

Malcarne et al.
Wells^{1,2,4}

Medicine,
UC San Diego Health
Moore Cancer Center

Stage IIB
Cervical cancer

Stage IIB
The cancer is outside cervix

Cancer in Parametrium
Bleeding in vagina

[not just view]

[not just view]

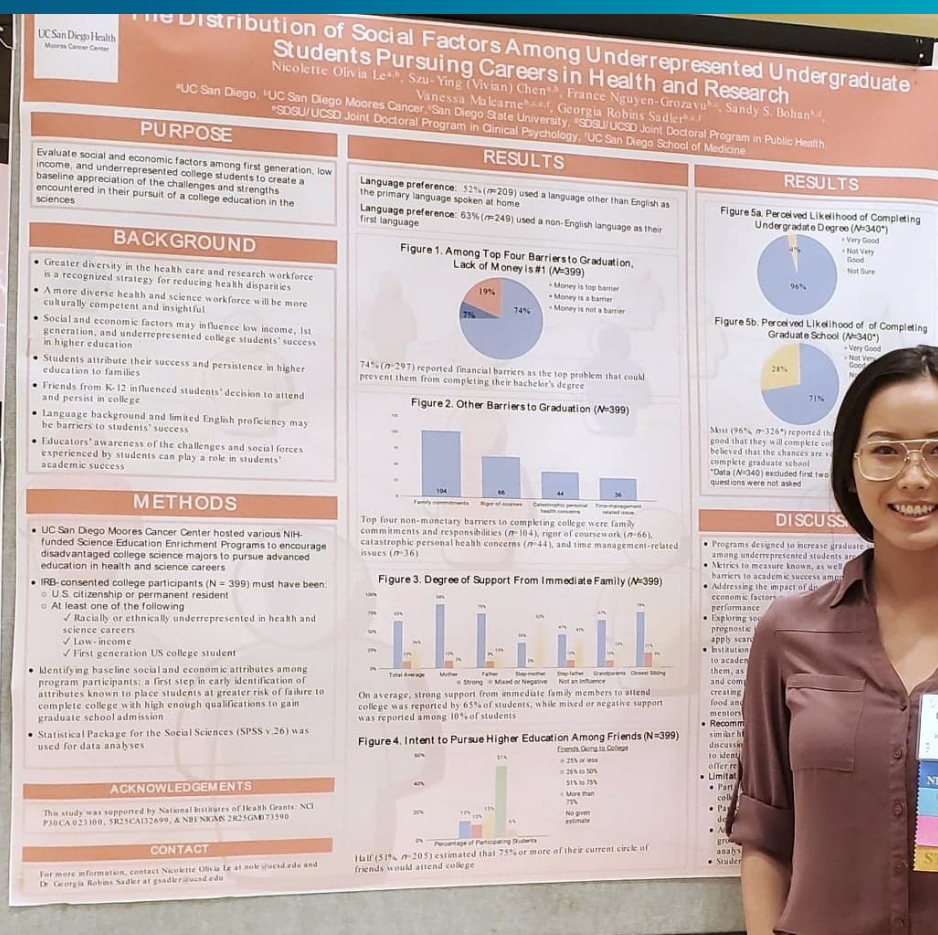
Conclusion

Screening in India are impactful, but
induced in developing countries
basis for screening methods in India
that there are successful programs
national, economic, sociocultural
to improve quality of life in
cervical cancer burden

References

Malcarne, I., Dikshit, R., Eser, S.,
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mortality worldwide: Sources,
or patterns in GLOBOCAN 2012.
Journal of Cancer, 136, E359-E386.
Sasagawa, A., & Wells, K. (2019).
This-If you are alive, you can be
initiators and barriers to cervical
among women living with HIV in
es & Control, 30(4), 365-374.

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Directory Notes

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Cover Photo: **Nicolette Olivia Le** at the 2019 International Cancer Education Conference, Salt Lake City, Utah

This directory reflects our best knowledge of UC San Diego undergraduates participating in mentored research between Summer 2019 and Summer 2020. We know this listing is not comprehensive and we welcome information regarding other undergraduate research projects from the aforementioned timeframe. We hope the 2020-21 directory will include an even larger number of groundbreaking undergraduate research projects at UC San Diego.

