 28 international teams that competed, his team placed third. LSAMP continued to support his competitions, most recently in Boston and San Francisco. Kheder will begin his graduate studies at UCLA in Fall 2016 at the prestigious UCLA Henry Samueli School of Engineering MS program in Structural/Earthquake Engineering. He has been the recipient of several fellowships and scholarships; has been initiated into engineering national societies; and had the opportunity to do civil engineering internships. Cal State LA takes great pride in recognizing Kheder Alrazaa as a CSU-LSAMP PROUD Scholar.





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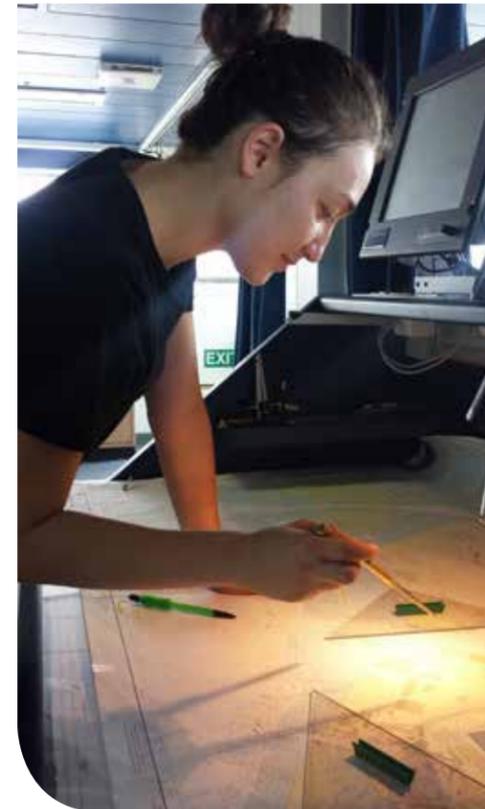
OUTSTANDING ACADEMIC, RESEARCH, & SERVICE/LEADERSHIP

ALEC SAFRENO • MECHANICAL ENGINEERING

Alec Safreno joined the LSAMP program at CSU Maritime Academy in 2015 and contributed to the program by serving as an advisor to many Mechanical Engineering students. His expertise and academic proficiency in the demanding coursework required of ME students aided many of his peers, who benefited from his advice about coursework and success strategies. Alec completed his B.S. in Mechanical Engineering in April 2016. For his Senior Capstone Project, Alec was a member of an interdisciplinary team for the U.S. Department of Energy Collegiate Wind Competition. Under the guidance of Dr. Tom Nordenholz, the team designed and constructed a small-scale wind turbine that is safe, reliable, and effective. They were selected to present their results at DOE's annual exhibit through a highly competitive selection process. Alec contributed to the project by serving as the lead designer for the electrical circuitry that transforms the AC power into usable DC power. Additionally, Alec programmed the complimentary software that controls the turbine while ensuring the proper amount of power is output by the rotating blades. Alec accepted a job at a renowned medical device company in Silicon Valley, where he will be a part of a new product introduction team for the next generation of robotic surgery advances. Alec plans to return to school and pursue a Master's degree in engineering after gaining valuable work experience for a few years. CSU-LSAMP is proud to recognize Alec for his high academic achievements, mentoring of underclassmen, and for his contributions to cutting-edge research.

OUTSTANDING ACADEMIC & SERVICE/LEADERSHIP

PAM SWITZER • MARINE TRANSPORTATION



Pamela Switzer is working towards her B.S. in Marine Transportation at CSU Maritime Academy. She joined the CSU-LSAMP program this year, and has made significant contributions by mentoring students in the program and providing unique guidance for first- and second-year students in her major. She is one of the most active participants in LSAMP mentorship programs and gladly lends her insight for students following her path in coursework and career development. Her love for marine transportation stems from her passion in leadership and fondness for the sea. Pamela has maintained a high GPA in her major throughout her studies and has served as a tutor for students in the Marine Transportation program through the Student Engagement and Academic Success Center. In addition to her academic excellence and leadership, she also serves as a volunteer for the Cal Maritime Academy's Office of Maritime programs. Her many voluntary efforts include running bridge simulations for attendees at professional development conferences held at our state-of-the-art bridge simulation center, working on the Training Ship Golden Bear for events and tours, and helping incoming and prospective students with any Marine Transportation-related questions on campus visits. CSU LSAMP is proud to recognize Pamela for her outstanding service to the campus and the maritime industry, all the while maintaining a high level of academic achievement. Pamela serves as a role model for other students seeking to join this vital and technically demanding industry.



California State University MONTEREY BAY

Extraordinary Opportunity

OUTSTANDING RESEARCH JUAN CERDA • BIOLOGY

Juan Cerda, a Biology major concentrating in Molecular Biology, credits the supportive academic and research community at CSUMB with providing him the guidance to excel in undergraduate research. Juan was first primed to explore the life sciences through the 2014 CSU-LSAMP Costa Rica summer program, after which he participated in research, helping to improve a method for quantifying a toxin commonly found in California stream systems. His research under the mentorship of Dr. Timothy Miles, is where he has identified his true passion and talent. Juan's work, using sequence-based identification protocols to investigate a species of fungal plant pathogen, led to discovery of a new plant pathogen in California, and to his first publication in the journal *Plant Disease*. He continued working with Dr. Miles, developing a genomics-based detection assay to detect the crop pathogen, *Rizoctonia solani* in the field, helping farmers to prevent crop losses. To continue developing his skills combining bioinformatics and other computational techniques, Juan conducted research this summer at the Center for Big Data in Translational Genomics at UC Santa Cruz's Genomics Institute with support from the NIH-funded BD2K Scholars program at CSUMB. He was recently awarded the prestigious and competitive Barry Goldwater Scholarship. When Juan graduates from CSUMB he will be the first in his family of Mexican-American immigrants to earn a college degree. Juan's ultimate goal is to pursue a Ph.D. in genomics from UC Davis' Integrative Genetics and Genomics program, which will allow him to contribute to advanced genomics research in the future.



OUTSTANDING ACADEMIC & RESEARCH JORDAN COLLIGNON • MATHEMATICS



Jordan Collignon is a Mathematics major concentrating on Pure Mathematics. He is in his third year at CSUMB and since he joined the CSU-LSAMP program he has been selected as a McNair Scholar, a National Alliance Scholar for Doctoral Studies in the Mathematical Sciences, a recipient of the prestigious Barry Goldwater Scholarship, inducted into the National Society of Leadership and Success, named to the Dean's List, and awarded the Outstanding Math Major award during both his sophomore and freshman year. These accomplishments clearly demonstrate Jordan's commitment to excellence, not only in his academic pursuits, but also in other areas of his professional and scholarly development. Jordan's experience with undergraduate research has been no less impressive. During his first research summer, Jordan conducted research under the mentorship of Dr. Alex Capaldi at Valparaiso University in Indiana. His research project, entitled "Mathematical Modeling in Ecology: Simulating the Reintroduction of the Extinct Passenger Pigeon" applied the mathematical theory he has excelled in at CSUMB to create two distinct models analyzing the potential for reintroducing an extinct species. Jordan has presented this research at the Joint Mathematics Meeting, the CSU Research Competition, and the CSUMB Undergraduate Research, Scholarship, and Creative Activity Showcase, where he won first place for his oral presentation. In summer 2016, Jordan traveled to Brown University's Institute for Computational and Experimental Research in Mathematics (ICERM), continuing to pursue the skills and experiences to get him to his ultimate goal of a Ph.D. in Applied Mathematics.



OUTSTANDING RESEARCH RYAN MENDOZA • ENVIRONMENTAL SCIENCE, TECHNOLOGY, AND POLICY

Ryan Mendoza is an Environmental Science, Technology, and Policy major, where he has a 3.72 and has been on the Dean's List every semester since he started at CSUMB. Ryan is also both a McNair Scholar and UROC Scholar. Ryan's first foray into research was working alongside CSUMB faculty to maximize the efficiency of a bioreactor, a denitrification filtration system for the problem of polluted agricultural runoff common in the central valley of California where he is from. During the summer of 2015, Ryan was invited to participate in a summer research program at the Missouri University of Science and Technology (MS&T) where he conducted a literature review to document the efficiency of municipal green infrastructure and developed a calculator to determine the viability of these systems under various climatological variables. Ryan presented the products of his research at the National Council for Undergraduate Research (NCUR) conference in Spring 2016. Conducting and presenting his research have cemented in Ryan a deep interest in understanding how ecological principles can be applied to measure and mitigate the effect of urbanization on urban ecosystems. Ryan's passion for this topic and impressive writing skills have led him to be invited to participate in another program at Miami University in Ohio during summer 2016, studying the ecology of human-dominated landscapes. These experiences have provided Ryan with the preparation and exposure necessary for him to accomplish his ultimate goal of exploring city-planning policies and effective ways of communicating ecologically sound development practices to economists.

