



Preparing scholars for graduate education in **STEM** since 2000.

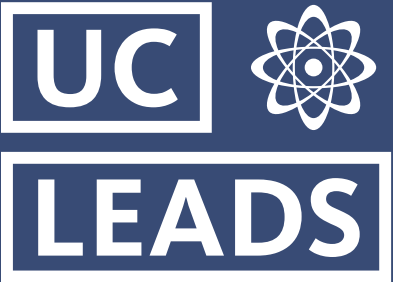
UNIVERSITY
OF
CALIFORNIA

Leadership Excellence
through Advanced
Degrees (UC LEADS)

20-21
Annual Report

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Preparing Promising Scholars for Graduate School and Beyond

The University of California Leadership Excellence through Advanced Degrees (UC LEADS) program engages and educates California’s future leaders by preparing promising students for advanced education in science, technology, mathematics and engineering (STEM). UC LEADS identifies exceptional UC undergraduate students with great potential to succeed in these disciplines, but who have experienced situations or conditions that have adversely impacted their advancement in their field of study. UC LEADS Scholars embark upon a two-year program of scientific research and graduate school preparation guided by faculty mentors and UC LEADS staff. By providing valuable educational experiences for a diverse pool of graduate applicants, the UC system empowers a new generation of leaders.

The Year in Review

A MESSAGE FROM THE DIRECTOR



Michele Johnson
UC LEADS Statewide Director

What a year! We started off the 2020 cohort with our first ever virtual summer program. UC LEADS campus leadership teams re-envisioning their summer programming to be offered online. They worked hard to ensure their scholars would have the funding and professional development they were planning on, while emotionally supporting them through the isolating and uncertain transition. Faculty mentors also had to reimagine their research focus to engage scholars remotely. I am so grateful for everyone who made this summer a success.

In addition to local summer programming, many campuses offered their workshops systemwide, including a weekly Scientific Writing Series taught by UCLA's Dr. Fernando Gomez, and a Summer STEM Speaker Series offered by UC Berkeley's Diana Lizarraga and Christian Noble. The UC LEADS Executive Steering Committee also organized a series of systemwide workshop on Mentorship, Social Justice, and Creativity in Research, as well as a Graduate Division Panel introducing scholars to outreach representatives from all 10 UC Graduate Divisions. Despite the drawbacks of the online format, many students appreciated the additional offerings.

Our 21st Annual Koret UC LEADS Research and Leadership Symposium was also hosted virtually in March 2021. It was a great way to include family and friends in a way we have never done in-person. We look forward to being together in person again soon.

A handwritten signature of Michele Johnson in black ink. The signature is cursive and reads "Michele Johnson".

Leadership in scholarship

IMPACT THROUGH SCHOLARLY CONTRIBUTIONS

These 2020-2021 UC LEADS Scholars are already making an impact through their scholarly publications:

Mary Eloise Fernandez / UC Merced

Brock KM, Madden IE, Ramos C, Degen R, Stadler S, Ayton C, **Fernandez ME**, and Reyes-Servin J. (in review). Color morph diversity varies from island to island in a repeated fashion in the Aegean wall lizard (*Podarcis erhardii*). *Herpetology Notes*.

Benito Gonzalez / UC Santa Barbara

Gomez SJ, Sarte PM, Zelensky M, Hallas AM, **Gonzalez BA**, et al. (2021). Absence of moment fragmentation in the mixed B-site pyrochlore Nd₂GaSbO₇. *Physical Review B*. 103, 214419. DOI: 10.1103/PhysRevB.103.214419

Janelle Coleen Dela Cueva / UC San Diego

Dela Cueva JCA, Zheng L, Lawlor B et al. (2020). Blast wave interaction with structures: an application of exploding wire experiments. *Multiscale and Multidiscip. Model. Exp. and Des.* 3, 337–347. <https://doi.org/10.1007/s41939-020-00076-0>

Jasmine Posada / UC Merced

Apostol AC, et al. (in review). Prenatal inflammation perturbs fetal hematopoietic development and causes persistent changes to postnatal immunity. *JEM*. Acknowledged.

Apostol AC, Otsuka K, **Posada J**, and Beaudin AE. (in preparation). The effects of INF γ from maternal infection with *T gondii* on fetal hematopoiesis.

Evanejlin Mahmoodi / UC Santa Cruz

Elor A, Powell M, **Mahmoodi E**, Teodorescu M, Kurniawan S. (2021). Gaming Beyond the Novelty-Effect of Immersive Virtual Reality for Physical Rehabilitation. *IEEE Transactions on Games*. PP(99):1-1. DOI:10.1109/TG.2021.3069445

Vivian Hoang / UC Santa Barbara

Han D, Longhini AP, Zhang X, **Hoang V**, Wilson M, Kosik KS. (in review). Dynamic Assembly of mRNA m⁶A Writer Complex via Substrate Dependent Liquid-Liquid Phase Separation. *PLOS Biology*.

Eduardo Montano / UC Irvine

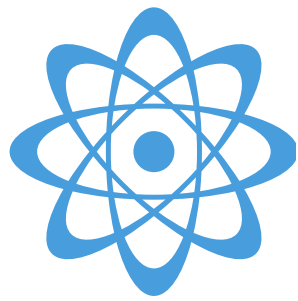
Montano EE, Peraza Hernandez EA. (2021). Kinematic design of deployable structures with low actuation requirements based on pop-up folding. *Proceedings of the ASME 2021 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*. August 17-20, 2021.

Pamodya Peiris / UC Riverside

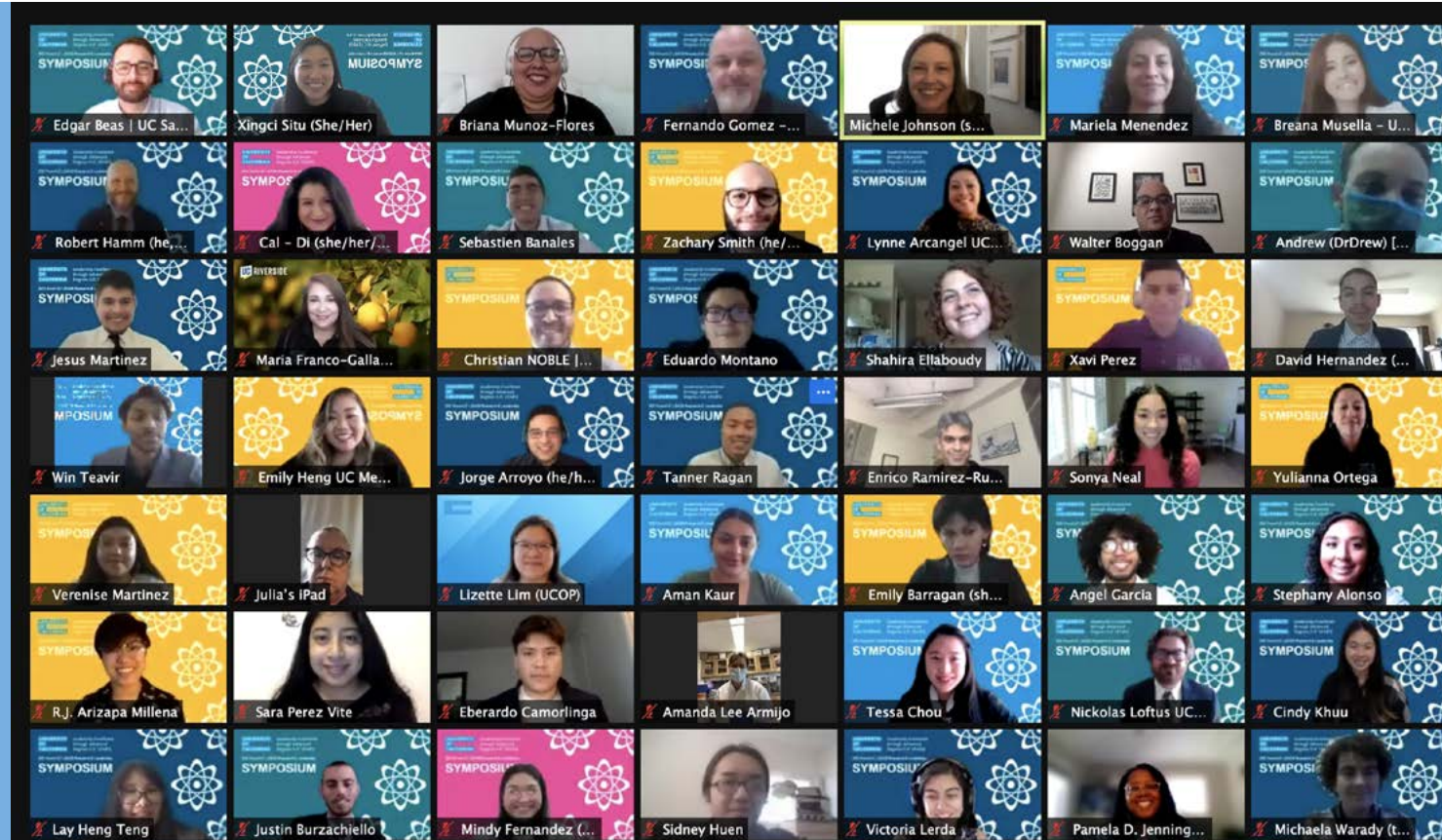
Peiris P, Mestas J, Modi A, Enriques-Barrundia D. (2021). Characterization of Infant Reaching Action Motion for Action Recognition. UC Riverside Undergraduate Research Symposium. Awarded the Best BCOE Emerging Research Presentation. <https://www.youtube.com/watch?v=5oEiZYvZWQ>

Pedro Valencia Landa / UC Merced

Valenzuela Toro A, **Valencia Landa P**, and Koch PL. (in prep). Foraging of northern elephant seals: Revelations from a dental diary.



2021 UC LEADS Koret Research And Leadership Virtual Symposium MARCH 6, 2021



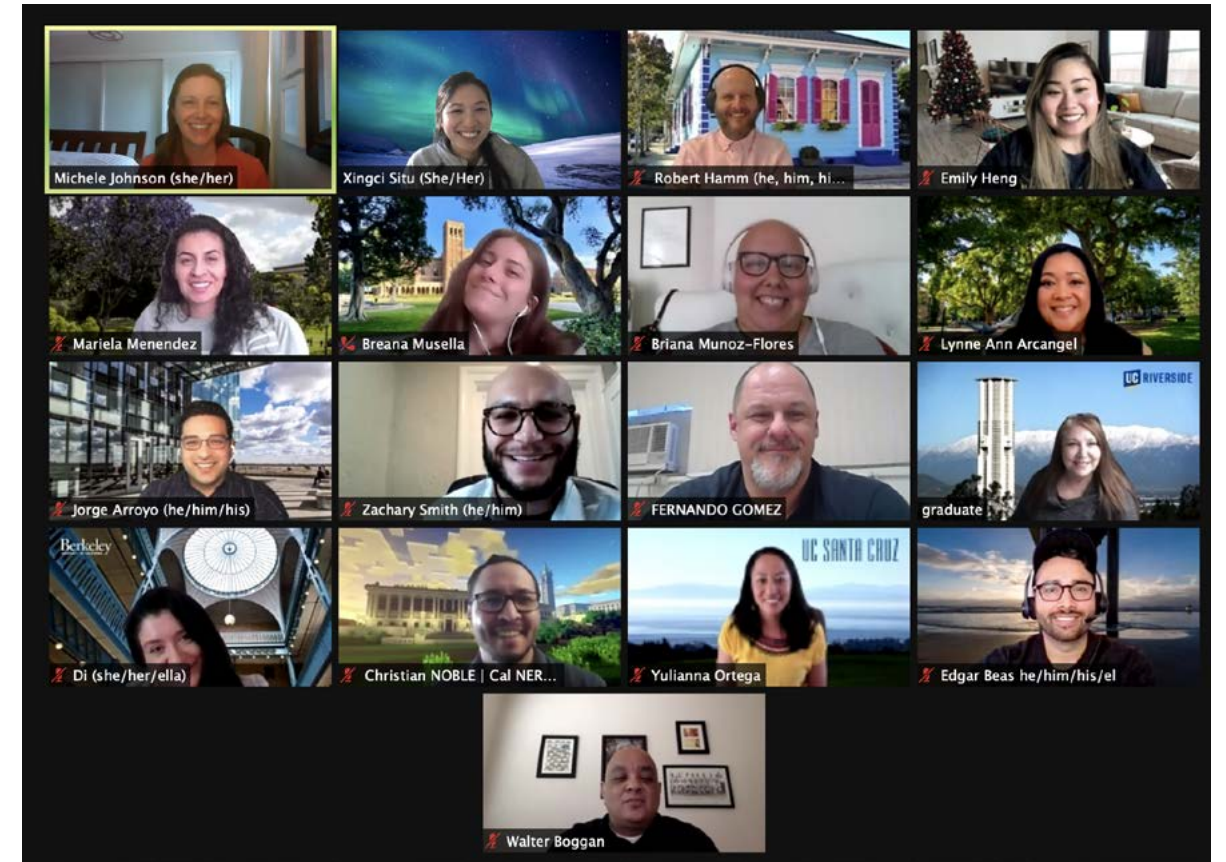
The 21st Annual Koret UC LEADS Research and Leadership Symposium was held virtually in March 2021, with research presentation judging occurring online Monday March 1 through Wednesday March 3. Forty-seven faculty and alumni judges met with 50 scholars during the online judging. Then at the Symposium, 47 scholars presented their research posters to peers, friends, family, and PIs. The online format allowed for this special added attendance.

Dr. Andrew Ekelem, Chief Product Officer at Evolution Devices, and UC Berkeley UC LEADS Alum, opened the March 5th event with an inspiring morning keynote. Then later, we were able to host multiple alumni panels, allowing for more in-depth conversations between scholars and alumni about career planning and graduate school.