The data in this directory represent information available at the time of publication. The students listed completed research at any time between Summer 2019 and Summer 2020. For students in formal research programs, the dates listed for their projects represent the time they were in the particular program. Their research may have started prior and/or extended beyond their program participation. The students may have unlisted accomplishments (e.g. presentations, publications) that occurred or will occur outside the time frame for this year's directory.

Programs and scholarships identified in this directory were available between Summer 2019 and Summer 2020. They may or may not be available in subsequent years.

Descriptions and logos used from non-AEP programs are reprinted with permission from the programs or departments. Photos are used with permission from those in them.

This is a living document. Please report any corrections or submissions to Marie Sheneman, PhD at msheneman@ucsd.edu

Acknowledgements

We would like to acknowledge the invaluable support our program staff have received from Chancellor Pradeep Khosla, Executive Vice Chancellor Elizabeth Simmons, Vice Chancellor of Student Affairs Alysson Satterlund, and Assistant Vice Chancellor for Student Retention and Success Maruth Figueroa, as well as Interim Assistant Vice Chancellor Ebonee Williams. We are grateful that they and our faculty mentors and other partners in promoting undergraduate research maintained the university's commitment to student centered research during this most unusual year.

Undergraduate Research

By David Artis, PhD

Dean of Undergraduate Research Advancement

For curious, creative, conscientious, and ambitious students, participating in structured cocurricular research programs is challenging enough. Anyone who has completed a research program has met the demands of finding a mentor and then likely being an accountable member of a research team, showing up, being quick (in action and in thought), sharing ideas, hitting roadblocks, and moving forward.

The effort comes with potentially life-changing payoffs. In addition to achieving specific results, dedicated researchers open doors for themselves to pursue their interests in graduate or professional schools or through postbaccalaureate fellowships at renowned national and international institutions, or gaining leadership positions in industry or government.

This year our students faced new challenges, from being denied access to their physical workspaces, to digital dilemmas, and, for too many of them, housing and food insecurities.

But these students persevered; they demonstrated resilience, persistence, and a willingness to reach out for assistance. This Directory honors their admirable devotion to scholarship, their commitment to their mentors and research partners, dedication to their families and communities, and unconquerable belief in learning.

In time, the circumstances under which they produced the results celebrated here will be less important than the remarkable work itself.

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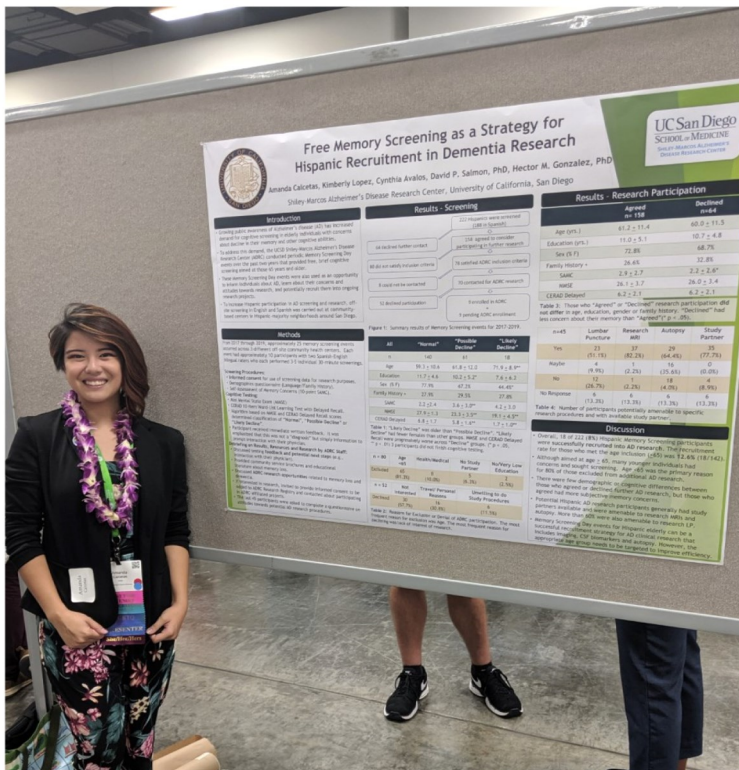
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**Amanda T. Calcetas, URS Scholar
SACNAS 2019, Honolulu, HI**