OUTSTANDING ACADEMIC & RESEARCH KALI PRESCOTT • BIOLOGY



Kali Prescott's persistence on the Dean's List since her first semester in Fall 2014 as a transfer student to CSUMB is only one of many attributes that demonstrates her commitment to academic and scholarly excellence. In addition to being part of CSU-LSAMP, Kali is a McNair Scholar, a UROC Scholar, a volunteer with the Monterey County SPCA, and a teaching assistant for CSUMB's SCUBA diving program. This ability to juggle multiple commitments reflects Kali's tenacity when it comes to identifying her passions. Kali is a Biology major with a concentration in Ecology, Evolution, and Organismal, and since her arrival at CSUMB she has plunged into the pursuit of undergraduate research with a tenacity and independence that has ultimately developed in her a passion to explore a new and unusual area of science. Kali spent the summer of 2015 under the mentorship of Dr. Scott Bridgham of the University of Oregon investigating the effects of climate change on northern peatlands with the Spruce and Peatland Responses Under Climatic and Environmental Change (SPRUCE) project. While measuring the concentrations of greenhouse gases from porewater collected across the soil horizon, she became familiar with the uniquely adapted methanotrophic organisms of this ecosystem. This introduction to these unusual extremophiles has helped her identify her new research goal of combining her interests in extremophiles and evolution, and ultimately pursuing a graduate degree that allows her to examine how the evolutionary and ecological traits of extremophiles could be applied to the search for life beyond earth.

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California State University Northridge

OUTSTANDING SERVICE/LEADERSHIP

RAMSEY ISMAIL • MECHANICAL ENGINEERING

Ramsey Ismail is an enthusiastic and gregarious third year student at Cal State Northridge studying Mechanical Engineering. He is currently serving as President of the National Society of Black Engineers (NSBE) on the CSUN campus. He was initially elected as Vice President, but the NSBE President was unable to serve and Ramsey had to step-up to the plate. He's been doing a great job, showing promising leadership qualities by being a hard worker, an active member of teams and internships, and a successful student with a stellar GPA. After unexpectedly taking on the role of NSBE President, Ramsey needed to catch up in terms of training and planning, making it a challenging experience, but also a worthwhile opportunity for personal growth. The mission of NSBE is to "increase the number of culturally responsible Black engineers who excel academically, succeed professionally, and positively impact the community." Ramsey followed NSBE's mission and his efforts have granted him skills, experience, and several opportunities. He received three internship offers through NSBE career fairs in a span of only 5 months, from PG&E, GE Aviation, and The Gas Company and recently began an internship with The Gas Company. Ramsey feels that being involved in extracurricular activities has shaped the person he is today and the professional that he aspires to become. Ramsey plans to pursue an MBA, because as he states, "every company runs on money right? To work alongside the engineers with a background of their 'lingo' will definitely help me climb the ladder."



OUTSTANDING RESEARCH

SCOTT JUDGE • MECHANICAL ENGINEERING

Scott is a Mechanical Engineering major. Being a first generation college student, he says, is a humbling experience. He feels deeply rooted in his Latino culture and family, one that reflects hard work and determination. It motivates him through his academic and professional career. Scott feels fortunate to have mentors and reciprocates by mentoring others. He is President of ASME (American Society of Mechanical Engineers) and Director for SHPE (Society of Hispanic Professional Engineers). Scott has interned with multiple companies, ranging from aerospace tooling design to microelectronics manufacturing for satellites, and he continually seeks internships for his peers. In November, ASME hosted "Evening with Engineers," which provided opportunities to meet professionals from various engineering backgrounds. Scott and his team have made contributions to underrepresented communities through STEM outreach. Scott finds it rewarding to work with K-12 students. He quoted a student in the ASME rocket workshop, "I never thought this rocket could go that high. I hope I could become a person that could make the best rocket ever!" Through SHPE, Scott has helped organize events focused on minority STEM outreach. Noche de Ciencias provides students opportunities for hands-on workshops while parents are informed of financial aid. He also helped host 200 junior high school girls at the Young Latina Forum. Scott is currently working as a Biomedical Research Assistant under Dr. Vidya Nandikolla, and has presented research at several conferences, most notably at the 8th Annual AHSIE Conference, where he reaffirmed the importance of funding HSI STEM initiatives.



OUTSTANDING SERVICE/LEADERSHIP

SA KIM • BIOLOGICAL SCIENCES

Sa La Kim is a senior pursuing a Bachelor of Arts in biology at Cal State Northridge. Sa has contributed over 300 volunteer hours at a local medical center while working closely with CSUN biology professor, Dr. Jonathan Kelber, for the last two years. Both experiences have been intriguing to her and encouraged Sa to study health and medicine from a translational perspective. During her time at CSUN, Sa has received the Outstanding Junior Award, was a finalist for the Undergraduate Nagel Award, a recipient of the HOWELL-CSUPERB scholarship, and placed 2nd place for CSUN'S 20th Annual Student Research Symposium. At the end of April 2016, Sa was appointed to represent CSUN in the CSU Statewide Research Symposium held at CSU Bakersfield. As both MARC and Presidential Scholar, Sa presented at two national conferences – American Society for Cell Biology and American Association for Cancer Research. During the undergraduate poster competition held at the annual meeting for AACR, Sa placed in the top five out of one-hundred poster presenters. As of last year, Sa has one second author publication and is currently preparing a manuscript for her first co-first author publication with another graduate student. Upon completion from this program, Sa hopes to pursue a M.D./Ph.D with an emphasis on cancer research.



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CAL POLY POMONA

OUTSTANDING ACADEMIC

HANSINI VITHARANAGE • BIOLOGICAL SCIENCES

Hansini Vitharanage earned her Bachelor's degree from the Biological Sciences Department with an option in Microbiology. She graduated in winter 2016 with a 3.87 GPA and eight consecutive quarters on the Dean's List. She had the distinction of earning a place on the President's honor roll for two consecutive years. She plans on pursuing a Ph.D. in the biomedical sciences and eventually becoming a professor. Hansini received an NSF S-STEM Scholarship at Cal Poly Pomona and was an active member of the S-STEM program. She was also the winner of the prestigious Don Huntley Fellowship for Undergraduate Research, which rewards students contributing in the field of biotechnology. During her fellowship, she performed research on the biocompatibility of new prosthetic materials, under the direction of Dr. Steve Alas. She investigated the susceptibility of human prosthetic alloys to colonization by infectious microbes, including *Staphylococcus epidermidis* and *Pseudomonas aeruginosa*. She furthered the study by studying whether plasma treatment of prosthetics prevents biofilm formation. She also worked on migration patterns of osteoblasts on prosthetic materials to evaluate the alloys' compatibility with bone-forming cells in the body post-implantation. Her work resulted in various conference presentations. Coming from a poor family in Sri Lanka, Hansini has overcome many hurdles to obtain her STEM education. She feels that the support of her family and the mentorship of her professors and her research adviser at Cal Poly Pomona allowed her to maintain a high level of motivation during her successful academic career.



OUTSTANDING RESEARCH

OBED VILLALPANDO • MECHANICAL ENGINEERING

Obed Villalpando, a Mechanical Engineering major with a minor in Materials Science & Engineering, graduated in spring 2016. He was an intern at the Jet Propulsion Laboratory for over two years in the Thermal Energy Conversion Technologies group. During that time, he was a CSU-LSAMP research scholar, as well as part of the Kellogg Undergraduate Scholars program, Sigma Xi, NACE International, and other societies. His goal is to obtain a Master's degree in Materials Engineering. Obed spent his undergraduate career working on several research projects with Dr. Vilupanur Ravi. Obed helped develop corrosion-related projects that implement electrochemistry to determine the corrosion behavior of different alloys for either low or high temperature applications. These projects included aqueous corrosion of advanced titanium alloys for biomedical applications, hot corrosion of iron and nickel based superalloys for biomass applications, and hot corrosion of steels for concentrated solar power generation applications. His hard work culminated in co-authorship of the paper, "Effect of Austenite Stability on Pack Aluminizing of Austenitic Stainless Steels," published in the Journal of The Minerals, Metals & Materials Society. He has also been a co-author of five National Association of Corrosion Engineers (NACE) Corrosion conference proceedings, and has presented his research at many conferences, including the Southern California Conference for Undergraduate Research and the American Association for the Advancement of Science Pacific Division Conference. Obed is the first in his immediate family to graduate from a four-year university, and plans to continue his work at JPL until starting graduate school.