The event wrapped with awards and a celebration of all the scholars' hard work. The Research Presentation Awardees are listed below. Finally, the Graduate Deans' Leadership Award was given to three scholars who exhibited extraordinary leadership during their tenure as UC LEADS scholars. Awards went to Diana Cruz Garcia from UC Merced, Shahira Ellaboudy from UC Santa Barbara, and Jose Magana from UC Berkeley. This \$500 award was selected by the UC LEADS Executive Steering Committee, and funded by the deans of all 10 UC Graduate Divisions.

Other nominees, and recipients of the Campus Leadership Awards were Kelly Chau (UCD), Jorge Mendoza (UCI), Luke Elissiry (UCLA), Arthor Bernal (UCR), Xavier Perez (UCSD), and Verenise Martinez (UCSC).

UC LEADS Campus Leadership



L to R: UC LEADS Campus Leadership Michele Johnson, Xingci Situ, Robert Hamm, Emily Heng, Mariela Menendez, Breana Musella, Briana Muñoz-Flores, Lynne Arcangel, Jorge Arroyo, Zachary Smith, Fernando Gomez, Maria Franco-Gallardo, Diana Lizarraga, Christian Noble, Yuliana Ortega, Edgar Beas, Walter Boggan



Research Presentation Award Winners

Biological Sciences

Alexander Del Toro, UC Merced
Pedro Valencia Landa, UC Merced
RJ Millena, UC Davis

Engineering and Computer Sciences

Robert Bloom, UC Irvine
Xavier Perez, UC San Diego
Eduardo Montano, UC Irvine

Physical Sciences and Mathematics

Luke Elissiry, UC Los Angeles
Garrett Kukier, UC Los Angeles
Lorraine Nicholson, UC Los Angeles

Honorable Mentions

Biological Sciences

Tessa Chou, UC Santa Barbara
Andy Nguyen, UC Los Angeles
Noah Gaitan, UC San Diego

Engineering and Computer Sciences

Emily Barragan, UC Irvine
Michele Campbell, UC Merced
Justin Burzachiello, UC Riverside

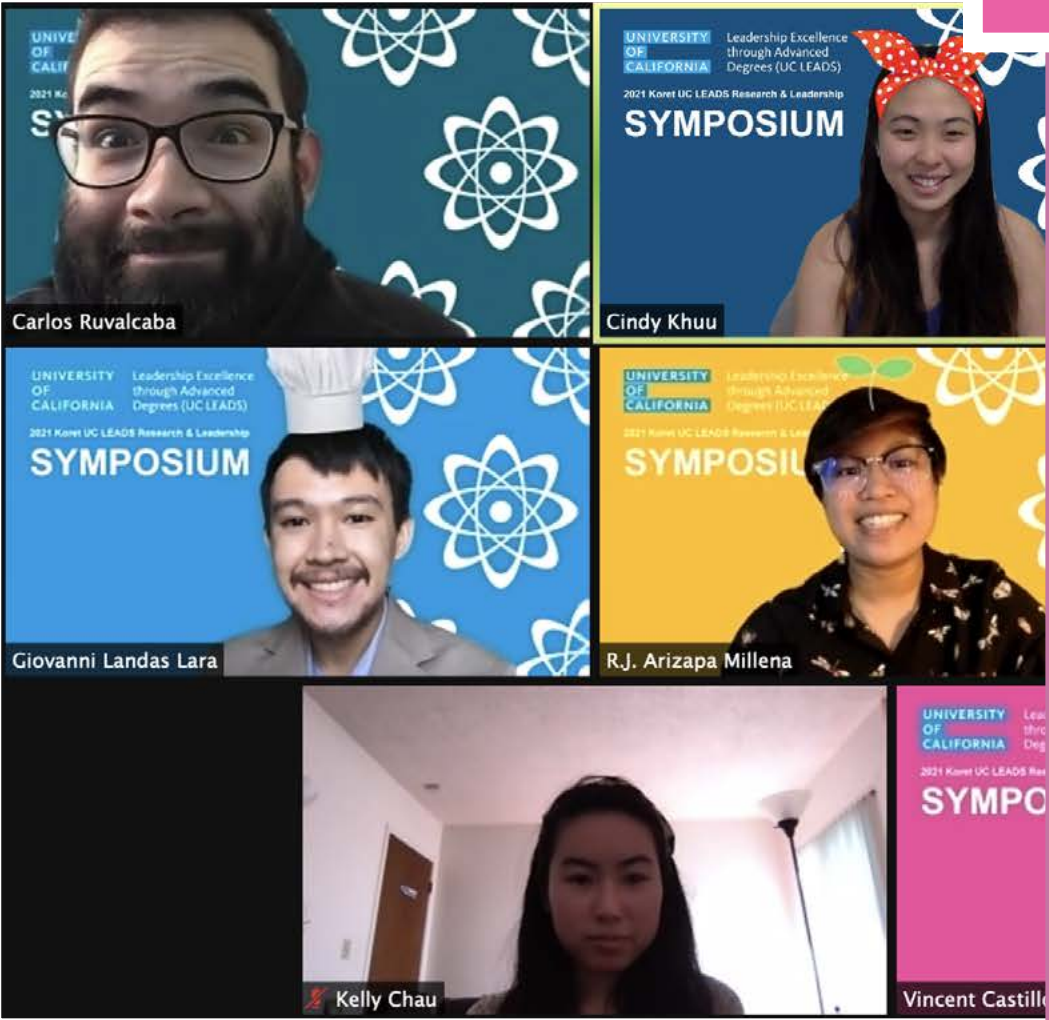
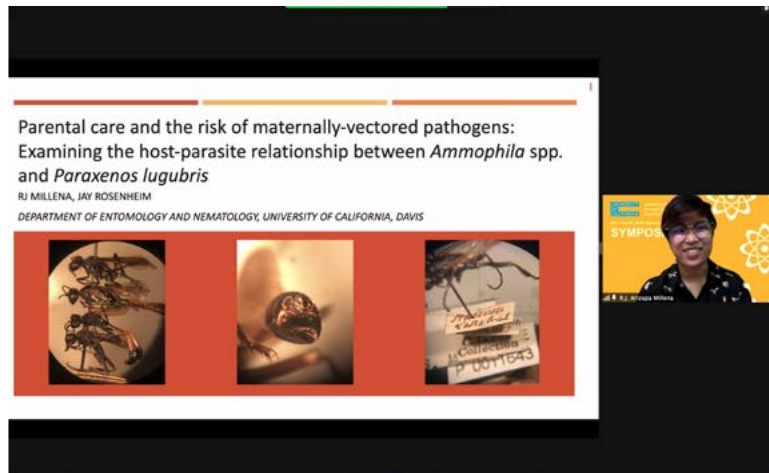
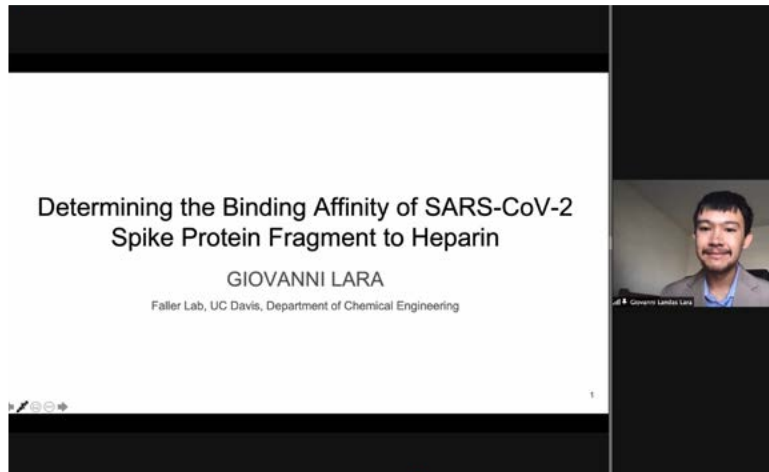
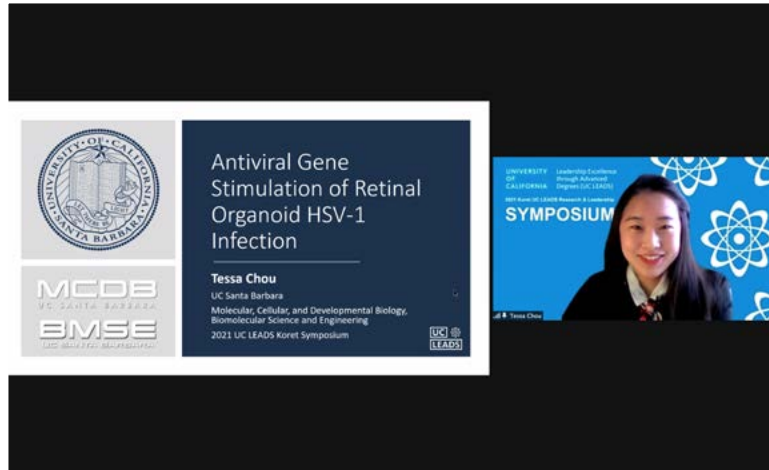
Physical Sciences and Mathematics

Verenise Martinez Lopez, UC Santa Cruz
Giovanni Lara, UC Davis
Jose Magana, UC Berkeley

2021 UC LEADS
Koret Research and Leadership Symposium



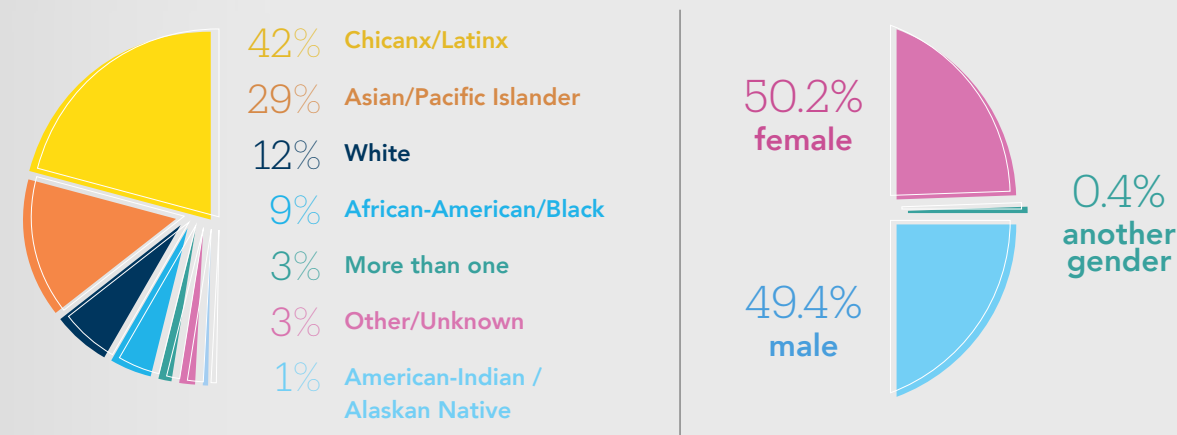
MARCH 6, 2021
VIRTUAL



Program Impact Summary

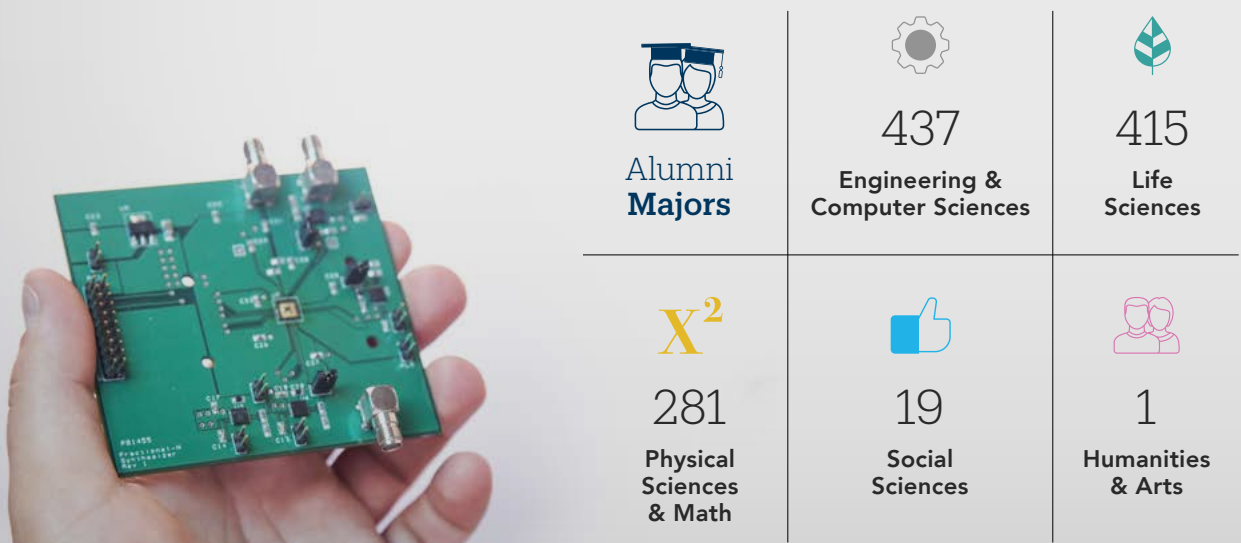
UC LEADS IN DIVERSITY

Over 21 years, UC LEADS has supported 1153 scholars. This population consists of 53% first generation college students, and 52% underrepresented minorities. Pictured are the gender and ethnicity breakdowns for these scholars.