Fast Stats

882

UC San Diego undergraduate students in this directory conducted research

700

Students gave over 700 conference presentations

9

Students listed here published a peer-reviewed journal article

Majors represented in this directory



■ Engineering (37.5%)
■ Physical Sciences (6%)
■ Health Sciences (2%)

■ Social Sciences (24%)
■ Arts and Humanities (3%)
■ Other (0.5%)

■ Biological Sciences (24%)
■ SIO (3%)

Student Spotlights

Student Spotlight

Sabeel Mansuri

Computer Science (Bioinformatics)

Although my first research position was a bioinformatics role at the Scripps Institution of Oceanography, my most impactful work has been in CS education. In partnership with IEEE - Eta Kappa Nu and Assistant Teaching Professor Niema Moshiri, I founded and led a 4-unit education research course that continues to be offered today.



At the time of founding, we were ~10 students trying to investigate the efficacy of the AP Computer Science A course while simultaneously connecting local high schools with the technical expertise of UC San Diego. We developed week-long modules on cutting-edge Computer Science topics (e.g. Artificial Intelligence, Computer Vision) that relied solely on knowledge that students should have gained from taking the AP course. We would then use adaptive grading and feedback technology to identify consistent errors or misconceptions in student answers, which would indicate a systemic failure of the AP course at teaching particular topics.

I had a professor who insisted, "If you want to learn anything, get out of the classroom." I'd amend that to, "If you want to learn post-undergraduate skills, get out of the classroom." It doesn't matter if you want to go into academia or industry—practical, hands-on research will teach you how to be both an independent contributor and a team member better than any class ever will.

Student Spotlight



Steve Maravillo

**Public Health, Education Sciences
TRELS**

I completed a literature review assessing COVID-19-related vulnerability in health disparities experienced by the Black Homeless population of Los Angeles, California.

The relevance of my research project is most certainly the primary catalyst of my overall excitement for completing this project.

Steve at UC San Diego Summer Research Conference 2020

I feel very honored to have the opportunity to further examine the ways in which society and the United States Healthcare System affect certain individuals more than others. Particularly in the current times of COVID-19 and nationwide protests against the ongoing racism against the Black population, my research has become extremely important to me to further examine the ways in which health-based racism gravely affects my target population and to propose resolutions as a result.

Undergraduate research has allowed me to apply the skills and concepts I've learned in the classroom to practice and has been an incredible experience for me as a result. I firmly believe that all students should pursue undergraduate research in any form because it's provided me with practical and experiential experience in my intended career field, and has offered plenty of clarity regarding my future goals as a researcher.

Student Spotlight

Hector Murguia

**Electrical Engineering
ECE SRIP**

Gino Carfano (fellow student) and I began by devising a way to track the trajectory of flying boomerangs using Ultra-Wide Band (UWB), and as we further dove into the specs of UWB, we realized that the frequency nature of this technology might make it vulnerable to 5G New Radio (NR), the next generation of cellular technology.



As a result, we shifted our focus into evaluating the impact of 5G NR on commercially-available UWB indoor positioning systems through meticulous testing. In addition to that, we have worked on developing a simulation testbench for UWB theoretical performance limits using MATLAB and Simulink to verify our measurements.

Ultimately, both of the studies have culminated into successful paper submissions for AIAA and IEEE conferences, the latter being the 2019 Indoor Positioning and Indoor Navigation Conference in Pisa, Italy ([See Video Here](#)). As coauthor of the paper, I had the privilege of presenting our findings to 250 global industrial and academic experts at this prestigious conference. I am very excited to be putting my name out there in academic papers and presenting to actual professionals as an undergraduate student to show other students that this is possible.

Student Spotlight

Dora Ogbonna

**Chemical Engineering
CAMP, McNair, TRELS**

My research deals with the creation of biomaterial scaffolds for the delivery of several small molecule immunomodulators which when delivered will alter the cellular profile in a region leading to a more favorable outcome for diseases like Graft versus Host Disease (GvHD), and Rheumatoid Arthritis (RA).



Dora at UC San Diego Summer Research Conference 2019

I was interested in the intersection of engineering and the body, the idea of taking a pure science and translating it into practical applications. In addition, the project is based on immune engineering and I have always been interested in immunology, I find the cellular interactions and mechanisms fascinating.