OUTSTANDING SERVICE/LEADERSHIP RENEE ESTEPHAN • BIOLOGICAL SCIENCES

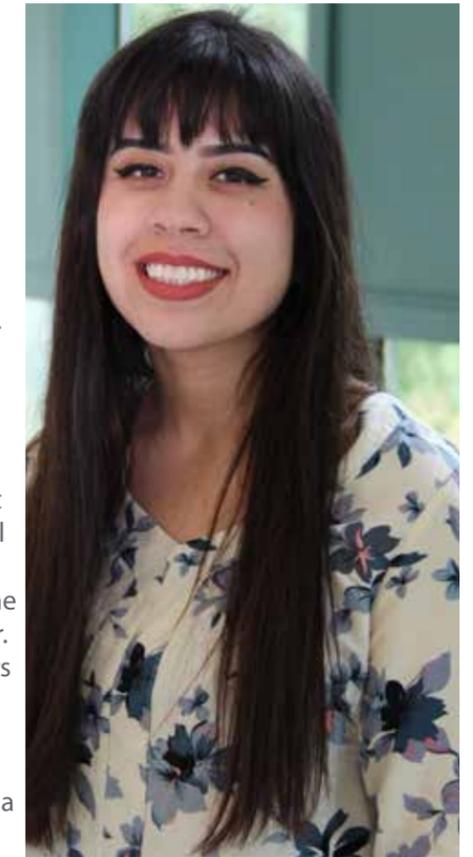
Renee Estehan obtained her Bachelors in Biological Sciences with a minor in Physiology in Spring 2016 and will begin her Ph.D. studies in Fall 2016 at the City of Hope Graduate School of Biological Sciences, with a full scholarship. Renee was a 2014-2015 McNair Scholar. Under Dr. Ed Bobich, she studied water conservation incentive programs in nine San Gabriel Valley cities, met with government and city officials to discuss water conservation policies in the greater Los Angeles area, and presented at various city council meetings, commission meetings and academic conferences. For her Kellogg Honors College Capstone Project, Renee worked with Dr. Peter Arensburger to search for DNA transposable elements in the genome sequence of the common house spider, using computers and bioinformatics. She and three teammates also competed in the CSU I-Corps Program, developing a residential water conservation device to recycle grey water and produce potable water for household tasks. With an NSF grant of \$1,500, Renee and her team developed a prototype of their product, called PolyPotable, and presented at the CSUPERB conference. Renee, a great proponent of mentorship, served as a mentor through the Science Educational Enhancement Services program, assisting first-year biology students with the transition from high school to college. She also served as the project counselor for the inaugural CPP Shark Tank innovation program for incoming freshmen in STEM. Renee attributes her success to her phenomenal mentors at Cal Poly Pomona and has enjoyed being able to provide guidance to her mentees.



OUTSTANDING ACADEMIC

LILLIANA OCHOA • MECHANICAL ENGINEERING

Lilliana Ochoa is an undergraduate Mechanical Engineering student with a minor in Physics and plans to attend graduate school for Mechanical Engineering after graduating in Spring 2018. She currently has a 3.85 overall GPA and a 3.90 core GPA. Lilliana has been involved with numerous organizations on campus, including the McNair Scholars Program, Maximizing Engineering Potential (MEP) program, and Society of Women Engineers (SWE). She is Secretary for the McNair Scholars Club, Vice President of Communications for SWE, and has held two other officer positions with SWE: 2013-2014 Freshman Representative, and 2014-2015 Team Tech Director. Lilliana's research involves studying the influence of raster orientation and of part size on the mechanical properties of fused deposition modeling (FDM) printed parts, with her mentor Dr. Mehrdad Haghi. Lilliana is also working on a technology assessment project for the NASA Armstrong Flight Research Center. Lilliana has tutored Mechanical Engineering and Physics courses and has been a Mentor to Mechanical Engineering Freshmen for the MEP program. Through her involvement with MEP, she earned a scholarship from Boeing/MEP at the end of the 2014-2015 school year. She is also a 2015-2016 Pace-Setters Scholarship recipient and a Kellogg Honors Student. In the summer after her sophomore year, she worked as an Engineering Instructor/Aide at a summer camp for elementary school students, and in the summer after her freshman year, she was a Public Works Intern for the City of Pomona. This summer, Lilliana interned at Jet Propulsion Laboratory (JPL) as a Facilities Engineering Intern.



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SACRAMENTO STATE



OUTSTANDING ACADEMIC & SERVICE/LEADERSHIP

AUREA COLSTON
MATHEMATICS

Aurea Colston is a sophomore majoring in Mathematics with a pure emphasis. Prior to entering as a freshman in fall 2014, Aurea took part in the Sacramento State CSU-LSAMP Summer Math Honors Program, where she was placed in the calculus cohort. Upon completing the program, based on her performance and personality, Aurea was selected to be one of the math facilitators for the LSAMP Summer 2015 Math Honors Program. She continues to serve as facilitator working with students in pre-calculus and calculus. Along with being selected to be a facilitator she received the Science Undergraduate Research Experience (SURE) Award in the College of Natural Science and Mathematics at Sacramento State to do research with mathematics professor Dr. Timothy Morris looking at applying graph theory to time series analysis. Through LSAMP, Aurea has been able to present her research at various symposia and conferences like the Annual Biomedical Research Conference for Minority Students. With all that she has accomplished, Aurea continues to excel in her classes. After graduating from Sacramento State, Aurea is planning on going on to graduate school to earn her Ph.D. and eventually become a mathematics professor.

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OUTSTANDING RESEARCH & SERVICE/LEADERSHIP

ELIZABETH CONTRERAS RUIZ
BIOLOGICAL SCIENCES

Elizabeth Contreras Ruiz is a senior majoring in biological sciences with a concentration in cell and molecular biology, and a minor in chemistry. She immigrated to the USA at the age of 12 and as soon as she started going to school, she started working hard because of her ambition for success. As a first generation college student, Elizabeth wanted to set an example for her younger siblings and other students who think that college is not an option when you are not fluent in English. One of her goals for the future is to educate those in the Latino community about the opportunities out there and show them that everyone can go to college. Coming from a migrant family she had to work long hours in the fields picking raspberries and strawberries to help her parents. This was a motivation for her to get an education. During her time at Sacramento State, Elizabeth has conducted research in cancer biology and ecology. Elizabeth has participated in the CSU-LSAMP Introduction to Science Research (ISR), an REU with the Organization of Tropical Studies (OTS) in Costa Rica and recently participated in the CSU-LSAMP 2016 Academic Year Research Scholars Program conducting research at the UC Davis department of molecular biology. Along with her research experience, she has served as a peer mentor working with students who have an interest in research. In the future Elizabeth would like to conduct research in breast cancer and contribute to the scientific knowledge about this matter.

OUTSTANDING ALUMNUS & SERVICE/LEADERSHIP

JAVIER GONZALEZ-ROCHA
MECHANICAL ENGINEERING

As a child of farm workers, Javier Gonzalez-Rocha attended schools that were severely understaffed and underfunded. Against all odds, Javier became the first member of his family to attend college. He joined CSU-LSAMP at Sacramento State as a student in mechanical engineering in fall 2004. Throughout his time at Sacramento, Javier cultivated leadership and engagement among others. He served as an officer for the Society of Hispanic Professional Engineers (SHPE) student club and continued to help other students become leaders. The California Space Grant Consortium supported Javier as he worked with Dr. Jose Granda on a project involving the structural resiliency of the International Space Station. Javier graduated from Sacramento State in 2010 with a B.S. in mechanical engineering. He immediately enrolled in the graduate program in mechanical engineering at Sacramento State and was selected to attend the NASA Aeronautics Academy at Dryden Flight Research Center. After completing his M.S. in 2012, Javier started a Ph.D. program at Virginia Tech. Javier is now a second year doctoral student in Aerospace Engineering where he led the effort to create a Graduate Society of Hispanic Professional Engineers Chapter. Through this organization Javier successfully built a network of graduate-to-undergraduate engineering student mentoring, instilling a new sense of pride among the Latino engineering students at Virginia Tech. Javier's travel is near completion: from the rural fields in northern California to academia or a government laboratory; an environment where he can continue to learn, teach, and advocate for the empowerment of underrepresented groups in STEM.





OUTSTANDING ACADEMIC
LLASMIN LOPEZ • MATHEMATICS

Llasmin Lopez is a CSU San Bernardino sophomore majoring in Mathematics. Llasmin carries a 3.759 GPA and has been on the Dean's list for the four quarters she has been a student at CSUSB. She joined CSU-LSAMP in the winter quarter of 2015, and immediately started participating in the graduate school preparation activities offered by the program. In summer 2015 she participated in the CSUSB Math Summer Program, and this past summer was accepted into the CSU Alliance Preparing Undergraduates through Mentoring toward Ph.D.s (PUMP) summer program, held at Cal Poly Pomona. Llasmin has an outstanding mathematical talent that, coupled with her academic performance, makes her a promising prospect in mathematical research. Llasmin is looking forward to graduate studies. She became interested in math after an AP Statistics class she took in high school and intends to pursue a Ph.D. degree in Statistics.