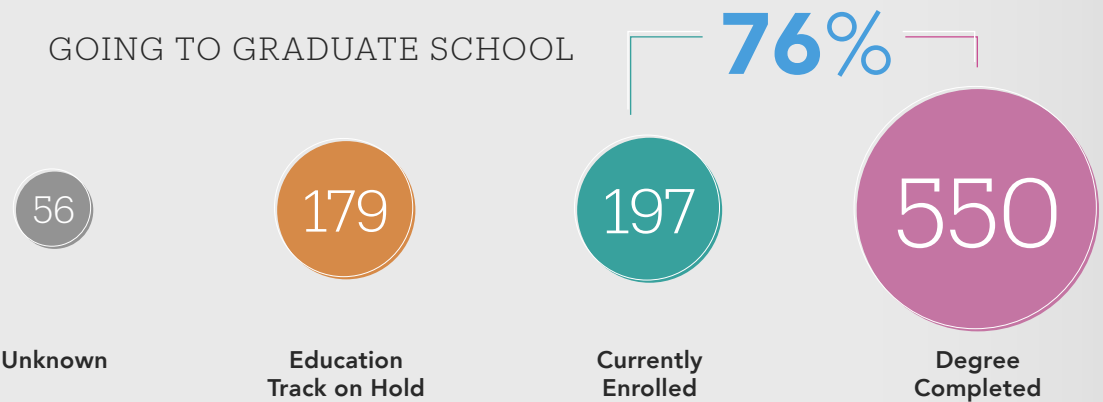
MAJOR ACHIEVEMENTS

This year we take a closer look at the disciplinary makeup of our alumni, and we will explore this focus by campus as well. As is shown, the majority of scholars' majors were in Engineering and Computer Sciences or Life Sciences, with some Social Sciences scholars mainly in psychology. As you review the campus pages, you will notice that each campus has a unique focus for their UC LEADS program.



DIVERSIFYING GRADUATE SCHOOL

An impressive 99% of UC LEADS scholars have graduated with their undergraduate degree. Also noteworthy, 76% of these scholars are either currently enrolled in graduate school or have already earned degrees in a master's or doctoral program, and 48% of these students go to a UC graduate program. One aspect of the UC LEADS program that makes it so unique is the scholars' second summer at another UC campus. Surprisingly, 28% of scholars who enroll in a UC graduate program go to the school where they spent their second summer, further illustrating how impactful the relationships are that they build during this time.



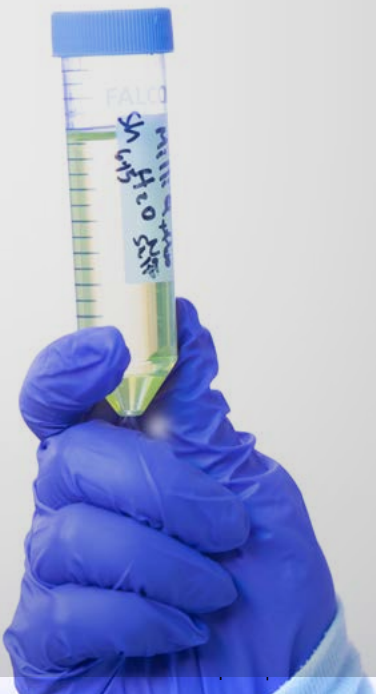
EMERGENCY TECHNOLOGY FUNDS

UC LEADS scholars showed an incredible capacity to adapt during this time. With generous support from the UC Office of the President, we were able to reinforce their resilience with funds to support their technology needs during their 2020 summer research programs. With programming and research moved online, many scholars needed additional or ergonomic technology in order to effectively work remotely.

TECHNOLOGY SUPPORTED:
Webcams, headphones, internet boosters, routers, monitors, memory cards, portable hard drives, ergonomic keyboards and mice, laptops, software...



\$19,125 spent
30 scholars supported



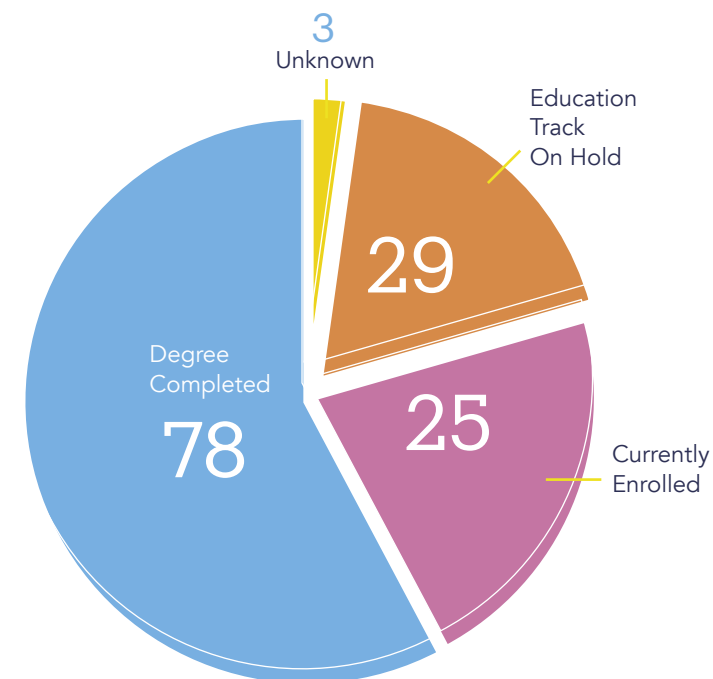


UC Berkeley | Year in Review

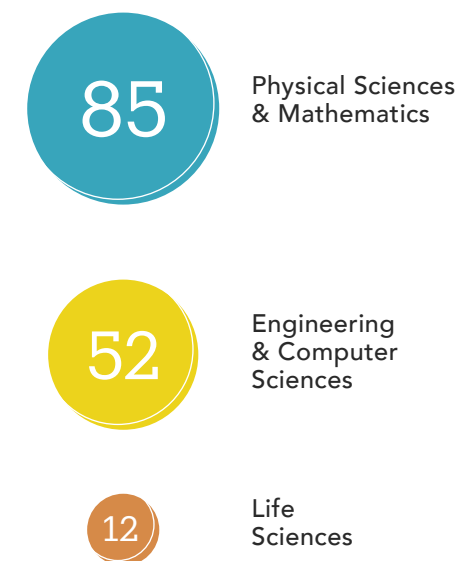
At UC Berkeley, we navigated the pandemic by focusing on technoinclusive efforts to create an on-line positive campus climate, validate our students, and create a sense of belonging during such a challenging time. We opened up our virtual summer and academic year STEM speaker series (plus our introduction to python coding and STEMintroduction to data science coding boot camps) to other UC LEADS and diversity STEM programs, serving over 2,000 students. A few of our UC LEADS alumni participated as speakers, including Dr. Salvador Barriga of Digital Alloys, UC Berkeley Physics Graduate Student Donez Horton-Bailey, UC Berkeley Material Sciences and Engineering Graduate Student Anthony Salazar, UCSF Bioinformatician Cindy Barrios, and Nicole Lai Ferreiro of Instagram.

Through an amazing team of staff and Student Directors (including UC LEADS UC Merced Alum and now UC Berkeley Chemistry Graduate Student Anthony Garcia), we worked hard to provide digital emergency health and wellness grants, Cal Fresh 101 workshops, paid research, technoadvising, a business core competencies workshop series, and on-line community mixers. We provided on-line mentoring with some of our UC LEADS alumni including Dr. Crystal Bray of Uber, Seasoned Chemical Engineering Graduate Student Steven Chavez, Dr. Andrew Ekelem of Evolution Devices, among other STEM role models. We also offered virtual mental health and empowerment coaching with TrybeAI, under the leadership of Naomi Davidson. In addition, we focused our energies on solving the problem of lack of STEM information by making STEM opportunities more accessible at UC Berkeley by launching a 200 page STEM diversity website, called STAR.berkeley.edu. STAR stands for STEM Training, Activities, and Resources. This digital tool includes role model profiles (featuring nine UC LEADS Scholars), a searchable (and downloadable) database, blog, and 184 page pdf guidebook. We also had five scholars apply to STEM PhD programs.

Going to Graduate School



Majors



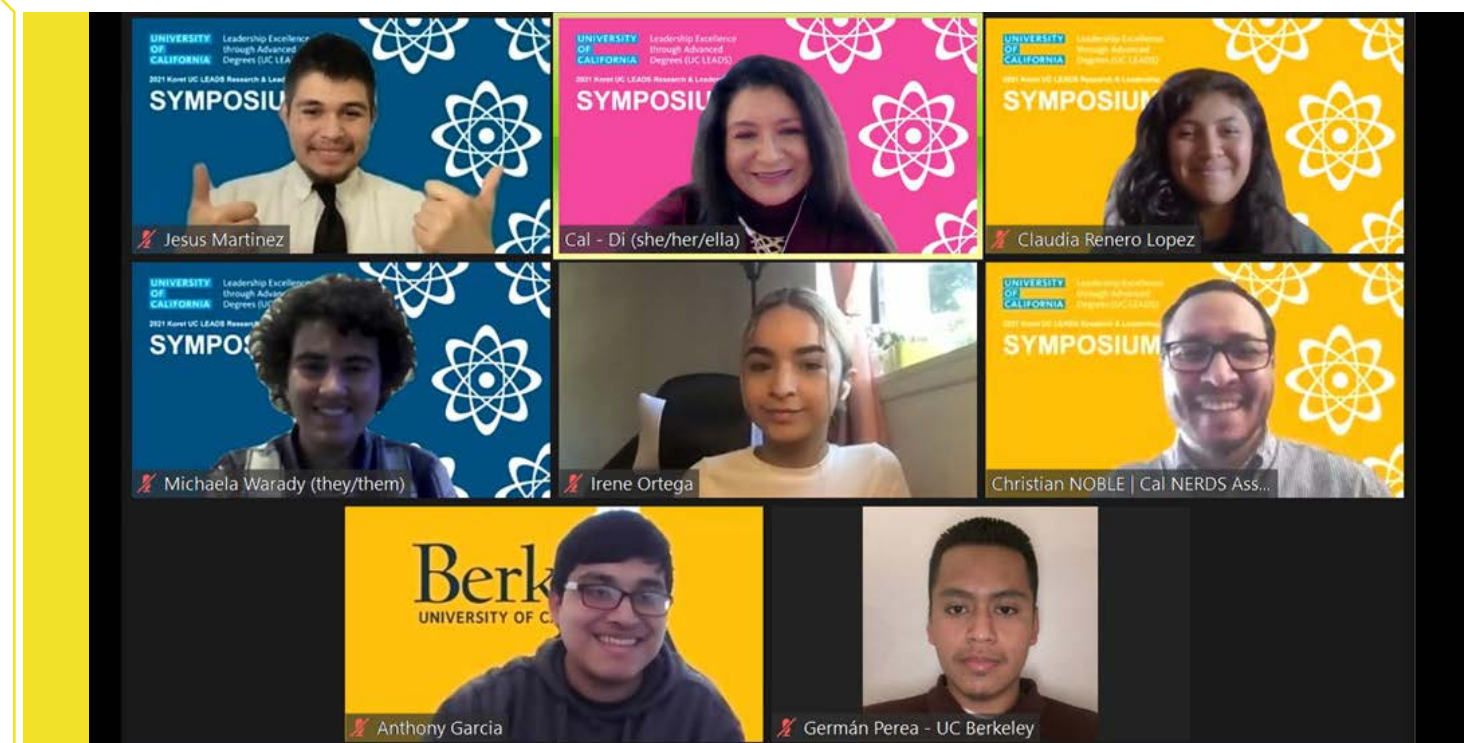
Second Year Scholars

Vanessa Hernandez-Cruz (Mechanical Engineering) completed summer experiences with Professor Scott Moura at UC Berkeley, and with General Motors as an Engineering intern. This project was entitled "Battery Estimation Research in Heterogeneous Battery Packs." Vanessa was also Co-Corporate Vice President for the Hispanic Engineering Science Society on campus and is a Cal NERDS Student Director. She graduated and applied to Mechanical Engineering graduate programs in December 2021.

Jason Jiang (Applied Mathematics) did their second summer research at UC Berkeley. They graduated in spring 2021. In 2021, they served as a Data Science Curriculum Lead for the UC Berkeley Division of Computing, Data Science, and Society and just transitioned into a new role as a Data Science Instructional Designer for UC Berkeley's Haas School of Business.

Eshaan Pathak (Computer Science and Data Science) did his second summer research at UC Berkeley. He graduated in fall 2020 and is currently working as a Machine Learning Engineer at You.com.

German Perea Lopez (Civil Engineering) is a transfer student and did his second summer research at UC Berkeley. He graduated in spring 2020 and is now a Civil and Environmental Engineering Masters student focusing on Systems Engineering at UC Berkeley. Previously, he held a position as Research and Development Engineer working at the Energy, Controls, and Applications Lab (eCAL). Project name: Smart Learning Pilot for Electric Vehicles (SlrpEV).



Alumni Spotlight



DR. VICTOR TAM

UC LEADS 2001-2003
B.S.Chemistry

After finishing his undergraduate career at UC Berkeley with a B.S. in Chemistry, Dr. Victor Tam obtained both his M.S. and Ph.D. in Chemistry from UC San Diego, where he taught multiple undergraduate organic chemistry courses. This influenced Dr. Tam to become an instructor at Foothill College for 7 years before becoming the Dean of Physical Sciences, Mathematics, and Engineering. Today, he is the Dean of STEM at the Santa Rosa Junior College.

First Year Scholars

Toren D’Nelly-Warady (Computer Science and Mathematics) did their second summer research at UC San Diego under the direction of Professor Kedlaya. They published their Number Theory research, “Geometric decomposition of abelian varieties of order 1” (<https://arxiv.org/abs/2109.03986>). Toren was Co-President for the STEM club on campus. They applied to graduate programs and graduated with their B.S. in December 2021.

Irene Gutierrez Ortega (Cognitive Science) presented her poster at the 2021 UC LEADS Symposium titled *Computer-Based Testing*. Upon graduating in the spring 2021, she was a Data Analyst summer intern at Wallbreakers and then took a role in the fall of 2021 as a Junior Software Engineer at SnapChat.

Jose Magana (Geophysics) was a transfer student and did his first summer research at UC Berkeley. His poster, Stress Drops Calculations of the Ridgecrest Aftershock Sequence of 2019 Based on Finite Source Analysis, received an honorable mention at the 2021 UC LEADS Symposium. He also received the Graduate Deans’ Leadership Award. He graduated in spring 2021 and was accepted as a Civil Engineering Masters student

at UC Berkeley. He has been working in the seismology lab and is a Earth and Planetary Science Graduate Student Instructor.