With this experience, I am learning what research is about and gathering a big picture of what I want to do in the future. This experience can also help me during my graduate school application because it proves my willingness to participate in research. The skills I learn during my time as an undergraduate researcher can also help contribute to making me a better researcher and teacher in the future.

Student Spotlight

Emily Paris

**Biochemistry and Cell Biology,
TRELS, URS**

Under the supervision of a postdoc, Tristan de Rond, in Bradley Moore's Lab at the Scripps Institution of Oceanography (SIO), my [honors thesis] project involved adjusting a microbial culturing technique, called "encapsulation", to capture and grow microbes in situ in marine sponges. The goal was to find new marine natural products and advance knowledge in microbiology by culturing new types of microbial life.



Emily preparing to collect bioacoustic and video data from orcas in the icy fjords of Norway, 2019

Towards the end of my senior year, I had the opportunity to participate in the **all-female "Sedna Epic Expedition"**. In collaboration with the Gerald D'Spain Lab at SIO, I was able to record video and bioacoustics data of orcas by snorkeling with them in the fjords of Norway. The project intended to link orca bioacoustics and behaviors with environmental conditions over a period of three years. Our team also participated in microplastics research for the Dimitri Deheyn Lab at SIO and environmental DNA collections for the University of Tromsø.

My goal is to become a scientist with NASA and contribute to research on microbial life in extreme environments. Conducting research at UC San Diego developed my love for the independence that comes with having a PhD, which led me to pursue that path. I will start PhD program in Earth System Science at Stanford University in Fall 2020.

Awards and Publications



2020 Undergraduate Library Research Prize Winners

The [Undergraduate Library Research Prize](#), co-sponsored by the UC San Diego Library, UC San Diego Alumni, and the Vice Chancellor for Student Affairs, is awarded to students who demonstrate a strategic and effective use of the UC San Diego Library as a resource in direct support of research undertaken on campus. Read further about the 2020 winners [here](#).



Syreeta Nolan, 1st Place

Life Sciences, Physical Sciences, and Engineering

Research Project: A Systematic Review of Methamphetamine Use Disorder Considering Syndemic Factors in HIV

Jack T. Whiteley, 2nd Place

Life Sciences, Physical Sciences, and Engineering

Research Project: Potassium Chloride-Dependent Activation of Immediate Early Genes in an Induced Neuron Model





2020 Undergraduate Library Research Prize Winners

The [Undergraduate Library Research Prize](#), co-sponsored by the UC San Diego Library, UC San Diego Alumni, and the Vice Chancellor for Student Affairs, is awarded to students who demonstrate a strategic and effective use of the UC San Diego Library as a resource in direct support of research undertaken on campus. Read further about the 2020 winners [here](#).



Garrett Martin, 1st Place

Social Sciences, Arts, and Humanities

Research Project: Leveraging Death:
Violence, Language, and History in
the Conceptualization of Mortality
Salient Activism

Ashley Amaladhas, 2nd Place

Social Sciences, Arts, and Humanities

Research Project: Birds and Bees:
The Effects of Comprehensive Sexual
Health Education on Adolescents



2020 National Competitive Scholarship Winners

Anne Cardenas

Travis Fleming

Kevin Joslin

Sherry Zheng

National Science Foundation (NSF) Graduate Research Fellowship

Up to \$34,000 stipend and up to \$12,000 tuition for graduate study and research in science and engineering.



Harrison Li

Winston Churchill Scholarship

Funding for a year of Master's study in engineering, mathematics, and the sciences at the University of Cambridge, Churchill College.

Dora Ogbonna Barry Goldwater Scholarship

Financial award for undergraduate study for students who intend to pursue a career in research.