OUTSTANDING ACADEMIC
MARIA HERNANDEZ • COMPUTER SCIENCE

Maria Hernandez is a CSU San Bernardino sophomore majoring in Computer Science. As well as carrying a 3.788 GPA, Maria has been involved in the graduate school preparation activities of the CSU-LSAMP program since her freshman year. In summer 2015, she participated in the CSU San Bernardino PRISM Program, where she did research on Game Theory under the supervision of Dr. Kirsten Voigt. The goal was to create a program that could solve any Sudoku puzzle, varying in difficulty. During this past summer she participated in the REU for Multimedia Data Analytics at the University of Houston under the supervision of Ioannis Kakadiaris, whose research is under Computational Biomedicine.

Maria's future path will lead her to graduate school where she will pursue a graduate degree in Computer Science. She hopes to become a professor of Computer Science at a University.



OUTSTANDING RESEARCH
LUIS JAUREGUI • APPLIED PHYSICS



Luis Jauregui is a CSU San Bernardino senior majoring in Applied Physics. He first became interested in physics, specifically alternative energies such as solar power, early in his college career. Luis has done outstanding research in physics, and has presented his results at prestigious conferences. In spring of 2014 he joined the CREST Program and worked under the supervision of Dr. Timothy Usher on Piezoelectric materials and later moved onto other organic materials with various properties. He presented his research on Piezoelectric materials at SCCUR 2014 and ERN 2015. His poster presentation at the 2015 ERN conference earned first place prize for a poster presentation in Nanoscience and Physics. Luis was also selected to participate in the 2015 summer REU Nuclear/Particle Physics REU at Old Dominion University and Jefferson Lab. He presented his REU research at the 2015 Meeting of the Minds at CSU San Bernardino, at the 2016 ERN conference, and at the American Physical Society Conference Experience for Undergraduates held in Santa Fe, New Mexico. Luis has also been very active searching for a graduate school program. He was accepted into the Ph.D. program in Physics at the University of Nebraska-Lincoln, where he started his graduate studies this fall with an emphasis on condensed matter. His main drive to obtain a Ph.D. in physics is the research, and the opportunity to teach. To him research is rewarding, challenging and never boring.



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SAN DIEGO STATE UNIVERSITY

OUTSTANDING SERVICE/LEADERSHIP

AMADEO CANDIDO • APPLIED MATHEMATICS

Amadeo Candido graduated with a B.S. in Applied Mathematics with a minor in Physics at San Diego State University. Amadeo began the LSAMP program the summer before his freshmen year. Due to his strong mathematics skills and his love of helping others understand math, Amadeo was asked to be the teaching assistant for the LSAMP program for the following two summers. In addition to being a TA, Amadeo has been a MESA Academic Excellence Workshop Leader for calculus II for the last five semesters. As a workshop leader, Amadeo not only facilitates the group learning process but also offers advice to other STEM students. On one of his evaluations a student stated "He had a vast knowledge of the subject and gave us advice in what to know for future math classes".

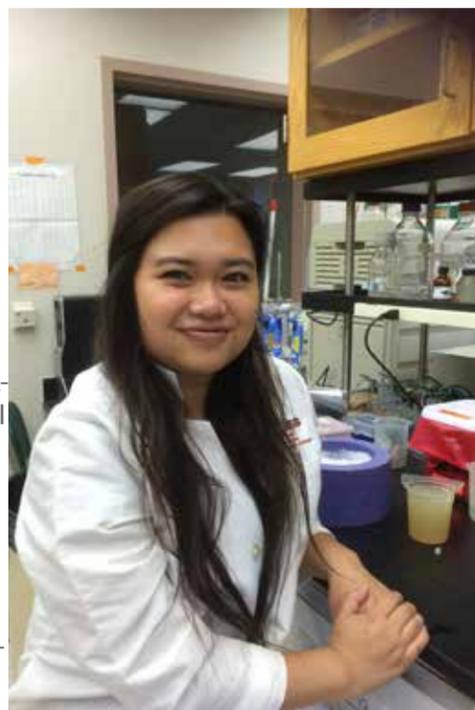
Amadeo has also been a peer mentor for Introduction to Campus Activities and Networking (ICAN) Program. As an ICAN mentor, Amadeo assisted new freshmen and transfer STEM students become familiar with the campus and introduced them to campus resources. He met with them regularly and provided advice to help them succeed. As an active participant in both LSAMP and MESA, Amadeo can be counted on to provide students with a lab tour or to be "shadowed". Amadeo has been accepted to the Master's Programs in mathematics at SDSU and CSU Los Angeles. Amadeo hopes to eventually earn a Ph.D. so he can become a professor and researcher and continue to mentor students.



OUTSTANDING SERVICE/LEADERSHIP

VANESSA QUACH • CHEMISTRY

Throughout her college career, Vanessa Quach, a chemistry major with an emphasis in biochemistry at SDSU and future optometrist, has been devoting her "free" time to helping others. Since her freshman year she has been an active member of FOCUS, the pre-optometry club on campus. As an executive board member for the organization for the last three years and its current president, she has participated in several eye glass donation drives, become certified to give vision exams and has helped to organize and administer eye assessments for children at local elementary schools and day care centers, and for adults at health fairs. In conjunction with other student organizations, she recently spearheaded efforts to extend these efforts to low-income residents in Baja California. In addition, Vanessa has been a peer mentor for College of Science's Introductory to Campus Activity and Networking (ICAN) program and a member of the College of Sciences Student Council (CSSC). As a peer mentor she helps freshmen and incoming transfer students who are science majors navigate the University's rules and regulations, the College's expectations, and find the resources they will need to meet their academic goals. As a Council member she is one of the liaisons between the students within the College and the Dean's office, Associated Students and the University President. Vanessa has been doing all of this while going to classes and conducting research with Dr. Manal Swarjo using X-ray crystallography to study tRNA biogenesis processes and their links to human disease.

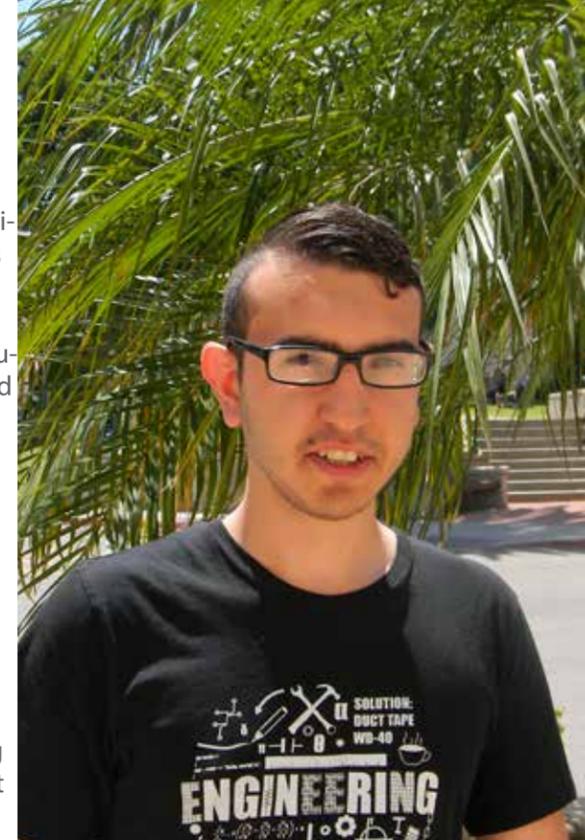


OUTSTANDING ACADEMIC

FADI GEORGE • COMPUTER ENGINEERING & MATHEMATICS

Fadi George is a senior graduating with a double major in Computer Engineering and Mathematics, with an emphasis in Computational Sciences and a minor in Computer Science from San Diego State University in Summer 2016. Not only did he accomplish this in five years, but also maintained an overall GPA of 3.78. Fadi was selected as the Outstanding Baccalaureate Candidate for the Department of Mathematics & Statistics. Fadi entered CSU-LSAMP in the summer of 2011 and formed such a strong bond with those students and the LSAMP students from summer 2010, that over the past 5 years, they have continued to study together, despite being various STEM majors. When anyone graduates and moves on to graduate school or industry, they all come together over the holidays to celebrate.

What makes Fadi stand out among other students is that even though he is a very busy student and is very active in research, Fadi has also taken the time to give back. He has been a calculus workshop leader, a tutor, and is a part of a team with the Zahn Innovation Center that helped develop CourseKey. CourseKey is a classroom management tool that uses student-owned smart-devices to turn a modern classroom into an engaging learning environment. Fadi is and always has been a very dedicated student and effectively utilizes the resources available to him to be successful.



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OUTSTANDING PERSEVERANCE

PRESTON (WILL) DOZIE ITIE • GEOLOGICAL SCIENCES



Preston (Will) Dozie Itie graduated with a degree in Geological Sciences from San Diego State University in spring 2016. Will exemplifies persistence. Seven years ago, he entered SDSU as a new freshman in the summer CSU-LSAMP Program. In his LSAMP application essay, he foreshadowed what was ahead for him: "To know what is desired will help anyone get out of a desert, but the hardest struggle to get through a desert is the barriers that will block one's path". The many obstacles that Will faced over the years are enough to make anyone quit. At times Will was without money for food, not to mention housing; living on friend's couches or in hostels. Even though financial aid ran out, Will's determination to complete his degree did not. He pushed through coursework and successfully applied to summer programs at the University of Minnesota and the Lubbock Lake Landmark Regional Research Program. When one of Will's most supportive mentors passed away from breast cancer in 2014, it seemed he might drop out of SDSU and seek employment, but he knew that is not what his mentor had hoped for him. So with determination and perseverance, Will pushed through.