Jesus Martinez Martinez (Astrophysics and Physics) did his first summer research at UC Berkeley. He presented a poster at the 2021 UC LEADS Symposium titled Members of Star Cluster G286.21+0.17. His second summer research experience was at UC Riverside under the mentorship of Professor Gillian Wilson on a new project entitled “Converting GalWeight to StarWeight” which focused on adapting an algorithm used to find members of a galaxy cluster. He plans to graduate in 2022.

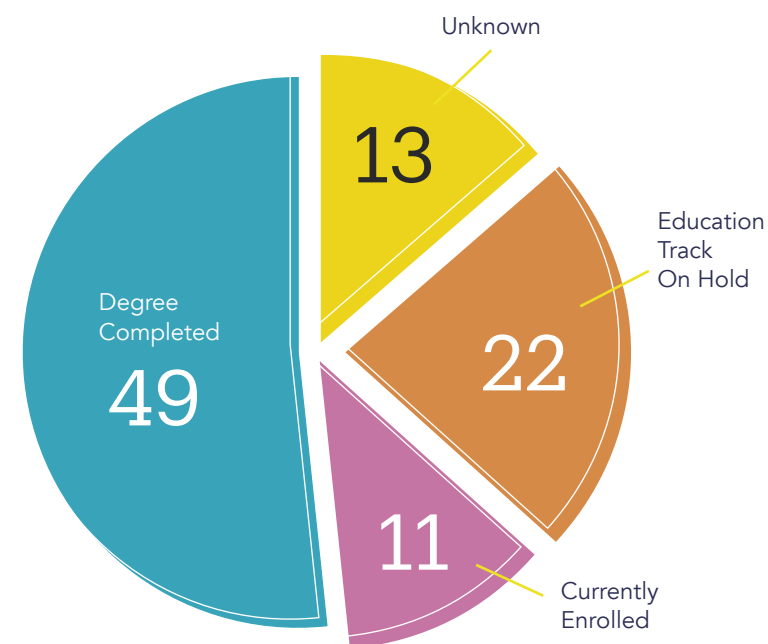
Claudia Renero (Mechanical Engineering) did her first summer research at UC Berkeley. She plans to graduate in 2022.

Wyatt Singh (Applied Mathematics and Computer Science) did her first summer research at UC Berkeley in the Department of Environmental Science, Policy, and Management under the direction of Professor Whendee Silver. Her project was entitled “Benchmarking LinguaFranca”. She has continued this research after the summer and is working on her honors thesis. She plans to graduate in 2022.

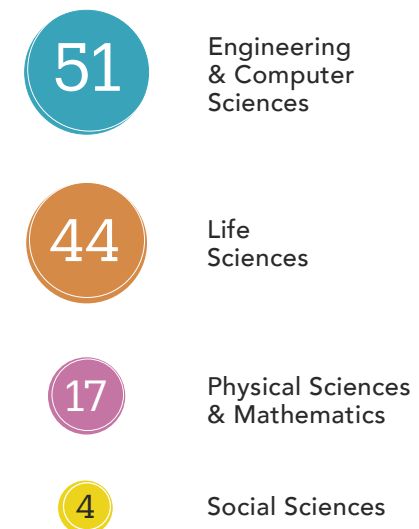
“The targeted support of the UC LEADS program helped to break down barriers and provide valuable opportunities. In my current role, I try to pay that forward and involve myself in work to help lower obstacles for community college students as they pursue a college education, and be a mentor for the next generation of scientists and educators.



Going to Graduate School



Majors



UC Davis | Year in Review

Every year, the scholars continue to be remarkable as evidenced by their resilience and commitment to stay the course given the challenges presented by the pandemic. Through Spring graduation, they persistently worked to pursue diverse experiences and opportunities as much as possible even through obstacles that limited in-person learning and immersive experiences. Managing academics, work, research, and family responsibilities while dealing with these life events did not deter their paths. For instance, three of the four scholars were slated to participate in UCSF's Summer Research Training Program for second summer research and the other at UC Berkeley. The quick pivot and transition to remote summer research did not throw them off; they forged ahead and inspired creativity and optimism in spite of everything. Through it all, each scholar, though disappointed and hesitant at times, progressed in their research and focused on graduate school planning, application, and admission decision processes. Overall, the scholars had quite an eventful year filled with many successes and less desirable moments, however, they did so with conviction and determination – true examples of leaders!

Second Year Scholars

Rebecca "RJ" Millena (Entomology) did her second summer research at UC Davis. Her poster, *Parental care and the risk of maternally-vectorized pathogens: Ammophila transmit Strepsipteran parasites to their young*, received top honors at the 2021 UC LEADS Symposium. RJ held a variety of roles in her department over the course of her undergraduate years such as co-leading and assisting the media production and distribution of research-grade *Drosophila*. She graduated in spring 2021 and is a Comparative Biology PhD student at the American Museum of Natural History Richard Gilder Graduate School.

Giovanni Lara (Pharmaceutical Chemistry) did his second summer research at UC Davis. His poster, *Determining the Binding Affinity of SARS-CoV-2 Spike Protein Fragment to Heparin*, received an honorable mention at the 2021 UC LEADS Symposium. Gio held a variety of leadership positions in the Chemistry Student Club, most recently as President until he graduated in spring 2021. He is a Pharmacy PharmD student at UC San Francisco.

Kelly Chau (Biotechnology) did her second summer research at UC San Francisco. She presented a poster at the 2021 UC LEADS Symposium titled *Predicting Cell-Type Specific MicroRNAs from Single Cell Chromatin Accessibility Data*. Kelly also received a Campus Leadership Award. She graduated in spring 2021 and is an Integrative Genetics and Genomics PhD student at UC Davis.

Lay Heng Teng (Biomedical Engineering) did her second summer research at UC Davis. She presented a poster at the 2021 UC LEADS Symposium titled *Computational Simulations of Dry Aerosol Drug Delivery in the Avian Respiratory System*. Lay Heng was active in the College of Engineering's LEADR (Leadership in Engineering Advancement, Diversity and Retention) Program where she was an ambassador for other engineering student peers, particularly those who shared first-gen experiences. She graduated in spring 2021 and she is currently working as a Research Specialist at Emory University.

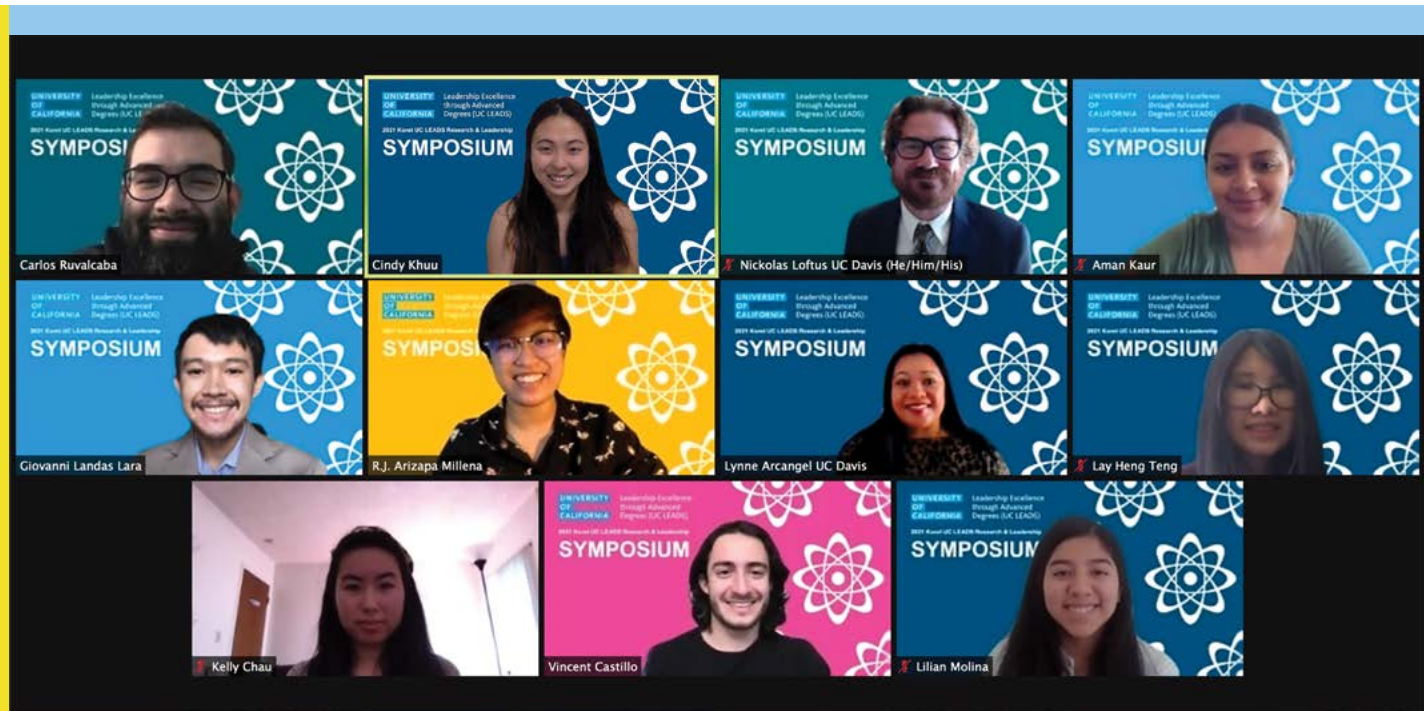
Alumni Spotlight



DR. KIMBERLY PRADO

UC LEADS 2011-2013
B.S. Clinical Nutrition

Dr. Kimberly Prado remained at UC Davis after earning her B.S. in Clinical Nutrition and earned her both M.P.H. and Ph.D. in Epidemiology. During her time at Davis, she worked as a Bilingual Community Nutrition Education Specialist. Throughout the past year, she has also investigated the health consequences of COVID-19 on farmworkers in the USA and Mexico, and has become a Postdoctoral Fellow at the University of Austin at Texas.



First Year Scholars

Vincent Castillo (Neurology, Physiology, and Behavior) did his first summer research at UC Davis. He presented a poster at the 2021 UC LEADS Symposium titled *Investigating the Effects of Aging and Diabetes on Pancreatic Alpha Cells*. He plans to graduate in 2022.

Adebade "Ade" Ilori (Microbiology) did his first summer research at UC Davis. He presented a poster at the 2021 UC LEADS Symposium titled *Patellar Tendon Injuries*. He plans to graduate in 2022.

Aman Kaur (Managerial Economics) did her first summer research at UC Davis. She presented a poster at the 2021 UC LEADS Symposium titled *Effects of a Public Health Intervention Program on Educational Outcomes*. She plans to graduate in 2022.

Nickolas Loftus (Mechanical Engineering) did his first summer research at UC Davis. He presented a poster at the 2021 UC LEADS Symposium titled *An Examination of Potential Uses for Radiation Sensitive Graphene Based Nanocomposite Films and Electrical Resistance Tomography in Medicine and Nuclear Power*. He plans to graduate in 2022.

Lilian Molina (Electrical Engineering) did her first summer research at UC Davis. She presented a poster at the 2021 UC LEADS Symposium titled *The Investigation of Noise Levels in Transabdominal Pulse Oximetry*. She plans to graduate in 2023.

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The foundations I received from UC LEADS included familiarity with wetlab work, community-based research, professional presentations, and networking with faculty. I draw on these today as I partner with scientists who work in labs and in the community field.

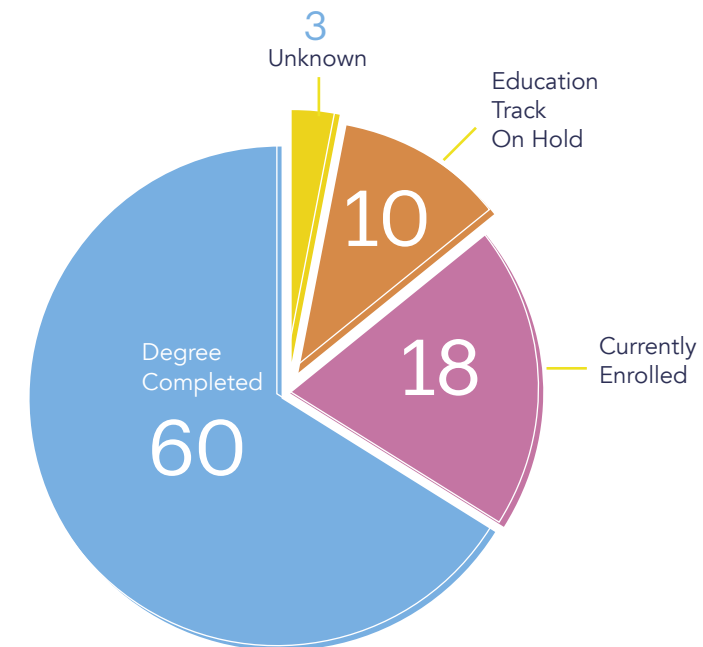


UC Irvine | Year in Review

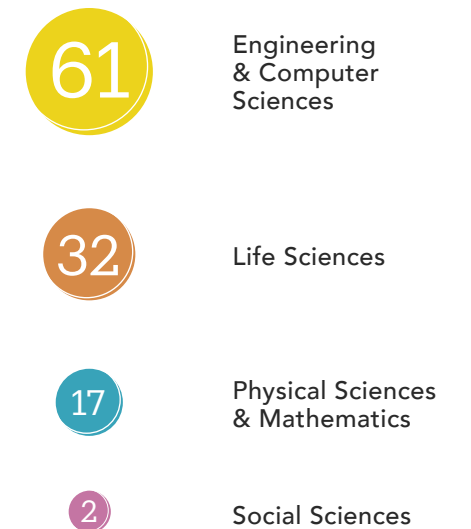
Despite the challenges presented by the pandemic, scholars persevered in their research and graduate school goals. All scholars conducted remote research at various University of California campuses. All second year scholars successfully applied to graduate school or post baccalaureate opportunities. First year scholars were quick to immerse themselves in the virtual summer research program at UCI and start working on developing their skills as researchers. All scholars continued to participate in professional development workshops, such as networking in a COVID era, identifying strategies to overcome imposter syndrome, and building on their communication skills.