Additional Award Recipients

Kimblery Almaraz

Jacobs School Student Travel Fund

Julia Asay

2019 American Society of Pharmacognosy Undergraduate Research Award

Erica Chan

Irwin Jacobs Award in Public Health Research from the Department of Family Medicine and Public Health (2019) and Independent Study in Public Health Research Award (2020)

Chinmay Kalluraya

Outstanding Poster in the Computational and Systems Biology category at The Annual Biomedical Research Conference for Minority Students 2019

Gayatri Mainkar

Outstanding Poster in the Cell Biology category at The Annual Biomedical Research Conference for Minority Students 2019

Marina Ramsey

2020 Silagi Award for Undergraduate Excellence in Aging Research

Iris Ulloa

Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) 2019 Travel Scholarship

Peer-Reviewed Publications

Anu P. Chaparala

Kong, K.Y., Kwong, T. N. Y., Chan, H., Wong, K, Wong, S. S. Y., **Chaparala, A.** P., Chan, R. C. Y., Zhang, L., Sung. J. J. Y., Yu, J., Hawkey, P. M., Ip, M., Wu, W. K. K., & Wong, S. H. (2020). Biological characteristics associated with virulence in *Clostridioides difficile* ribotype 002 in Hong Kong. *Emerging Microbes & Infections*, 9(1), 631-638.

<https://doi.org/10.1080/22221751.2020.1739564>

Kartik Choudhary

Runser, R., Root, S. E., Ober, D. E., **Choudhary, K.**, Chen, A. X., Dhong, C., Urbina, A. D., & Lipomi, D. J. (2019). Interfacial drawing: Roll-to-roll coating of semiconducting polymer and barrier films onto plastic foils and textiles. *Chemistry of Materials*, 31(21), 9078- 9086.

<https://doi.org/10.1021/acs.chemmater.9b03343>

Janelle Coleen Dela Cueva

Dela Cueva, J.C.A., Zheng, L., Lawlor, B., Nguyen, K. T. Q., **Westra, A.**, Nunez, J., Zanteson, J., McGuise, C., Chavez Morales, R., Katko, B. J., Liu, H., Eliasson, V. (2020). Blast wave interaction with structures: An application of exploding wire experiments. *Multiscale and Multidisciplinary Modeling, Experiments and Design*.

<https://doi.org/10.1007/s41939-020-00076-0>

Peer-Reviewed Publications (cont.)

Mariela Lopez-Valencia

Wei, H., Zapata, R. C., **Lopez-Valencia, M.**, Aslanoglou, D., Farino, Z. J., Benner, V., Osborn, O., Freyberg, Z., & McCarthy, M. J. (2020). Dopamine D2 receptor signaling modulates pancreatic beta cell circadian rhythms, *Psychoneuroendocrinology*, 113, 104551.
<https://doi.org/10.1016/j.psyneuen.2019.104551>

Dibyabrata Mukhopadhyay

Sayed, I. M., Sahan, A. Z., Venkova, T., Chakraborty, A., **Mukhopadhyay, D.**, Bimczok, D., Beswick, E. J., Reyes, V. E., Pinchuk, I., Sahoo, D., Ghosh, P., Hazra, T. K., & Das, S. (2020). Helicobacter pylori infection downregulates the DNA glycosylase NEIL2, resulting in increased genome damage and inflammation in gastric epithelial cells. *The Journal of Biological Chemistry*, 295(32), 11082–11098.
<https://doi.org/10.1074/jbc.RA119.009981>

Andrew Nguyen

Suarez-Lopez, J.R., **Nguyen, A.**, Klas, J., Gahagan, S., Checkoway, H., Lopez-Paredes, D., Jacobs Jr., D. R., & Noble, M. (2020). Associations of acetylcholinesterase inhibition between pesticide spray seasons with depression and anxiety symptoms in adolescents, and the role of sex and adrenal hormones on gender moderation. *Exposure and Health*.
<https://doi.org/10.1007/s12403-020-00361-w>

Peer-Reviewed Publications (cont.)

Marina Ramsey

Lee, E. E., Bangen, K. J., Avanzino, J. A., Hou, B., **Ramsey, M.**, Eglit, G., Liu, J., Tu, X. M., Paulus, M., & Jeste, D. V. (2020). Outcomes of randomized clinical trials of interventions to enhance social, emotional, and spiritual components of wisdom: A systematic review and meta-analysis. *JAMA Psychiatry*, 77(9), 925–935.

<https://doi.org/10.1001/jamapsychiatry.2020.0821>

Maryana Saoor

Bandoli, G., Bertrand, K., **Saoor, M.**, & Chambers, C. D. (2020). The design and mechanics of an accessible human milk research biorepository. *Breastfeeding Medicine* 15(3), 155-162.