Will is a persistent warrior, who knows he won't always win, but he is brave enough to return to battle always without fear, because he knows that perseverance will lead to victory someday, no matter what it takes.



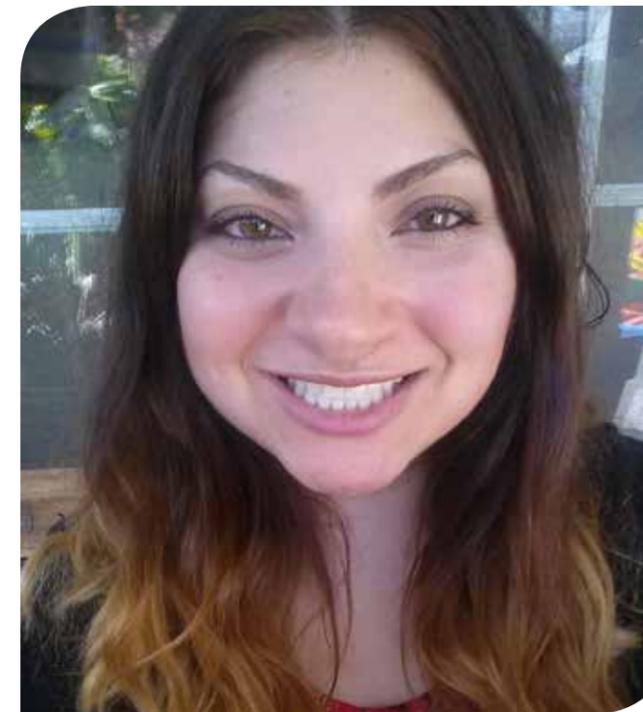
SAN FRANCISCO STATE UNIVERSITY



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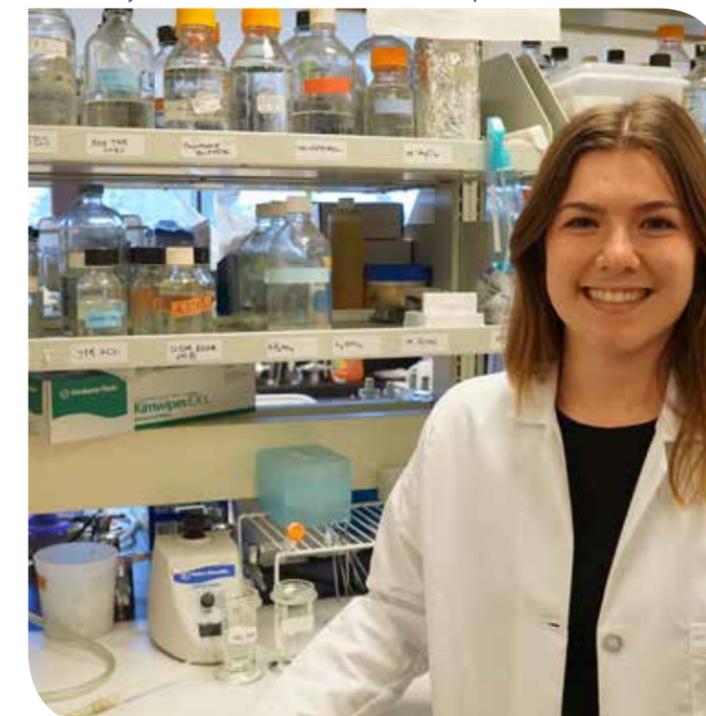


OUTSTANDING RESEARCH REBECCA BLANDINO CELL & MOLECULAR BIOLOGY

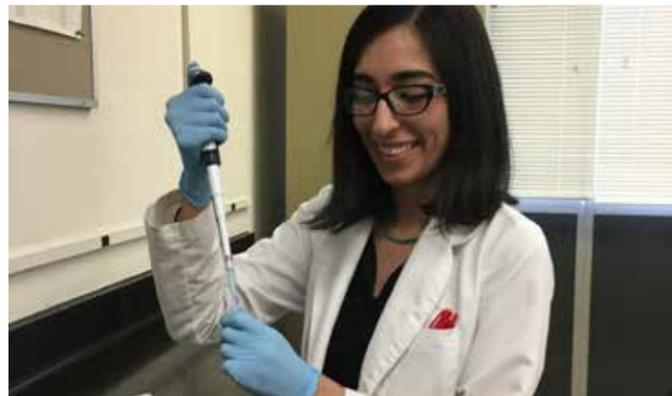
Rebecca Blandino is a Cell & Molecular Biology major at San Francisco State University. When Rebecca was a teenager she lost her grandfather to cancer. Even though this was a tragic loss, Rebecca chose to honor his memory by learning more about the disease that took his life. A high school research project set her on a journey to become a research scientist. Rebecca had to work to put herself through college which had a negative, and somewhat discouraging, impact on some of her academic pursuits. However, after discovering that she loved the lab classes that she took in community college, when she transferred to SFSU, Rebecca joined a research lab to get first-hand experience in cutting edge research. She worked in the area of developmental biology under the supervision of Dr. Carmen Domingo for three years where she studied how muscles form in the developing vertebrate embryo. Her work has been recognized through several scholarships and prestigious awards. Rebecca presented her work at the Annual Biomedical Research Conference for Minority Students and at the Society for Developmental Biologists. Rebecca also wants to inspire others. She says, "Being an undergraduate student in research has empowered me so much as a woman in the field, as well as a Latina. I want to strive to inspire women and ethnic minorities to join this field in which we are predominantly underrepresented. As a young Latina, I did not [believe] that I was capable of doing half the things that I have already accomplished."

OUTSTANDING SUCCESS THROUGH RESILIENCE TALIA HART CELL & MOLECULAR BIOLOGY

Talia Hart, a Cell & Molecular Biology Major at San Francisco State University, knows first-hand that one can take control of their future and not let their past determine their destiny. When Talia was a sophomore at SFSU, she and her family fell upon hard financial times, eventually losing their home and many of their possessions. As heartbreaking as this experience was, instead of viewing her circumstances as a sign of a grim future, Talia used the situation to find inner strength and push forward toward her goals. Talia secured a Maximizing Access to Research Careers (MARC) Scholarship and began research in developmental biology in the laboratory of Dr. Carmen Domingo. As she gained confidence in her research abilities, Talia pushed herself to apply for more funding opportunities to expand her research capabilities. In 2015, she received a summer fellowship from the Society of Developmental Biology to present her research. This summer, Talia attended New York University where she explored a biological pathway linked to cancer. Talia is currently applying to Ph.D. programs. Because of the impact of the training that she has received from her research mentor and her laboratory colleagues, Talia has developed a desire to help others in the same way. She says, "...I have found my passion and am exploring it through academic work, volunteering, and potential career opportunities. The hardships I have faced...have not stopped my determination from pursuing my goals. These hardships have only made it clear that this is the path for me."



SJSU SAN JOSÉ STATE UNIVERSITY



OUTSTANDING ACADEMIC & RESEARCH FAUNA YARZA • BIOLOGICAL SCIENCES

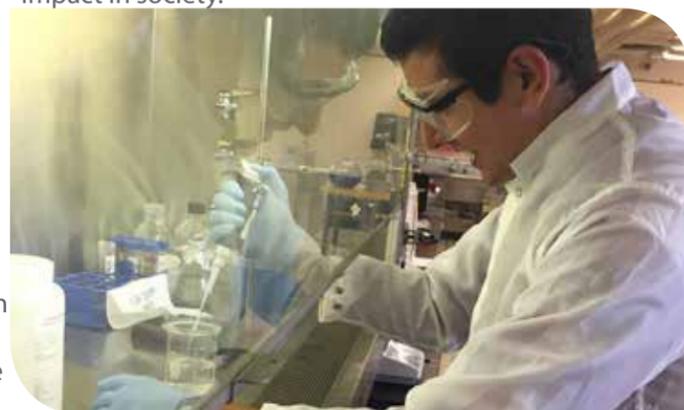
Fauna Yarza transferred to San Jose State University from Sierra College in spring 2015. Her declared major is Biological Sciences with a concentration in Microbiology. Soon after she started at SJSU, Fauna joined the bacteriology laboratory of Dr. Elizabeth Skovran. Working as an undergraduate research assistant in the Skovran laboratory, she studies the methylotrophic pathways in *Methylobacterium extorquens* AM1, a model organism that is of interest due to its potential to produce value added chemicals such as biofuels and biodegradable plastics from methanol. Fauna's work is to identify and study genes required during the lanthanide-dependent methylotrophic growth of *M. extorquens* AM1 to further understand the biological role of lanthanides. Within a year of joining the laboratory, Fauna was able to present her work at ABRCMS, where she won an award for outstanding poster presentation in microbiology.