Scholars Eduardo Montano and Robert Bloom were recognized for their research at the UC LEADS symposium.

Going to Graduate School



Majors



Second Year Scholars

Emily Barragan (Chemical Engineering) did her second summer research at UC Santa Barbara. Her poster, *COMSOL Simulation of Gaseous Methane Rising in a Molten Salt Column Reactor*, received an honorable mention at the 2021 UC LEADS Symposium. She graduated in spring 2021 and is now a Chemical Engineering PhD at Columbia University.

Jorge Karam Padilla (Aerospace Engineering) did his second summer research at UC Los Angeles. He presented a poster at the 2021 UC LEADS Symposium titled *Mechanical Analysis Of PVA Nanofiber Mats For 3D Hydrogels*. He graduated in spring 2021 and he is currently working as a Project Manager at UCI Rocket Project. He was also accepted as a Mechanical and Aerospace Engineering Master student at UC Davis.

Robert Bloom III (Mechanical Engineering) did his second summer research at UC Santa Barbara. His poster, *A Wearable Sleeve for Reaching Guidance using Skin Stretch*, received Top Honors at the 2021 UC LEADS Symposium. He graduated in spring 2021 and is a Mechanical and Aerospace Engineering PhD at UC San Diego as a Sloan Scholar.

Myia Dickens (Mechanical Engineering) did her second summer research at UC Santa Barbara. She presented a poster at the 2021 UC LEADS Symposium titled *The Steerable Walking Robot*. She graduated in spring 2021 and is a Mechanical Engineering PhD at the University of Notre Dame.



Alumni Spotlight



RITA BLAIK

UC LEADS 2006-2008
B.S. Materials Science

After completing her B.S. in Materials Science at UC Irvine, Dr. Rita Blaik received a Ph.D. in Materials Science and Engineering at UCLA. During her research with Professor Bruce Dunn, she developed a practice of STEAM education which led her to teach in the Humanities and Science department at Art Center College. In 2016, she returned to UCLA as the Director of Education for the California NanoSystems Institute, where she develops nanoscience experiments and demos for students and teachers in the LA Area.

First Year Scholars

Stephany Alonso (Materials Science and Engineering) did her first summer research at UC Irvine. She presented a poster at the 2021 UC LEADS Symposium titled *Novel Surgical Procedure to Treat Postpartum Hemorrhage*. She plans to graduate in 2022.

Michael Guerra (Nursing Science) did his first summer research at UC Irvine. He plans to graduate in 2022.

Melissa Lepe (Aerospace Engineering) did her first summer research at UC Irvine. She presented a poster at the 2021 UC LEADS Symposium titled *Sustainability in Mining*. She plans to graduate in 2022.

Eduardo Montano (Aerospace Engineering) did his first summer research at UC Irvine. His poster, *Kinematic Design of Deployable Structures with Low Actuation Requirements Based on Pop-Up Origami*, received top honors at the 2021 UC LEADS Symposium. He plans to graduate in 2022.

Samanta Negrete (Biomedical Engineering) did her first summer research at UC Irvine. She presented a poster at the 2021 UC LEADS Symposium titled *An Acoustic-Electrical Shear Opening Poration (AESOP) Platform for High Efficient Intracellular Delivery*. She plans to graduate in 2022.

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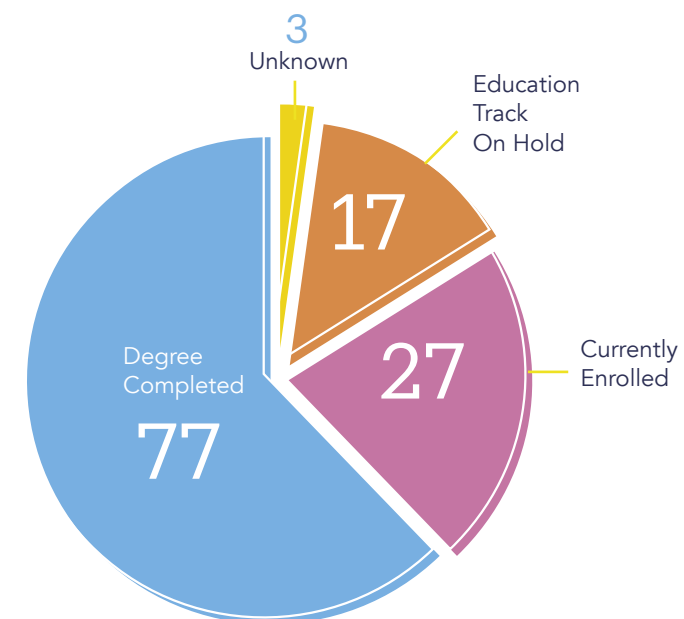
I was very fortunate to have supportive mentors throughout my career, from UCI through to UCLA and now with my career. It was also great to get a research experience at another campus for one summer, since it opened up my horizons to different types of research, both through being in a different lab and also seeing what other UC LEADS colleagues in different majors were doing research on.



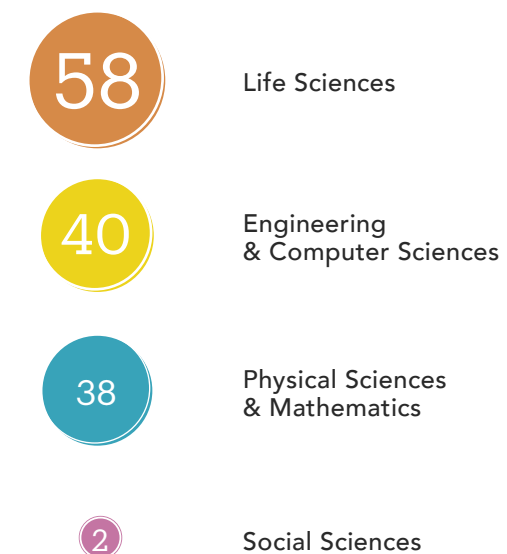
UC Los Angeles | Year in Review

UCLA's UC LEADS program remains unique in its design as a two-year capstone experience in which all senior students submit a thesis proposal at the end of their tenure in the program. Between 2020 - 2021, we couldn't be prouder of the resiliency exhibited by the scholars as they transitioned to remote learning. All of our scholars had very successful summer research experiences, the majority of which were virtual, while a few were able to participate in-person. The scholars represented UCLA well while presenting at conferences. Lorraine Nicholson (Astrophysics), Luke Elissiry (Chemistry), and Garrett Kukier (Chemistry) were awarded Top Honors at 2021 UC LEADS Symposium. Angela Gao attended the 2020 Society of Women Engineers annual conference where she was a finalist in the Rapid-Fire Competition. Luke is now a Ph.D student in Chemistry at UC Berkeley, Andy is now a Ph.D student in Biochemistry and Molecular Biophysics at the University of Pennsylvania, and David Dang is now a Ph.D student in Physics at UC Irvine. We are immensely proud of all our scholars' accomplishments and look forward to their future endeavors.

Going to Graduate School



Majors



Second Year Scholars

Luke Elissiry (Chemistry) did his second summer research at UC Berkeley. His poster, *Tuning Second Coordination Sphere Interactions in Iron Pyridyl Complexes to Enhance Catalytic Properties*, received top honors at the 2021 UC LEADS Symposium. Luke also received a Campus Leadership Award. He graduated in spring 2021 and is a Chemistry PhD at UC Berkeley.

Angela Gao (Mechanical Engineering) did her second summer research at UC San Diego. She presented a poster at the 2021 UC LEADS Symposium titled *Static Fingertip Force Production by a Tendon-driven Robot Finger*. She graduated in spring 2021 and is currently working as a Staff Research Associate at UC San Francisco.

Andy Nguyen (Biochemistry) did his second summer research at UC Irvine. His poster, *Investigating the Binding of Spire/Myosin-V in Drosophila melanogaster*, received an honorable mention at the 2021 UC LEADS Symposium. He graduated in spring 2021 and is now pursuing a Biochemistry and Molecular Biophysics PhD at the University of Pennsylvania.

David Dang (Physics) did his second summer research at UC Irvine. He graduated in spring 2021 and is a Physics PhD at UC Irvine.



Alumni Spotlight



DR. SONYA LOPEZ

UC LEADS 2005-2007
B.S. Civil Engineering

Dr. Sonya Lopez received her B.S. in Civil Engineering from UCLA where she also completed her M.S. and Ph.D in Hydrology and Water Resources Science. With assistance from UC LEADS and SACNAS, she won the NSF Graduate Research Fellowship. Currently, she is an Assistant Professor in the Civil Engineering department at CSU Los Angeles, where she is developing methods to ascertain the impacts of climate variability on different ecosystems.

First Year Scholars

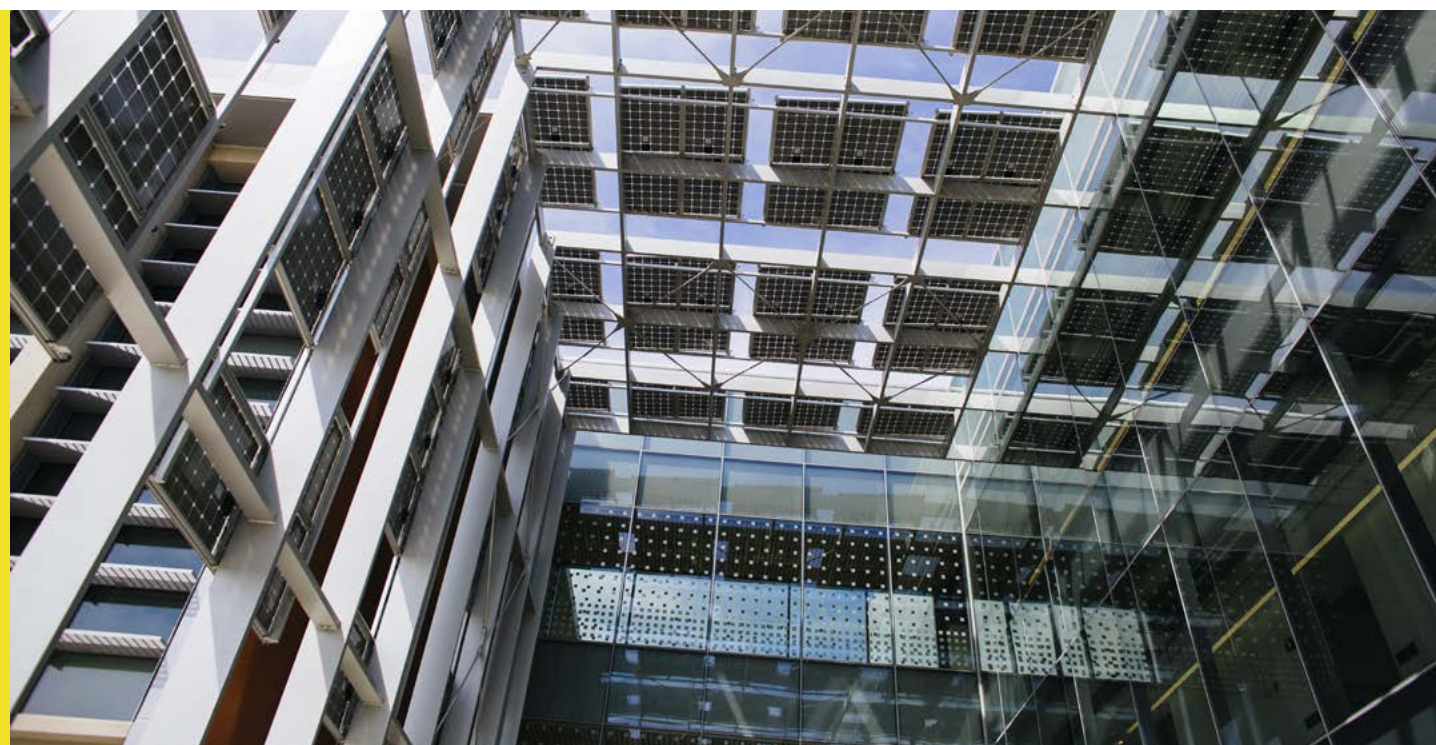
Garrett Kukier (Chemistry & Biochemistry) did his first summer research at UC Los Angeles. His poster, *The Highly-Favored Orbital-Symmetry-Forbidden Electrocyclization of Vinyllogous Sesquifulvalene*, received top honors at the 2021 UC LEADS Symposium. He plans to graduate in 2022.

Chris La (Atmospheric & Oceanic Sciences) did his first summer research at UC Los Angeles. He presented a poster at the 2021 UC LEADS Symposium titled *Kinetic Model for the Iron-Catalyzed Oxidation of Dithiothreitol*. He plans to graduate in 2022.

Lorraine Nicholson (Earth and Planetary Space Sciences) did her first summer research at UC Los Angeles. Her Poster, *The Effect of Evolving Luminosity on the Evolution of Small Exoplanets*, received top honors at the 2021 UC LEADS Symposium. She plans to graduate in 2022.

Jessica Salguero (Chemistry and Biochemistry) did her first summer research at UC Los Angeles. She plans to graduate in 2022.

“Most of the workshops I attended on annotated bibliographies, designing CVs, applying to graduate school, and applying for research funding are workshops I host now for our students at Cal State LA and in the Society of Hispanic Professional Engineers. UC LEADS provided the funding, community, and support I needed to be a successful researcher. I try to build these things for my students.