<https://doi.org/10.1089/bfm.2019.0277>

Alexander Westra

Dela Cueva, J.C.A., Zheng, L., Lawlor, B., Nguyen, K. T. Q., **Westra, A.**, Nunez, J., Zanteson, J., McGuise, C., Chavez Morales, R., Katko, B. J., Liu, H., Eliasson, V. (2020). Blast wave interaction with structures: An application of exploding wire experiments. *Multiscale and Multidisciplinary Modeling, Experiments and Design*.

<https://doi.org/10.1007/s41939-020-00076-0>

UC San Diego

Undergraduate Research Conferences



Conference for Research in the Arts, Social Sciences and Humanities

Conference for Research in the Arts, Social Sciences and Humanities (CRASSH) is a series of events and conferences with the purpose to recognize research done in the Arts, Social Sciences, and Humanities, as well as to encourage UC San Diego undergraduates to pursue research in these fields.

10 Students presented at a CRASSH event

2	Fall 2019
4	Spring 2020
4	Summer 2020

93 Students attended a CRASSH event



Taylor Campbell, URS Scholar, CRASSH Fall 2019



Online Undergraduate Research Symposium

Two of UC San Diego's signature annual research conferences—the Undergraduate Research Conference and the Faculty Mentor Program Symposium—were replaced this year by the [Online Undergraduate Research Symposium \(OURS\)](#), which was open to a more inclusive group of students with research experience.



UNDERGRADUATE
RESEARCH
CONFERENCE



136

Students participated in the OURS

6

Students participated in a live round-table discussion

[View OURS presentation videos here](#)



Summer Research Conference

The [Summer Research Conference \(SRC\)](#) is an oral presentation conference open to all undergraduates conducting summertime research in the Southern California region. The SRC is held annually as a component of UC San Diego's Academic Enrichment Programs' (AEP) [Summer Research Program \(SRP\)](#). In 2020, the conference was held virtually.

294

**UC San Diego
undergraduate students
presented their research
at the 2019 SRC**

257

**UC San Diego
undergraduate students
presented their research
at the 2020 SRC**

Research Programs and Students



AEP Programs

AEP offers UC San Diego undergraduates the opportunity to obtain valuable research-oriented academic or professional preparation in virtually any academic major including science, math, engineering, social sciences and the arts and humanities.

There are four academic year programs offered:

- CAMP
- FMP
- McNair
- TRELS



Alberto Castanedo, McNair Scholar

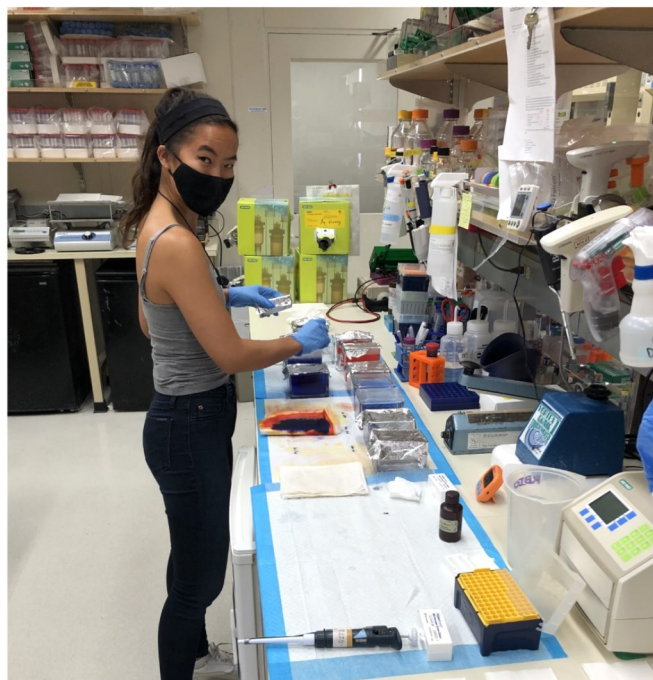


Summer Research Program

The [Summer Research Program \(SRP\)](#) through the Office of Academic Enrichment Programs equips students with the skills to become research scholars, encourages students' pursuit of graduate study, and increases graduate school enrollment among underrepresented, low-income, and first-generation college students.