Fauna's work in the Skovran laboratory has allowed her to gain in-depth experience with the theory and techniques that are taught in her microbiological courses. As a result, she has been able to maintain a 3.75 GPA at SJSU. Learning how to balance research and academics has been extremely valuable to Fauna as she advances towards a Ph.D. in microbiology. Additionally, Fauna has begun performing outreach and spending time at a primarily Hispanic-serving elementary school with students who are struggling academically or with behavioral issues. As she continues through her education and into her career, Fauna hopes that she can continue mentoring students, particularly students of color who are pursuing a career in science.

OUTSTANDING ALUMNUS, ACADEMIC, & RESEARCH

JOSE ALVAREZ • BIOMEDICAL ENGINEERING

Jose Alvarez graduated from San Jose State University in December of 2015 with a B.S. degree in Biomedical Engineering. At a young age he concluded that education was the key to success and was the first in his family to attend a four year university. Jose worked alongside Dr. Folarin Erogbogbo researching the synthesis and characterization of graphene quantum dots for biomedical applications. Subsequently, Jose worked on developing an accurate fluorescent targeting system with new bio-conjugated graphene quantum dots that are optically emissive in the near infrared range and amenable to near infrared excitation for selective bioimaging. He presented his research at both the 6th Annual Bay Area Biomedical Device Conference in San Jose, CA and the 14th Annual Biomedical Research Conference for Minority Students in San Antonio, TX. With a background in fluorescent imaging, Jose was given the opportunity to perform research in oncology at Stanford University with Dr. Stefanie Jeffrey in the summer of 2015. At Stanford he collaborated with cross-functional teams from fields such as cancer cell biology, nano-engineering, and imaging to investigate novel biomarkers for breast cancer studies. As the technical lead, Jose worked on developing a fluorescent nano-carrier targeting system for the isolation, enumeration, and characterization of rare circulating tumor cells. Currently, Jose works in the industry at Varian Medical Systems as a Regulatory Submissions Intern. He aspires to help improve the quality of life for patients around the world and make a positive impact in society.



OUTSTANDING ACADEMIC & RESEARCH CYNTHIA OUANDJI • BIOMEDICAL ENGINEERING

Cynthia Ouandji is a senior Biomedical Engineering major at San Jose State University. Since her start at De Anza Community College, she has consistently maintained a good GPA, earning membership into their honors program and taking honors-level science courses. After transferring to SJSU, she continued to maintain her GPA, earning a spot in the Tau Beta Pi Engineering Honor Society for her academic distinction. Cynthia's research background began in the microfluidics lab. She is currently working on two different research projects. The first focuses on developing a cyclic olefin copolymer technique to extract noncovalently held lipids from *Mycobacterium smegmatis*. Her second research project involves synthesizing a cost-effective silver-based antimicrobial compound. Her project is funded by the NSF I-Corps program. For her team's research in exploring commercialization of their project, they received the 2016 judges' Special Recognition Award at the I-Corps Student Challenge. In 2015, Cynthia was one of ten students accepted into the Summer Program Undergraduate Research in the Life and Biomedical Sciences (SPUR LABS), conducting research in the Cardiac Computing lab. Her project focused on troubleshooting an error in the UCLA computational heart cell model. At the end of summer, she provided recommendations on how to correct a model used by researchers worldwide. She presented her results at both the 2015 SPUR Undergraduate Research Poster Session and at ABRCMS. Cynthia wants to continue to a Ph.D. degree because she wants to help develop technological innovations that make receiving healthcare more affordable and efficient to underserved populations and developing countries.

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OUTSTANDING ALUMNA WITH COMPELLING PERSONAL STORY BEATRIZ CAMACHO • BIOCHEMISTRY

Beatriz Camacho completed her degree in Chemistry, with a concentration in Biochemistry at San Jose State University in May, 2015. She was accepted into the Chemistry Ph.D. program at the University of Wisconsin, where she was able to secure a position in the UW LSAMP Bridges to the Doctorate Program. Beatriz grew up in a small town in Mexico where women do not have a lot of educational opportunities. As a child she was not exposed to science, nor did she ever imagine that she would become a scientific researcher. She's the first woman in her family to attend college. As an undergraduate, she was exposed to three different research projects. This, combined with taking classes across disciplines, allowed her to determine that she wanted to pursue a Ph.D. in Chemistry, with a concentration in Chemical Biology. She is fascinated with everything related to the cell, specifically DNA, RNA and proteins. Her project at the University of Wisconsin focuses on sirtuins. Sirtuins are NAD⁺-dependent protein deacetylases/deacylases that play crucial roles in transcription, metabolism, and cellular stress responses. There are seven human sirtuins (SIRT 1-7), each with diverse subcellular localization and protein substrates. Even though sirtuins can be considered deacylases, the activities of several other human sirtuins are unsettled. She is working to understand the role played by SIRT1, SIRT4, and SIRT6. Betty's long-term goal is to become a biochemistry professor and researcher. She hopes to be able to influence more minority students to pursue a STEM education.



CAL POLY

SAN LUIS OBISPO

OUTSTANDING RESEARCH

HELENI RAMIREZ • KINESIOLOGY

Heleni Ramirez, a Kinesiology major with a Health Science concentration and a Statistics minor at California Polytechnic State University, San Luis Obispo, graduated in Spring 2016. Heleni has been involved in research since she joined CSU-LSAMP her sophomore year, when she developed her application for the University of Vermont's Summer Neuroscience Undergraduate Research Fellowship. While there, she looked at working memory networks in response to a nAChR blockade in individuals with prodromal schizophrenia, while simultaneously assisting Dr. Alexandra Potter on a research project investigating impulsivity. She returned to Cal Poly to serve as a research assistant for a Kinesiology graduate student's thesis project by scoring and coding responses to survey materials and preparing data for descriptive analysis. In her junior year Heleni presented her neuroscience research poster at Emory University's STEM Symposium, taking 3rd Place for Undergraduate Student Poster Presentations. In summer 2015, she was a member of the Fostering Advancement & Careers through Enrichment Training in Science (FACETS) cohort at the Harvard T. H. Chan School of Public Health. She worked alongside two other participants, under the guidance of Dr. Gary Adamkiewicz, to develop a proof-of-concept study focused on using mobile data, collected by wearables and nearables, to estimate time activity for use in indoor air quality studies. Heleni has twice served on Cal Poly's LSAMP Undergraduate Researchers Panel, and remains well connected to the LSAMP program. She is plans to pursue a master's degree in biostatistics or epidemiology.



OUTSTANDING RESEARCH

MICHAEL AGAVO • MECHANICAL ENGINEERING

Michael Agavo was born in Fresno, CA and raised in Michoacán, Mexico. He transferred to Cal Poly, San Luis Obispo from Reedley College in 2013, where he first developed an interest in research by assisting his physics instructor, Lauren Novatne, in partnership with NASA/IPAC Teachers Archive Research Program, in cataloging young and old stars to better understand their life cycle. At Cal Poly, Michael became an active member of the LSAMP Program, as well as the Society of Petroleum Engineers (SPE), of which he is the current president. He is also a member of the Society of Hispanic Professional Engineers and the Multicultural Engineering Program at Cal Poly.

Through CSU-LSAMP, Michael traveled to Mexico to research Solar-Heating Water Systems that are being used in developing countries, but not in the U.S. Using this research as the basis for his senior project, he proposed to study the performance of these systems and find ways to make them more affordable. His proposal was approved and sponsored by Dr. Mason Medizade, a Mechanical Engineering professor at Cal Poly. Michael also worked with Dr. Medizade on a separate research project, studying ways of reducing greenhouse gas emissions caused by the transportation of gas and oil through existing pipelines. He presented his work in the Student Paper Competition hosted by the University of Fairbanks, Alaska at the Society of Petroleum Engineers Western Regional Meeting in Anchorage, Alaska in May 2016. Michael earned his B.S. in Mechanical Engineering in June 2016.