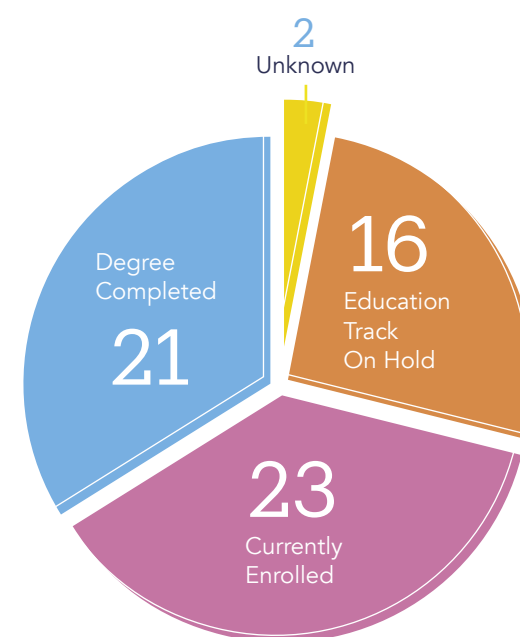


UC Merced | Year in Review

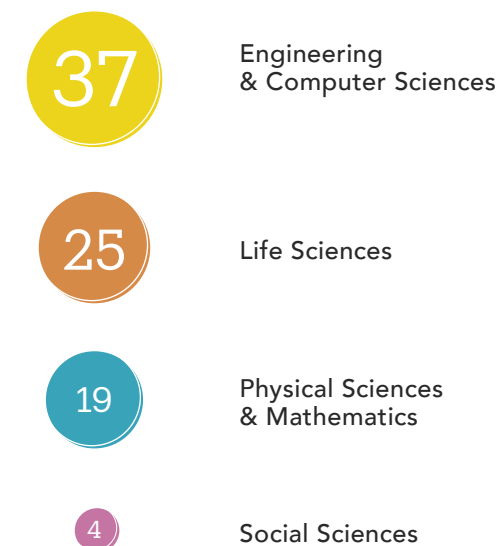
With a year full of challenges, UC Merced continues to support our UC LEADS Scholars with virtual research and workshops during the summer and academic year. As a result, our second year scholars thrived and had a full year of accomplishments: Alexander Del Toro, our transfer student, received Top Honors in Biological Sciences at the 2021 UC LEADS Symposium and has been accepted to Brown University's Neuroscience PhD Program; Diana Cruz Garcia was recognized for her continued leadership and received the Graduate Deans' Leadership Award; Jasmine Posada published a journal article titled, "Prenatal Inflammation Perturbs Fetal Hematopoietic Development and Causes Persistent Changes to Postnatal Immunity" and is currently working on another article titled, "The Effects of INF γ from Maternal Infection with T Gondii on Fetal Hematopoiesis." Pedro Valencia Landa received Top Honors in Biological Sciences at the UC LEADS Symposium and has been continuously working alongside his PI from UC Santa Cruz writing a manuscript titled, "Foraging of Northern Elephant Seals: Revelations from a Dental Diary." Pedro has since received admissions to the Ecology and Evolutionary Biology PhD Program UC Santa Cruz and was awarded the Eugene Cota-Robles Fellowship. Finally, Victoria Lerda was recognized for her undergraduate research poster presentation at the 2020 SACNAS National Diversity in STEM Conference and has been accepted into the Chemistry and Biochemistry Master's Program at UC San Diego.

Our 1st year scholars also jumped right into virtual research and have been invited to continue their research during the academic year with their principle investigators. Our scholars continue to push through challenging times with excellence and are in the process of applying to graduate schools within the UC system. We are immensely proud of our scholars for all of their accomplishments this past year and look forward to their future endeavors.

Going to Graduate School



Majors



Second Year Scholars

Diana Cruz Garcia (Bioengineering), a first-generation college student, conducted her second summer research at UC Los Angeles. She presented a poster at the 2021 UC LEADS Symposium titled *3-D Vessel Formation by Stem Cell Co-Differentiation*. Diana has also applied to be a Student Researcher at the Center of Engineering Mechanobiology at the University of Pennsylvania and plans to graduate in Fall 2021.

Alexander Del Toro (Psychology), a first-generation transfer student, did his second summer research at UC Berkeley. His poster, *Identifying Downstream Targets to the Interceptive SEZ Neurons (ISN) Using The Female Adult Fly Brain Electron Microscopy Volume*, received top honors at the 2021 UC LEADS Symposium. He graduated in fall 2020 and will start his Neuroscience PhD program at Brown University in fall 2021. Prior to beginning his PhD program, he served as the Staff Research Associate for Dr. Kristin Scott at the University of California, Berkeley.

Victoria Lerda (Chemical Sciences), a first-generation college student, conducted her second summer research at UC Berkeley. She presented a poster at the 2021 UC LEADS Symposium titled *Brønsted Acid-Catalyzed Stereospecific Dearomative Spirocyclization of Cis- β -Meth(hetero)arylstyrenes*. She graduated in spring 2021 and will begin her Chemistry and

Biochemistry Master program at UC San Diego in fall of 2021.

Sara Perez Vite (Environmental Engineering), a first-generation college student, conducted her second summer research at UC Davis. She presented a poster at the 2021 UC LEADS Symposium titled *Evaluating Temporal Disaggregation of Streamflow Times Series in Rio Grande Bravo Basin*. She graduated in Spring 2021.

Jasmine Posada (Biological Sciences). A first-generation college student, conducted her second summer research at UC Los Angeles. She presented a poster at the 2021 UC LEADS Symposium titled *The Impact of Maternal Infection on Fetal Cytokine Repertoire*. She graduated in spring 2021 and is currently working as an NIH funded, staff research associate at UC Merced and applying to Ph.D. programs.

Pedro Valencia Landa (Biological Sciences), a first-generation college student, conducted his second summer research at UC Santa Cruz. His poster, *Foraging of Northern Elephant Seals: Revelations from a Dental Diary*, received top honors at the 2021 UC LEADS Symposium. She graduated in spring 2021 and will begin his PhD program in Ecology and Evolutionary Biology at UC Santa Cruz in the fall of 2021.



Alumni Spotlight



JENNIFER ELHAWARY

UC LEADS 2012-2014

B.S. Cell/Cellular and Molecular Biology

Jennifer Elhawary completed their B.S. and Master's in Quantitative and Systems Biology from UC Merced. As a data analyst in a clinical science lab at UC San Francisco, they used their research experience from UC Merced to study the genetic and environmental determinants of childhood asthma in racial/ethnic minority groups. They have been featured in publications including the *New England Journal of Medicine* and the *Journal of Allergy and Clinical Immunology*.

First Year Scholars

Eberardo Camorlinga-Ruiz (Material Science and Engineering), a first-generation college student, conducted his first summer research at UC Merced. He presented a poster at the 2021 UC LEADS Symposium titled *KOH Etching to Increase Zorflex Energy Capability*. He plans to graduate in 2022.

Michele Campbell (Materials Science and Engineering/Computer Science and Engineering), a first-generation college student, conducted her first summer research at UC Merced. She has applied for a fellowship with Merced's Anomaterials Center for Energy and Sensing (MACES) funded by NASA. Her poster, *Photocatalytic Reaction Testing System for Dye Degradation*, received an honorable mention at the 2021 UC LEADS Symposium. She plans to graduate in 2022.

Tanner Ragan (Mechanical Engineering) conducted his first summer research at UC Merced. He presented a poster at the 2021 UC LEADS Symposium titled *Tribological Effects of Varied Operating Conditions on Pressure and Film Thickness*. He plans to graduate in fall 2021.

Win Teavir (Biological Sciences), first-generation college student, conducted his first summer research at UC Merced. He presented a poster at the 2021 UC LEADS Symposium titled *Kinesin Accumulation*. He plans to graduate in 2022.

Mary Eloise Fernandez (Biological Sciences) conducted her first summer research at UC Merced. She presented a poster at the 2021 UC LEADS Symposium titled *Diminished Antibody Responses in Toll-Like Receptor Knockout Mice Infected by Toxoplasma gondii*. Mary has also served in many different leadership roles for the Pilipinx American Alliance, the Pilipinx-American Leadership Summit, and the Asian-American and Pacific Islander Resource and Retention Center at UC Merced. Mary plans to graduate in 2022.

Steven Gonzalez (Biological Sciences) did his first summer research at UC Merced. He decided to leave the program in February 2021.

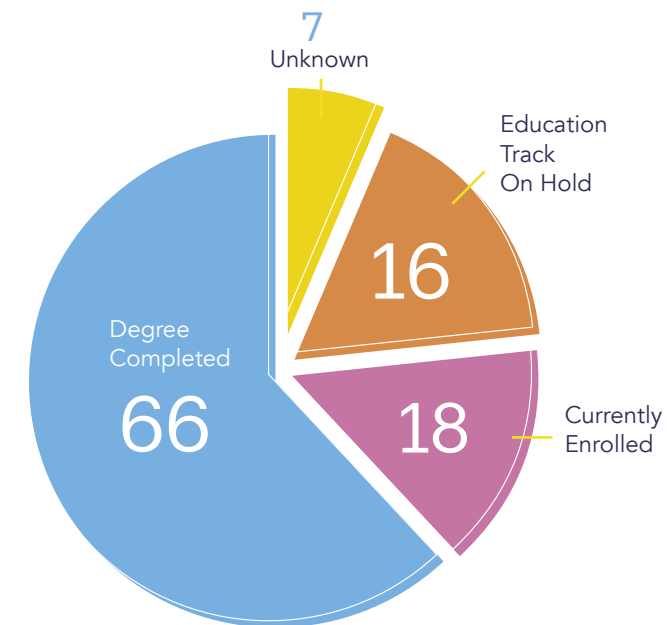
“ UC LEADS provided a network of peers and mentors to help guide and challenge me as I narrowed down my scientific interest toward bioinformatics and jump-started my research experience to help launch me into my career.



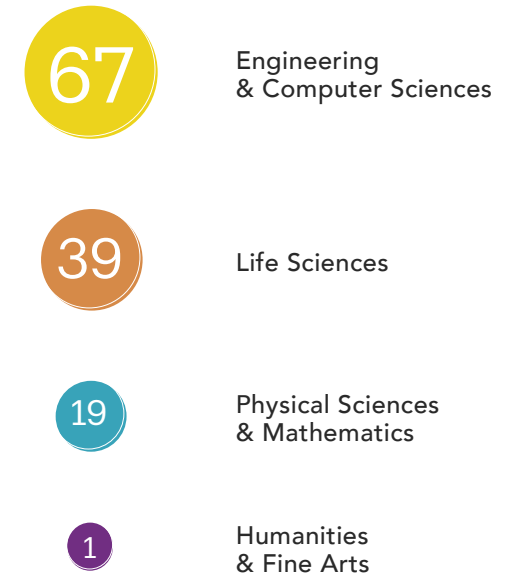
UC Riverside | Year in Review

The year was challenging in that the majority of instruction was conducted virtually, including our 2020 summer program. Going virtual had its advantages, too, in that UC LEADS programs were able to collaborate in a manner that had not been possible before. UCR scholars were able to attend other campus's workshops, programming courses (Python programming hosted by UC Berkeley), writing courses (hosted by UCLA), and joined GRE preparation courses with UC Irvine scholars. Despite not being able to connect personally, the scholars demonstrated adaptability and resiliency which would make any coordinator proud! Our faculty were likewise phenomenal in providing scholars with an enriching and rewarding research experience which our scholars presented during our end of summer Zoom Virtual Symposium. Hosting a virtual symposium allowed attendance by family members who might not otherwise have been able to attend, and both scholars and faculty demonstrated teamwork unified by a mutual love for research which encapsulated a couple of aspects the UC LEADS program embodies: Leadership and Excellence!

Going to Graduate School



Majors



Second Year Scholars

Arthor Bernal (Mechanical Engineering) did his second summer research at UC San Diego. He presented a poster at the 2021 UC LEADS Symposium titled *Comprehensive Analysis of Open Source Software for Mouse Behavioral Phenotyping*. Arthor also received a Campus Leadership Award. He graduated in spring 2021.

Zion Gutierrez (Electrical/Computer Engineering) did his second summer research at UC Los Angeles. He graduated in spring 2021 and is an Electrical and Computer Engineering Masters student at UC Los Angeles.



Alumni Spotlight



GEOFF PRONOVOST

UC LEADS 2014-2016
B.S. Biochemistry

After Geoff Pronovost earned their B.S. in Biochemistry at UC Riverside, they became a graduate student at UC Los Angeles studying molecular biology in Dr. Elain Hsiao's lab. Here, Geoff advocated for stem fields in UCLA's SACNAS chapter. They have since continued to serve on Peer Mentorship programs and DEI committees to recruit and retain individuals from underrepresented groups in the STEM field, and plan to enter the Biotech sector upon completing of their Ph.D.

First Year Scholars

Sebastien Banales (Chemical Engineering) did his first summer research at UC Riverside. He presented a poster at the 2021 UC LEADS Symposium titled *Surface Characterization Techniques and the Study of Solid Electrolyte Interphase and Electrochemical Reactions in Lithium Ion Batteries*. He plans to graduate in 2022.

Justin Burzachiello (Physics) did his first summer research at UC Riverside. His poster, *FPGA-Based Phase Locked Loop Tuning Fork Circuit*, received an honorable mention at the 2021 UC LEADS Symposium. He plans to graduate in 2023.

Pedro De Allende (Microbiology) did his first summer research at UC Riverside. He presented a poster at the 2021 UC LEADS Symposium titled *Foraging of Northern Elephant Seals: Revelations from a Dental Diary*. He plans to graduate in 2022.

Pamodya Peiris (Computer Engineering) did her first summer research at UC Riverside. She presented a poster at the 2021 UC LEADS Symposium titled *Soft Wearable Robots for Assist Upper-Extremity Motions for Infants*. She plans to graduate in 2022.