In 2020, the Summer Research Program comprised of seven research programs:

- CAMP
- Converge Incubator
- Genentech
- McNair
- TRELS
- UC Scholars
- URS



Tiffani Le, URS Scholar

Staining heart sections in the Panda Lab at the Salk Institute for Biological Studies, Aug. 2020



The California Louis Stokes Alliance for Minority Participation in Science, Engineering and Mathematics

The [UC San Diego Summer CAMP](#) is a 10-week, full-time research experience for undergraduates, supported by the California Louis Stokes Alliance for Minority Participation in Science, Engineering, and Mathematics grant from the National Science Foundation (NSF). The objective of the program is to provide students with the skills to pursue research careers and to stimulate serious consideration of graduate study.

20 **Students**
participated
in CAMP { **10** Summer 2019
10 Summer 2020

CAMP Students

Michael Baluja, Cognitive Science
Mentor: Paul Siegel, PhD
Project (2020): Error Correction for Natural Language Processing Neural Networks.
Conference: SRC 2020

Ceiba Becker, Marine Biology
Mentor: Stuart Sandin, PhD
Project (2019): Potential Recovery of a Disturbed Reef Ecosystem
Conference: SRC 2019

Pio Blanco Campos, Bioengineering
Mentor: Pedro Cabrales Arrevalo, PhD
Project (2020): Effects of Polymerized Hemoglobin on subjects with pre-existing conditions
Conference: SRC 2020

Alejandro Danguet, Neurobiology
Mentor: Shelley Halpain, PhD
Project (2020): Evaluating the relationship between synapse remodeling and local energy metabolism using an ATP sensor in dissociated hippocampal neurons
Conference: SRC 2020

Maliq de Piña, Management Science
Mentor: Robert Sah, MD, ScD
Project (2019): Geometric Characterization of Exostoses: A Literature Review
Conference: SRC 2019

Jesus Fausto, Electrical Engineering
Mentor: Frank Talke, PhD
Project (2020): Portable Ophthalmic Instruments
Conference: SRC 2020

Samuel Figueroa, NanoEngineering
[Read Student Spotlight Article Here](#)
Mentor: Shaochen Chen, PhD
Project (2019): Optimizing a Procedure for Synthesizing Gelatin-Norbornene and Alkyne-Modified Gelatins
Conference: SRC 2019

Jesse Garcia de Alva, Electrical Engineering
Mentor: Ravinder Mittal, MD
Project (2020): A Novel Gel Bolus to Improve the Impedance Based Measurement of Esophageal Luminal Cross Sectional Area during Primary Peristalsis
Conference: SRC 2020

CAMP Students (cont.)

James Garrafa-Luna, Environmental Chemistry

Mentor: Daniel Petras, MS

Project (2020): Analyzing Chemical Anthropogenic Input in the Ocean Using Public Data

Conference: SRC 2020

Natalia Henriquez, Physics (Materials Science)

Mentor: Tongyan Lin, PhD

Project (2020): Using CMB measurements to gain more precise understanding of dark matter density and interactions

Conference: SRC 2020

Jacqueline Hernandez, Biology

Mentor: Pamela Mellon, PhD

Project (2019): The Role of OTX2 in Kisspeptin Neurons in Reproductive Function

Conference: SRC 2019

Sarah Kinney, Electrical Engineering

Mentor: Vikash Gilja, PhD

Project (2019): Efficient Mapping of the Motor Cortex

Conference: SRC 2019

Bolarin Lawrence, NanoEngineering

Mentor: Ester Kwon, PhD

Project (2020): Visualization of Next-Generation Sequencing Phage Display Data for Identification of Novel Cell-Targeting Ligands After Traumatic Brain Injury

Conference: SRC 2020

Bryn Lopez, Biology

Mentor: Julian Schroeder, PhD

Project (2019): Characterization of Sodium Azide (NaZ) Mutant Lines in *Brachypodium distachyon*

Conference: SRC 2019

Gabriel Lopez, Molecular and Cell Biology

Mentor: Lidija Vukovic

Project (2020): The H3-like region of SARS-CoV-2 protein E is acetylated by p300 HAT

Conference: SRC 2020

Jesi Miranda-Santos, Electrical Engineering

Mentor: Frank Talke, PhD

Project (2020): Portable Ophthalmic Instruments

Conference: SRC 2020

CAMP Students (cont.)