OUTSTANDING RESEARCH ANA NUÑEZ-CASTREJON • BIOLOGICAL SCIENCES & MICROBIOLOGY

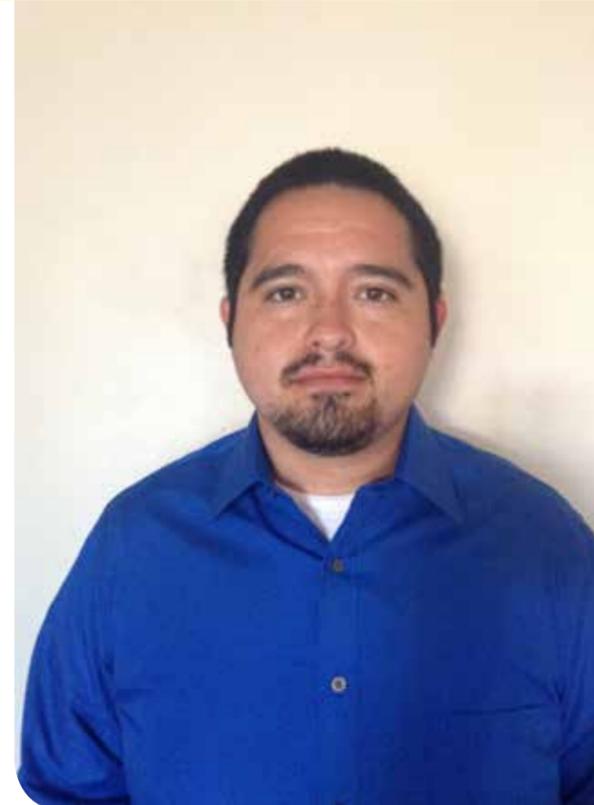
Ana Nuñez is a senior Biological Sciences and Microbiology double-major at Cal Poly, San Luis Obispo, with a minor in Spanish. Ana joined LSAMP in her second year and found her first research experience studying herbivory in rainforest plants, and parasites in deep ocean fish in the 2014 CSU-LSAMP International Research Experience in Costa Rica. Upon her return, she served on an LSAMP panel for other students interested in undergraduate research, and presented her Costa Rica research in a poster presentation at the 2014 SACNAS National Conference. The following summer, Ana was selected as one of Cal Poly's College of Science and Mathematics' Summer Researchers, and began working with Dr. Sandi Clement researching the role of cell signaling processes in the post-transcriptional regulation of gene expression in human cells. She has continued this research over the past year, sometimes performing tasks that would typically be carried out by advanced graduate students. Ana recently presented her work with Dr. Clement at the Experimental Biology Conference in San Diego in April 2016. She is also listed as co-author of a paper that will be submitted for publication in the near future. Ana plans to pursue graduate school in the fields of microbiology or molecular biology upon completion of her degree in Fall 2016.

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OUTSTANDING RESEARCH RAUL NAVA • BIOLOGICAL SCIENCES

Raul Nava is a winter 2016 graduate of Cal Poly, San Luis Obispo, with a B.S. in Biological Sciences and a concentration in Cellular and Molecular Biology. Raul began conducting research on Cal Poly's campus with Dr. Sandi Clement through the Bridges to Baccalaureate program. After he transferred from Allan Hancock College, Raul immediately built his support network and joined LSAMP. He continued to work with Dr. Sandi Clement on the role of cell signaling processes in the post-transcriptional regulation of gene expression in human cells. He presented this research at the Experimental Biology Conference in 2014 and again at Cal Poly's College of Science and Mathematics Student Research Conference in 2015. Raul has served on multiple panels for LSAMP, and became an EOP mentor for fellow transfer students. Raul is especially talented at training other students in the lab, and has received commendations on his "chalk talk." Raul is also co-author on a paper that will be submitted for publication in the near future (with Ana Nuñez). Raul intends to pursue graduate studies in Cellular and Molecular Biology.





California State University SAN MARCOS

OUTSTANDING ACADEMIC MAYLIN CALDWELL • BIOLOGY



Maylin Caldwell is a veteran of the Marine Corps. She transferred to CSUSM from Palomar Community College in Fall 2015 where she was a scholar of the Bridges to the Baccalaureate Program. Since transferring to CSUSM, Maylin has maintained an impressive 3.88 GPA while taking challenging courses and conducting research in the Plant Pathology Laboratory of Dr. Matthew Escobar. Her focus in the laboratory is on identifying genes in Arabidopsis that activate mechanisms responsible for eliminating reactive oxygen species. By silencing these genes, she intends to determine their specific functions as well as the consequences of having elevated levels of reactive oxygen species. Because of her academic and research excellence Maylin was recently accepted into the competitive Maximizing Access to Research Careers (MARC) Program. She was also recently awarded the California State University Trustees' Award for Outstanding Achievement. Maylin is a well-rounded individual who believes in giving back to the community. She is Founding President of the local chapter of the American Association of University Women at CSUSM and is a STEM Ambassador, roles that allow her opportunities for outreach to students of all ages. After graduating from CSUSM in 2018, Maylin plans to attend a doctoral program with a long-term goal of becoming an agricultural scientist and conducting research to develop better agricultural methods.

OUTSTANDING ALUMNUS & SERVICE/LEADERSHIP HECTOR GALVEZ • MOLECULAR CELL BIOLOGY

Hector Galvez graduated with a B.S. in Molecular Cell Biology from California State University, San Marcos in spring 2016. For the last two years, Hector has performed research in the virology laboratory of Dr. James Jancovich examining the potential pathogenic properties of a ranavirus. This important work has implications for better understanding the mechanisms of the host-pathogen interaction. In summer 2015, Hector conducted research in the laboratory of Dr. Kay Macleod at the University of Chicago where he made contributions to unraveling the potential role of mitochondria in breast cancers. His excellence in research and academics led to acceptances to multiple doctoral programs. He joined the Biological Sciences doctoral program at the University of California, San Diego this fall. Hector is a well-rounded individual who believes in giving back to the community. He has participated in outreach events with the local chapter of the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), an organization committed to increasing diversity in the sciences. He has also volunteered to bring the excitement of science to local elementary schools. Hector was a STEM Center Tutor and a STEM Ambassador at CSUSM, two positions that further speak to his academic strengths and commitment to helping develop future scientists. After receiving his Ph.D. from UCSD, Hector's goals include continuing research in the field of Cancer Metabolism and ultimately leading his own research team in this area.



OUTSTANDING RESEARCH SHARON PATRAY • BIOCHEMISTRY

Sharon Patray transferred to CSUSM from MiraCosta Community College and is expected to earn a B.S. in Biochemistry in spring 2017. Shortly after becoming an LSAMP Scholar in 2012, she joined the biochemistry laboratory of Dr. Sajith Jayasinghe where she has been examining the protein structure of CsgE. This protein is involved in the formation of curli fibers found on the outer surfaces of some bacteria, and enables these bacteria to attach to their host. Impressively, while still an undergraduate, Sharon is co-author on a peer-reviewed article in the journal *Intrinsically Disordered Proteins*. Sharon also conducted research in summer 2015 at Johns Hopkins University in the laboratory of Dr. Joel Schildback where her research focused on isolating mycobacteriophages from the environment, which allowed her to contribute to a database of phage genomes. Based on academic and research excellence, Sharon was accepted into the competitive Research Initiative for Scientific Enhancement (RISE) Program in 2014. Sharon has presented her work at national and regional conferences such as ABRCMS and CSUPERB. Sharon is a well-rounded individual who is involved in Club Biomed, the American Chemistry Society Club and the American Association of University Women. Sharon will be applying to graduate programs this fall and hopes to work for the Center for Disease Control conducting virus related research after receiving her Ph.D.

OUTSTANDING ALUMNUS & RESEARCH TEMET MCMICHAEL • BIOMEDICAL SCIENCES

Temet McMichael is completing his fourth year of graduate study in the Biomedical Sciences Graduate Program at Ohio State University. Temet transferred to CSUSM from Mount San Jacinto community college and received a B.S. in Biochemistry in 2012. In 2011 he began making important contributions in the marine natural products laboratory of Dr. Jacqueline Trischman. Temet focused on the isolation of secondary metabolites secreted by marine bacteria with the goal of identifying a new class of antibiotic for mycobacterium tuberculosis, the causative agent of tuberculosis. Currently, Temet is working on his dissertation project in the laboratory of Dr. Jacob Yount, focusing broadly on innate viral immunology. He studies a family of interferon-induced proteins that restrict a wide range of viruses including Ebola, SARS, West Nile, and Influenza. This work has led to authorship of five publications in scientific journals. Temet has earned several recognitions, including selection as a Gilliam fellow of the prestigious Howard Hughes Medical Institute, an ASM Robert D. Watkins Graduate Research Fellowship, and a Ford Foundation Fellowship honorable mention. He was a mentor for the Tribal Youth Council and a high school tutor for the La Jolla Indian reservation to which he belongs. Currently, he is the President of the Ohio Virology Association and a member of SACNAS. Upon receiving his Ph.D. from Ohio State University, Temet plans to pursue his passion for science, contribute to those in need, and foster the development of underrepresented minorities.



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OUTSTANDING ACADEMIC & SERVICE/LEADERSHIP
RUBY SUAREZ MORALES • MATHEMATICS

Ruby Suarez is the first in her family to pursue a college education. Growing up, Ruby knew that going to school and getting an education was very important; but had a hard time imagining the pursuit of a college degree. When she was younger, she had many teachers who did not believe in her ability to learn. Being a Latina who could not write, read, or speak English, she was placed in classes for students with learning disabilities. This was the biggest challenge she faced growing up because she started to believe she was not smart enough to pursue higher education. It was not until she was in 6th grade that she met a teacher who finally challenged her and within a year, had her reading books for fun and enjoying mathematics.