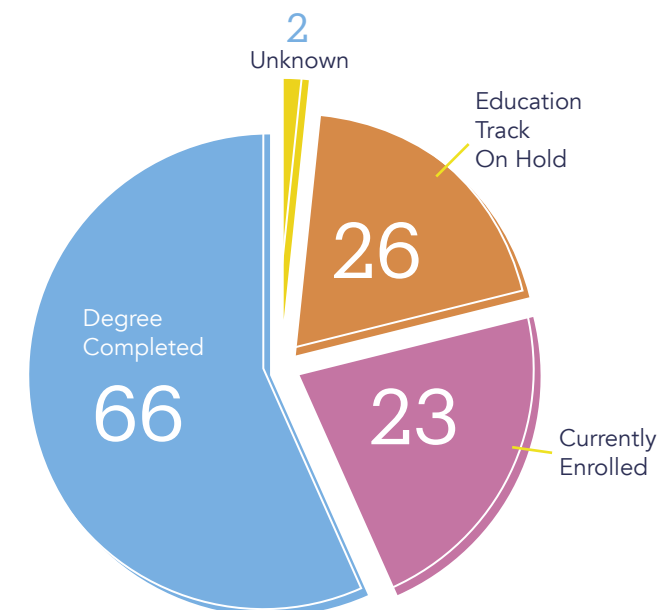
Traveling to a new environment, working in a field outside of my primary undergrad research project, and collaborating with scientists in a range of disciplines not only broadened my horizons as an undergrad, but they instilled the confidence that I could successfully transition into my graduate studies.



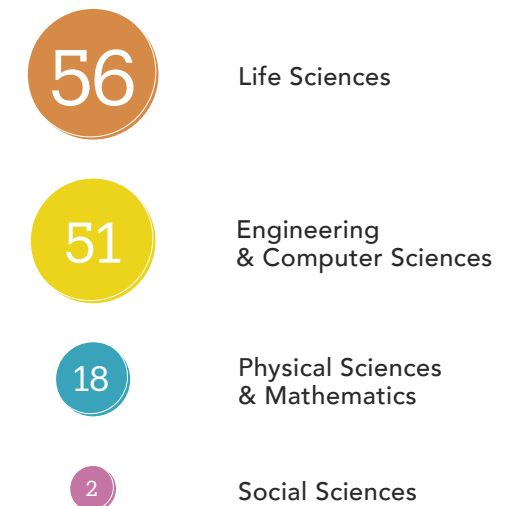
UC San Diego | Year in Review

This program continues to be a valuable experience for our scholars and despite the challenges that came with the COVID-19 pandemic, our students were successful in their efforts. Scholars presented their research virtually and worked with their faculty mentors to do research in a remote format. We're very proud of the resiliency and adaptability our students showed during this year. Although a lot of conferences and networking opportunities took place virtually, our scholars were encouraged to build relationships and expand their network whenever there was an opportunity. Our second-year scholars completed their second summer research experiences at UC Los Angeles, UC San Diego, and UC Santa Barbara. During our academic year meetings, scholars discussed topics of interest to them and we had a set of team-building events to ensure our scholars could bond and become closer even through Zoom. We take the utmost pride in seeing what our students will be doing upon graduation. This year was unique because all 5 of our graduating scholars decided to matriculate in various masters and doctoral programs at UC San Diego. Many of these scholars received honorific awards, fellowships, and scholarships to support their graduate school journey. All of our scholars continued to present their research, attend conferences, and serve in various leadership activities, such as mentoring and executive roles in clubs. We're proud of what our students have accomplished and wish them the best of luck in the future.

Going to Graduate School



Majors



Second Year Scholars

Janelle Coleen Dela Cueva (Structural Engineering) did her second summer research at UC Los Angeles. Janelle grew up in the Philippines and is the first in her family to pursue a graduate degree. She presented a poster at the 2021 UC LEADS Symposium titled *Application of Novel Impactor in the Nondestructive Evaluation of Composite Aerospace Structures*. She graduated in spring 2021 and is a Structural Engineering PhD student at UC San Diego.

Sidney Huen (Mechanical Engineering) did his second summer research at UC San Diego. Sidney is the first in his family to earn a bachelor's degree. He presented a poster at the 2021 UC LEADS Symposium titled *Simulation of a Soft Robot Walking Gait with Directionally Adhesive Suction Discs*. He graduated in spring 2021 and is a Mechanical Engineering Masters student at UC San Diego.

Christina Puzzanghera (Marine Biology) did her second summer research at UC San Diego. She presented a poster at the 2021 UC LEADS Symposium titled *Determining the Role of Predation in the Evolution of Sexual Dimorphism in Threespine Stickleback*. She graduated in 2021 and is a Marine Biology Masters student at UC San Diego.

Xavier Perez (Electrical Engineering) did his second summer research at UC San Diego. Xavier grew up in El Salvador and is the first in his family to earn a bachelor's degree. His poster, *Low-Cost Home-Made Recording Chambers for Zebra Finch Birds* received Top Honors at the 2021 UC LEADS Symposium. Xavier also received a Campus Leadership Award. He graduated in 2021 and was accepted as an Electrical and Computer Engineering PhD student at UC San Diego.

Kha Nguyen (Bioengineering) did her second summer research at UC Santa Barbara. Kha is the first in her family to earn a bachelor's degree and transferred to UC San Diego from Orange Coast Community College. She presented a poster at the 2021 UC LEADS Symposium titled *A Direct Comparison of Computational Models for Prosthetic Vision*. She graduated in spring 2021 and is a Mechanical and Aerospace Engineering PhD student at UC San Diego.



Alumni Spotlight



DR. JENN GARCIA

UC LEADS 2004-2006
B.S. Biochemistry/Chemistry

Dr. Jenn Garcia pursued her Ph.D. in Genetics at UC San Francisco after receiving her B.S. in Biochemistry/Chemistry at UC San Diego. Her postdoctoral studies continued at the University of Colorado, where she taught microbiology and genetics to undergraduates. After discovering her passion for both research and undergraduate teaching, she combined the two by becoming an Assistant Professor at Colorado College, where she teaches Molecular Biology.

First Year Scholars

Joanne Chen (Neuroscience) did her first summer research at UC San Diego. Joanne is first-generation college student and she presented a poster at the 2021 UC LEADS Symposium titled *Prosocial Rat Behaviors*. She plans to graduate in 2022.

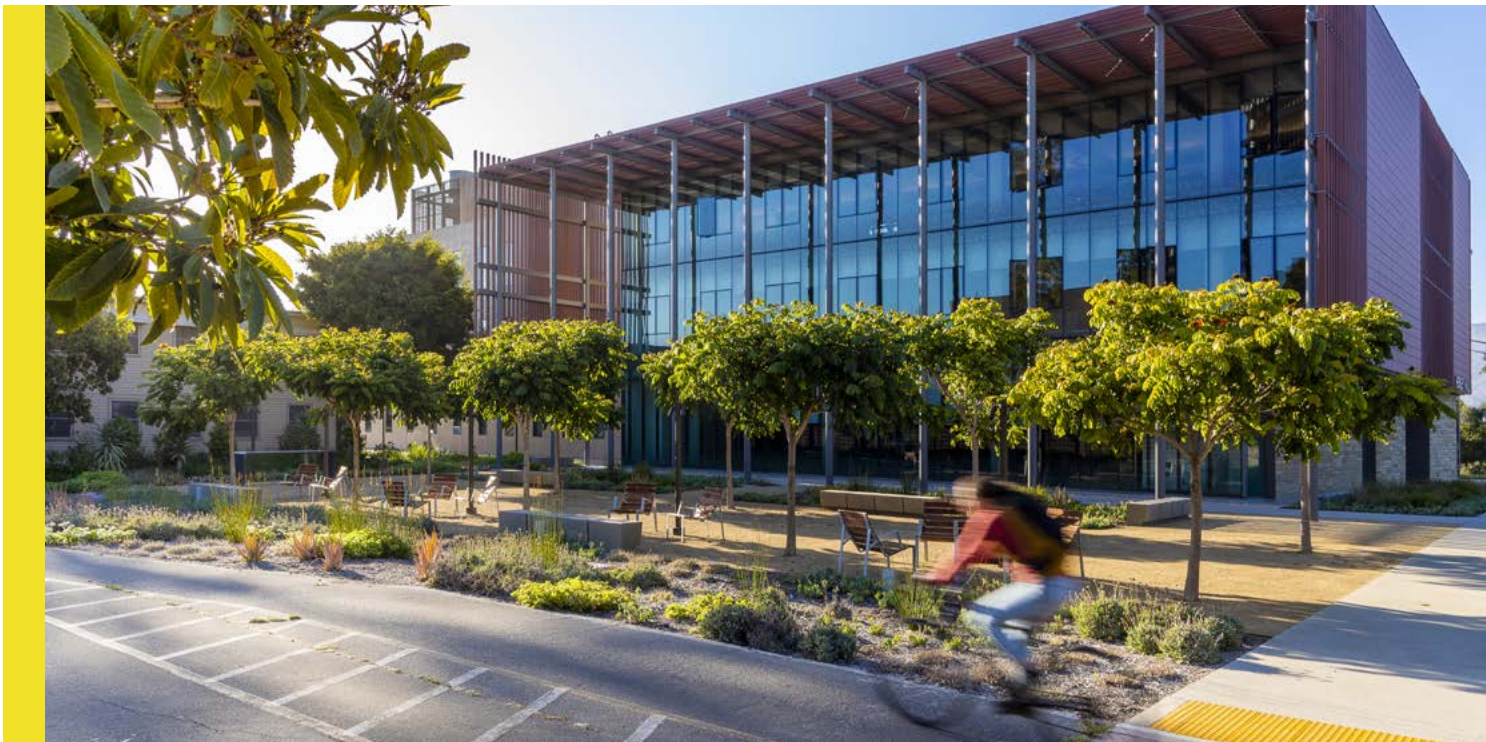
Sylas Eckhart (Environmental Systems) did his first summer research at UC San Diego. Sylas transferred from Santa Monica Community College to UC San Diego and he presented a poster at the 2021 UC LEADS Symposium titled *Measures of Built Neighborhood Environment and Mental Health*. He plans to graduate in 2022.

Noah Gaitan (Biochemistry) did his first summer research at UC San Diego and is a first-generation college student. His poster, *Investigating the Effects of Integrin $\beta 7$ Blockade in an Interleukin 10 (IL-10) Deficient Model of Chronic Colitis*, received an honorable mention at the 2021 UC LEADS Symposium. He graduated in 2021 and is a Biology Masters's student at UC San Diego.

David Hernandez (Mathematics) did his summer research at UC San Diego and is a first-generation college student. He presented a poster at the 2021 UC LEADS Symposium titled *Queen Packing on an Infinite Chessboard*. He plans to graduate in 2022.

Carolina Lopez (Biochemistry) did her first summer research at UC San Diego. She presented a poster at the 2021 UC LEADS Symposium titled *Analyzing Clinician Views on Race and Genetic Ancestry for Treating Hypertension*. She plans to graduate in 2023.

“In the UC LEADS program, I found a network of people who nurtured my potential, celebrated my successes, and helped me through each hardship or roadblock. Because of this network, each step I have taken through academia has felt a little less daunting.



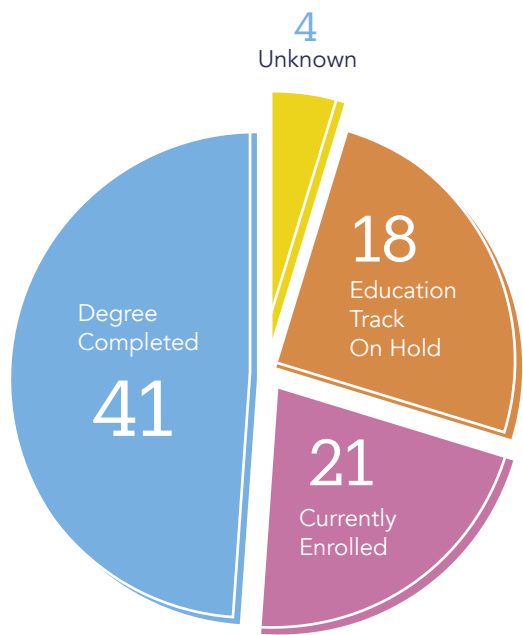
UC Santa Barbara | Year in Review

The 2020-2021 school year was a year of adaptation for the world and for UC LEADS. We moved to a fully virtual program for the academic year and the summer. Our 2021 UC LEADS Symposium was held virtually, which made it possible for family and mentors of many of our scholars to be able to watch them present. For our scholars, this marked the first time their families had ever seen them present and it made it all the more special. At the symposium, Tessa Chou received an Honorable Mention in the Biological Sciences category. Benito Gonzalez presented his work at the American Physical Society.

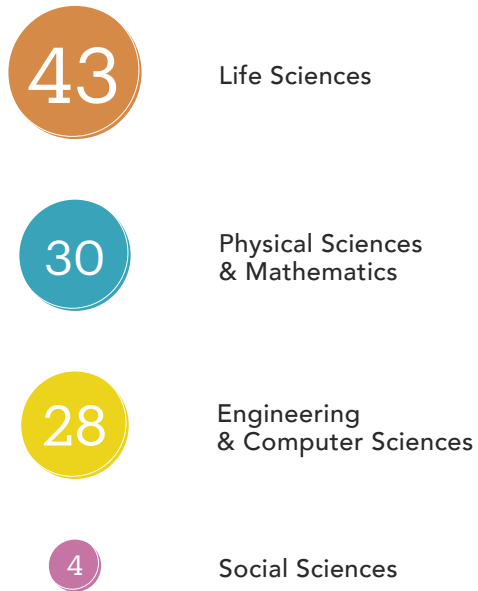
While our students are deeply involved in pursuing and presenting on their own research, they are also very involved in various leadership activities, such as tutoring and leadership roles in clubs. One such student took it upon himself to create an Info session on UC LEADS that was specifically geared to student groups. This was instrumental in recruiting our new cohort.

The most important thing we focused on this year was community. We worked hard to foster community among the scholars and to provide some stability and consistency. The first-year cohort created a group chat to encourage each other, and we connected current scholars with alumni scholars. We also focused on their future well-being by focusing our workshops on advocating for yourself, applying to graduate school during a pandemic, and self-care.

Going to Graduate School



Majors



Second Year Scholars

Michelle Chiu (Biology - Creative Studies) is from Northern California. She did her second summer research at UC Davis. She presented a poster at the 2021 UC LEADS Symposium titled *Cataloguing MUTYH Glycosylase Variants: Functional Consequences, Association with Disease, Protein-Protein Interactions, and Allele Frequency*. She graduated in spring 2021 and is a Biophysical Sciences PhD student at the University of Chicago.