Ruby has earned excellent grades while at Sonoma State. She has a 3.431 cumulative GPA, which is exceptional for any student in Mathematics. Ruby worked as a student assistant in the math department for the past two years where she was beloved by the department faculty for her cheerfulness, quality of work, and sense of responsibility. Ruby graduated in May 2016 with a B.S. in statistics, and was selected by the faculty of the Mathematics Department for the award of Graduation with Distinction. Ruby plans to continue her education. She has been accepted into Master's programs for statistics at three different universities.



OUTSTANDING ACADEMIC & RESEARCH
PATRICIA DE LA TORRE • BIOCHEMISTRY

Patricia De La Torre was born in Modesto, California to immigrants from Jalisco, Mexico. Her family moved around the Bay Area and Patricia attended elementary school in Richmond, San Pablo, and Vallejo; cities where she felt unsafe. Her family has lived in Santa Rosa since 2008 and Patricia feels it is the safest city she has lived in. Patricia currently lives with her parents and three younger sisters; her family is very close and together they have overcome hardships and rejoiced in each other's successes. Patricia graduated from Montgomery High School in 2014 and worked in a restaurant during that summer. She continued to work there while attending Sonoma State University in order to pay her bills, and buy textbooks and gas.

Although Patricia initially had reservations about her declared major, a BS in Biochemistry, she is now 100% sure of her decision. She has earned impressive grades, but most importantly has gained new and exciting experiences. She was able to dedicate herself to chemistry and, with the assistance of a CSU-LSAMP research stipend, has been conducting research with Dr. Carmen Works, the chair of the Chemistry department. She also works in the chemistry stockroom and received a summer research award from the School of Science and Technology. With her year-long involvement in research, she attended CSUPERB and the Miller-UC Davis science symposiums. In summer 2016, she attended the North Carolina State University REU program. Patricia plans to continue her research and hopes to go to graduate school.



OUTSTANDING PERSONAL MOTIVATION
JESSICA TORRES • BIOLOGY

Jessica Torres attended Santa Rosa Junior College and received an A.S. in Natural Sciences, and a certificate in Veterinary Technology. In January, she passed both the State and National board exams to become a Registered Veterinary Technician. Jessica started her animal care career volunteering at Safari West African Wildlife Preserve. When she transferred to Sonoma State in the fall of 2015 she thought she would get her B.A. and continue her career as a Veterinary Technician, but thanks to the CSU-LSAMP program she now has opportunities that she never thought possible. Recently she was admitted to the CSUMB Summer Expedition in Costa Rica with funding provided through LSAMP. This allowed her to gain field research experience. Jessica also met an inspiring and dedicated graduate student, Nicole Karres, who took Jessica under her wing and is teaching her how to organize and manage one of Dr. Nicolas Geist's research projects that analyzes quality of the aquatic environments between two ponds by comparing their populations of benthic macroinvertebrates.

Jessica is the first in her family to attend University. She attributes her success to the encouragement of her mother and grandmother. In the future, Jessica wants to attend a graduate program at SSU. Jessica believes without the support of LSAMP, and people like Nicole, she would have never thought she had the potential to become a scientist. Her career goals now focus on inspiring other women and Native Americans to recognize their own potential through teaching and research.



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California State University | Stanislaus

OUTSTANDING ACADEMIC CELESTE DIAZ • BIOLOGY

Celeste Diaz is majoring in Biology with a concentration in Molecular and Microbial Biology and a minor in Chemistry. She is a first generation college student who overcame the challenges of graduating from a disadvantaged high school. She found her passion for Biology at CSU Stanislaus when introduced to it the end of her freshman year. She has maintained a high GPA throughout her time at CSU Stanislaus and has been on the Dean's List every semester. She was also recognized by the honor society Phi Kappa Phi her sophomore year as one of the top students in her class and went on to be initiated in her junior year.

Celeste has been involved in research since sophomore year as a CSU-LSAMP research intern under the guidance of Drs. Thao and Grebner. Celeste and the group studied the effects of first hand, second hand, and third hand cigarette smoke exposure on plasma insulin and glucose levels in Swiss Webster mice. She presented at conferences at CSU Stanislaus and the West Coast Biological Sciences Undergraduate Research Conference where the project won first place. She is currently studying the effects of first hand cigarette smoke on the process of angiogenesis. Her research experience and love for the field of biotechnology led her to receive an internship at Genentech, where she returned this summer. She hopes to work in oncology research after pursuing a Ph.D. in Cancer and Cell Biology. She hopes to inspire future students to do what they love.



OUTSTANDING ALUMNUS & RESEARCH JAKE BIEWER • GEOLOGY

Jake Biewer investigated many possible directions to find his calling during his study at Modesto Junior College. At first, he leaned toward anthropology, loving the hands-on physicality found in physical and forensic anthropology, and archeology; however, he found the cultural elements were not as enthralling. Only in his last year did he stumble into a geology class and realize he was home. He earned his Bachelor of Science in Geology in late 2015.

While at CSU Stanislaus, with the help of CSU-LSAMP, Jake spearheaded research on the five-million-year-old exposure of the Mehrten Formation at nearby Turlock Lake. His research focused on location and re-documentation of fossil localities in the lake which necessitated travel by kayak, description and identification of fossil material of a Galapagos-sized tortoise, and investigation of the tooth morphology of a giant tusk-toothed salmon. Jake worked with the local Great Valley Museum to create a display of these paleontological resources in order to educate and inspire the youth of his home town. In the pursuit of science, Jake has traveled out-of-state and even out-of-country in order to present his research at major paleontology conferences or to visit exotic terranes. His travels include Canada, Germany, and Texas. Jake first-authored a paper, his senior thesis, on the fossil giant tortoise, published through Berkeley's Paleobios. Jake was accepted for graduate school at CSU Fullerton where he will continue in the field of paleontology, but returned to CSU Stanislaus to tutor geology during the summer.



OUTSTANDING RESEARCH & SERVICE/LEADERSHIP GUADALUPE CALVILLO • CHEMISTRY



Guadalupe Calvillo is a first generation college student and the oldest of six children from a family that has been working as part of California's agricultural workforce. She is currently a student at CSU Stanislaus majoring in Chemistry. She always knew she had the potential to become a science major because she likes to solve problems, to experiment, and has an interest in new inventions.

Guadalupe joined the research group of Dr. Elvin A. Aleman in the summer of 2014. She works on a research project studying the characterization of the photophysical and electrochemical properties of free base corrole molecules (H3TPCor). She calculates the potentials of the oxidized and reduced species of H3TPCor molecules using Cyclic Voltammetry. Guadalupe has presented her research at the Northern California ACS Undergraduate Research Symposium, the CSU Program for Education and Research in Biotechnology (CSUPERB), the National American Chemistry Society Meeting, and at the annual research competition at CSU Stanislaus. In addition, she is an active member of the Warriors Chemistry Club, and the American Chemical Society student chapter organization at Stanislaus, where she served as an officer in 2015-2016. She has participated in events to promote chemistry awareness in the community and she has volunteered in many chemistry learning service events, such as Science Saturday, Science Day, Science Olympia, and Earth day. Guadalupe will continue her research with Dr. Aleman and would like to continue graduate studies in chemistry after her graduation in May 2017.

OUTSTANDING ACADEMIC TAIGA YAMAGUCHI • BIOLOGY

Taiga Yamaguchi is an undergraduate student at California State University, Stanislaus seeking a B.S. in Biology with a concentration in Ecology. Through his time volunteering at Ohlone Humane Society Wildlife Rehabilitation Center in Fremont, CA, Taiga developed a passion for wildlife, and decided to pursue a career dealing with mitigating biodiversity laws. Upon graduation, he will seek employment opportunities with US Fish and Wildlife or National Oceanographic and Atmospheric Administration. He plans on attending graduate school after gaining field experience with these agencies.

Taiga strives for excellence, and through his dedication and hard work he maintained Dean's List standing for 5 consecutive semesters. This put him in the top 7.5% of all juniors at CSU Stanislaus, and a nomination to join the Honors Society of Phi Kappa Phi. He has also been a member of the University Honors Program from his first semester, and he is currently working on finding a solution for ocean acidification for his Senior Capstone Project. Taiga's academic achievements have been acknowledged by many faculty members, which led him to the positions of Peer Academic Leader in the dorms, Supplemental Instruction Leader for General Chemistry I, and a paid research intern under the mentorship of Dr. Ritin Bhaduri for aquatic ecology research funded by the USDA. His research focuses on the distribution and habitat selection of Siberian Prawn, *Exopalaemon modestus*, a shrimp species that resides in the San Joaquin River that has been known to be an invasive species that is still under-studied.



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