Shahira Ellaboudy (Biology - Creative Studies) is from Northern California. She did her second summer research at Stanford University. She presented a poster titled *Investigation Into the Interaction Between Host Cells and the Coronavirus 3CL Protease* at the 2021 UC LEADS Symposium. She also received the Graduate Deans' Leadership Award. She graduated in fall 2020 and is currently working as a Laboratory Assistant in the Weimbs Lab at UCSB.

Charusheela Garapaty (Geophysics/Earth Science) is from Northern California. She did her second summer research at UC Berkeley. She plans to graduate in 2021.

Matthew Salazar (Chemical Engineering) is a first-generation student from Southern California. He did his second summer research at UC Los Angeles. He presented a poster at the 2021 UC LEADS Symposium titled *Formation of Solid Carbon on Molten Salt Surfaces by Pyrolysis of Hydrocarbons*. He graduated in spring 2021 and is a PhD student at the California Institute of Technology.



Alumni Spotlight



ISABELLA MAYORGA

UC LEADS 2017-2019
B.S. Environmental Studies

Isabella Mayorga completed her undergraduate education at UC Santa Barbara with a B.S. in Environmental Studies, and began her research on agroecology. After receiving her M.S. from the University of Michigan-School for Environment and Sustainability, she joined the same lab that her undergraduate advisor worked in during her PhD program. Today, she works at SFSU as the Education Coordinator for the SF Bay National Estuarine.

First Year Scholars

Tessa Chou (Biology) is from Northern California and serves as the President of a student group called Breaching BioTech. She did her first summer research at UC Santa Barbara. Her poster, *Antiviral Gene Expression During HSV-1 Infection of Retinal Organoids*, received an honorable mention at the 2021 UC LEADS Symposium. She plans to graduate in 2022.

Benito Gonzalez (Physics) is a first-generation student from Central California who also serves as President of a student group called the Society of Physics Students. He did his first summer research at UC Santa Barbara. He presented a poster at the 2021 UC LEADS Symposium titled *Absence of Moment Fragmentation in the Mixed B Site Pyrochlore Oxide Nd₂GaSbO₇*. He plans to graduate in 2022.

Vivian Hoang (Biology - Creative Studies) is from Northern California and is very involved in creating mentoring opportunities for those in the College of Creative Studies at UCSB. She did her first summer research at UC Santa Barbara and plans to graduate in 2022.

Ricardo Espinosa-Lima (Biology - Creative Studies) is a first-generation student from Southern California. He did his first summer research at UC Santa Barbara and plans to graduate in 2022.

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In my current position managing the education programs for the San Francisco Bay branch of a national reserve system, I have made it my program's mission to engage traditionally excluded communities in science learning opportunities.



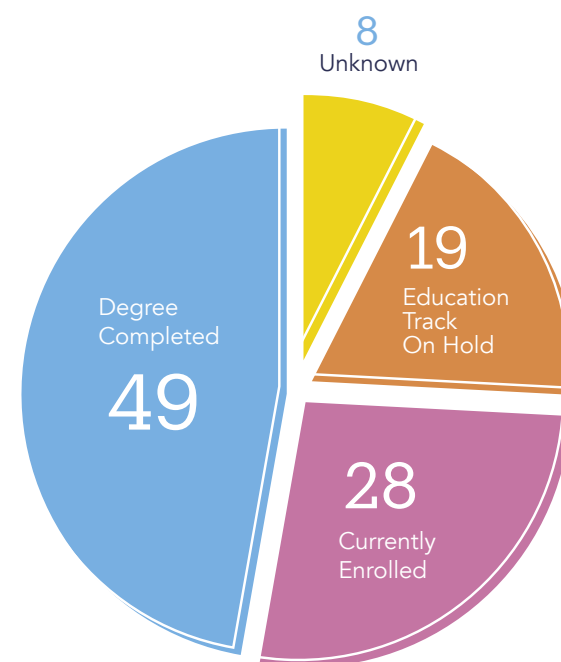
UC Santa Cruz | Year in Review

Our UC LEADS program had significant accomplishments for our 2020-2021 academic year. Despite the COVID-19 pandemic and all classes being moved to remote instructions, our graduating scholars are continuing their educational journey in graduate study, post-baccalaureate programs, and research associate positions.

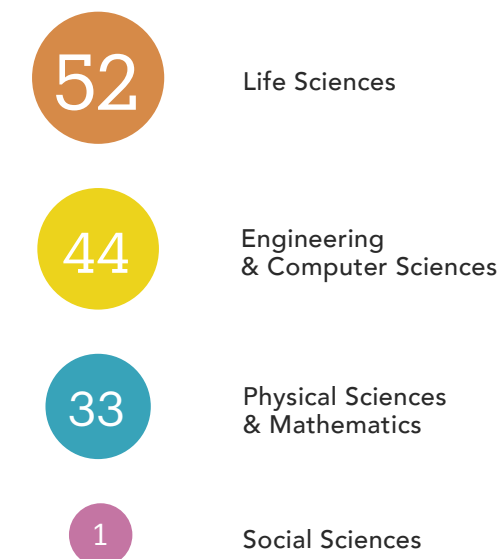
Given the unprecedented COVID-19 pandemic, our summer program was remote. During virtual programming, new activities were developed to ensure scholars gained research skills and professional development training. These included NSF Graduate Fellowship writing, writing lectures, and a programming/data analysis short course. Scholars could join other UC campus activities and workshops, where they met graduate representatives and alumni panels organized by the UC LEADS headquarter. In addition, they participated in Scientific Writing hosted by UCLA and a Python Bootcamp by UC Berkeley. Our first-year scholars completed an intensive, eight-week, full-time virtual summer research training, completing 12 hours of research ethics and 15 hours of professional development. All scholars participated in our end-of-the-summer virtual symposium presenting to over 80 attendees.

In addition to attending faculty research lectures and a weekly book club, all scholars participated in quarterly check-ins with program coordinators, received tutoring for upper-division courses, and participated in professional development workshops throughout the academic year. While access to research was limited during 2020-2021, most of the students were able to conduct in-person research. The rest of the scholars were able to work on small projects such as data analysis, literature review, etc. During fall 2020, three scholars attended SACNAS and three attended ABRCMS national conferences.

Going to Graduate School



Majors



Second Year Scholars

Adriana Gracia (Molecular, Cell & Developmental Biology) did her second summer research at UC Santa Cruz. She graduated in spring 2021 and is currently working as a COVID Screener at AltaMed Health Services.

Evanjelin Mahmoodi (Computer Science & Mathematics with a Computational Concentration) did her second summer research in the industry. Evanjelin was working as a Virtual Reality Development Intern at NASA in Fall 2020. She presented a poster at the 2021 UC LEADS Symposium titled *Towards an Accessible Immersive Virtual Reality Experience for Coping with Anxiety and Obsessive-Compulsive Disorders*. She graduated in 2021 and is currently working as a NIH Post-Bac Scholar at National Institute of Health.

Briana Prado (Earth Sciences) did her second summer research at UC San Diego. She presented a poster at the 2021 UC LEADS Symposium titled *Discovering Organic Chemical Indicators of Environmental Conditions at the Scripps Pier*. She graduated in spring 2021. Brianna was accepted into the Geology MS program at UMASS but decided to defer due to the uncertainty of Covid.

Ray Jara (Electrical Engineering) did his second summer research at UC Santa Cruz. Ray is the first in his family to attend college. He graduated in spring 2021 and is an Electrical Computer Engineering Masters student at UC Santa Cruz.



Alumni Spotlight



JENNY ANNE MAUN

UC LEADS 2013-2015
B.S. Bioengineering and Biomedical Engineering

Jenny Anne Maun received her B.S. at UC Santa Cruz in Bioengineering before working as a Research Assistant at the Clinical Gait Analysis Laboratory. In 2018, she began her graduate education at the University of Nebraska at Omaha in Biomechanics, receiving an M.S. in Biomechanics with a focus on understanding the daily impact of assistive devices. She plans to pursue a research and development career in industry focused on studying human movement.

First Year Scholars

Angel Garcia (Molecular, Cell, & Developmental Biology) did his first summer research at UC Santa Cruz. He presented a poster at the 2021 UC LEADS Symposium titled *Determining the Role of Fezf2 in Neural Stem Cell Lineage Progression*. He graduated in 2021 and participated in the SMART Program Research Fellow at the University of Colorado during the summer. Angel is currently working as a PROPEL Post-bac Research Associate at UC San Francisco in the L'Etoile lab.

Frances Li (Chemistry) did her first summer research at UC Santa Cruz. She presented a poster at the 2021 UC LEADS Symposium titled *Carbon Cloth Supported Bismuth-Based Electrocatalysts for Artificial Nitrogen Fixation*. She plans to graduate in 2022.

Verenise Martinez (Physics) did her first summer research at UC Santa Cruz. Her poster, *Using Spectroscopic Redshifts to Calibrate Richness for Galaxy Clusters in the Dark Energy Survey*, received an honorable mention at the 2021 UC LEADS Symposium. Verenise also received a Campus Leadership Award. She graduated in 2021 and is currently a first-year Ph.D. student in Applied Physics at Northern Arizona University.

Benjamin Mosqueira (Human Biology) did his first summer research at UC Santa Cruz. He presented a poster at the 2021 UC LEADS Symposium titled *Expression Levels of LincRNA-Cox2 in Resident and Recruited Alveolar Macrophages*. Benjamin serves as the undergraduate representative at the Diversity, Equity, and Inclusion committee in the UCSC Physical and Biological Sciences Division. He plans to graduate in 2022.

Angelly Perez Alvarez (Chemistry) did her first summer research at UC Santa Cruz. She presented a poster at the 2021 UC LEADS Symposium titled *Copper Dependent Structural Differences in a Disease Resistant Prion Protein Mutant*. She plans to graduate in 2021.

Leslie Serafin (Earth Sciences) did her first summer research at UC Santa Cruz. Leslie is a first-generation college student from southern California. She works in Dr. Andrew Fisher's Hydrogeology lab. She plans to graduate in 2022.

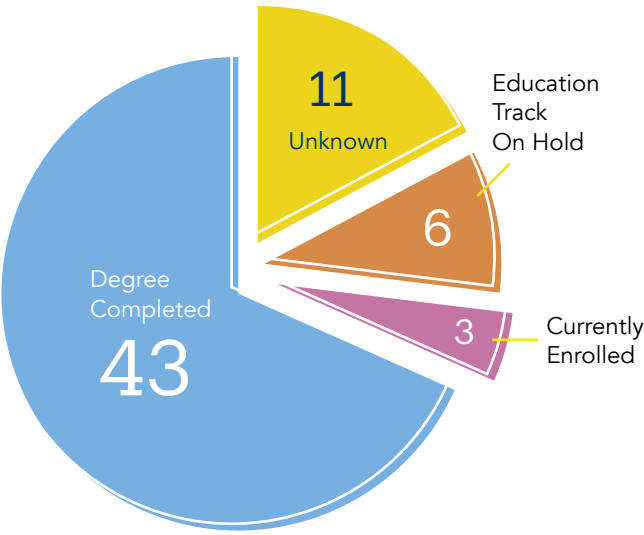
“Ultimately, this program provided me with an example of good mentorship, an uplifting community, and the importance of being aware of wonderful resources, like this program, to help individuals forge a path for themselves and for others.



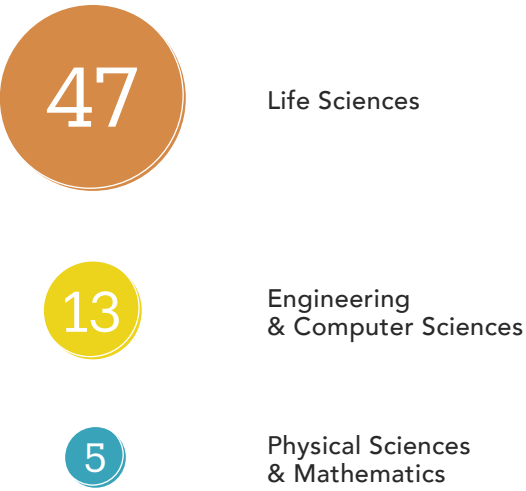
UC San Francisco | Year in Review

Due to COVID-19, the 2020 Summer Research Training Program at UCSF that UC LEADS Scholars participate in was cancelled. However, UCSF wants to celebrate each of you as brilliant scholars and thank you all for your leadership in what have been trying times. We are here for you and rooting you on in the next stages of your career and life!

Going to Graduate School



Majors



Second Year Scholars

Kelly Chau (Biotechnology) was a second summer scholar from UC Davis. She was able to work remotely with a lab at UCSF, while participating in her home campus and systemwide virtual programming. She graduated in spring 2021 and is an Integrative Genetics and Genomics PhD student at UC Davis.

Alumni Spotlight



DR. DANIEL LEE

UC LEADS 2003-2005
B.S. Cell/Cellular Molecular Biology

Dr. Daniel Lee received a B.A. in Molecular and Cell Biology from UC Berkeley before pursuing a Ph.D. in Neuroscience from the Johns Hopkins school of Medicine. After completing his postdoctoral fellowship at the California Institute of Technology, he uses his knowledge in Behavioral Genetics at Schmidt Futures where he serves as a Program Scientist to identify and support innovative research programs and technologies.

“ UC LEADS opened my eyes to the beauty, excitement, and impact of fundamental scientific research. It also provided me with a supportive community to understand its idiosyncratic culture, and how many barriers exist for underrepresented communities and immigrants to quickly build relevant social capital within it.

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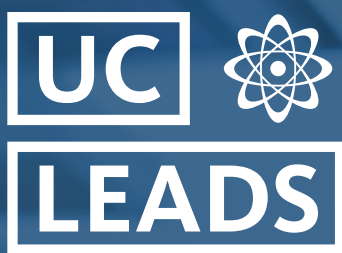
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