Joshua Mumford, Aerospace Engineering
Mentor: David Pierce, PhD
Project (2019): Effects of Changing Precipitation Patterns on Unimpaired Flows in the Sacramento River Basin
Conference: SRC 2019

Dora Ogbonna, Chem. Engineering
[Read Student Spotlight Article Here](#)
Mentor: Nisarg Shah, PhD
Project (2019): Delivery of immunomodulatory small molecules for tuning T cell activation
Conference: SRC 2019
Award: Barry Goldwater Scholarship

Cristian Sharp, Physics
Mentor: Matthew Shtrahman, MD, PhD
Project (2019): Two-Photon Calcium Imaging of Human Brain Activity: the Next Frontier in Neuroscience
Conference: SRC 2019

Ezechinyere Ukabiala, Bioengineering (Biotechnology)
Mentor: Robert Sah, MD, ScD
Project (2019): Multimodal and Multiscale Imaging of Murine Skeletal Growth: Spine
Conference: SRC 2019

Weginbara Youpele, Electrical Engineering
Mentor: Raghav Subbaraman
Project (2020): Beam-Forming Calibration through UART-to-SPI Data Conversion
Conference: SRC 2020

Converge Incubator

The [Converge Incubator](#) is a pilot program for upper division undergraduates seeking a dedicated focus on entrepreneurship. The 8-week experience includes up to 20 hours per week of programming and requires participation in designated core elements of the Summer Research Program, including orientation and a capstone presentation at the [Summer Research Conference](#) in August. All participants receive access to resources and multifaceted mentorship through [The Basement](#). This year's program centered on addressing civic challenges affecting San Diego.

57	Students participated in Converge Incubator	{	24	Summer 2019
			23	Summer 2020
			14	Fellows
			9	Auditing Students

Read [thisweek@UC San Diego](#) article on Converge [here](#).

Converge Incubator Students

Tanvi Bajaj, International Business
Mentor: Jacques Chirazi
Project (2020): Municipal Microgrid Planning
Conference: SRC 2020
Other Presentation: Converge Summer Showcase 2020

Yuhong (Vickie) Chen, Mathematics (Computer Science)
Mentor: Vish Krishnan, PhD
Project (2019): Smart Fridge
Conference: SRC 2019

Neve Foresti, Cognitive Science (Design and Interaction)
Mentor: Jacques Chirazi
Project (2020): Flybility —Improving Airport Accessibility at SAN
Conference: Converge Summer
Conference: SRC 2020
Other Presentation: Converge Summer Showcase 2020

Wanjun Gu, Chemical Engineering/Economics
Mentor: Vish Krishnan, PhD
Project (2019): PiggyRide
Conference: SRC 2019

Ryan Heo, Computer Science
Mentor: Vish Krishnan, PhD
Project (2019): PiggyRide
Conference: SRC 2019

Stanley Lee, Data Science
Mentor: Vish Krishnan, PhD
Project (2019): Delivrr
Conference: SRC 2019

Jianan Liang, Cognitive Science (Design and Interaction)
Mentor: Vish Krishnan, PhD
Project (2019): Tiscuss
Conference: SRC 2019

Tongshan Liu, Chemistry
Mentor: Vish Krishnan, PhD
Project (2019): PiggyRide
Conference: SRC 2019

Marlon Minchez, Communication
Mentor: Briana Weisinger, MA
Project (2019): Commteract Inc: Digital Information Accuracy for the Future
Conference: SRC 2019

Converge Incubator Students (cont.)

Griffin Mittleman, Cognitive Science
(Design and Interaction)
Mentor: Briana Weisinger, MA
Project (2019): Sav-e: The Online
Environmental Marketplace
Conference: SRC 2019

Katherine Ngo, Cognitive Science
Mentor: Jacques Chirazi
Project (2020): Municipal Microgrid
Planning
Conference: SRC 2020

Zahabiya Nuruddin, Business
Psychology
Mentor: Vish Krishnan, PhD
Project (2019): Discursive Healings
Conference: SRC 2019

Eunhee Oh, Economics
Mentor: Vish Krishnan, PhD
Project (2019): Harvesthru
Conference: SRC 2019

Tiffany Phan, General Biology
Mentor: Briana Weisinger, MA
Project: UCSD SANDDBAR
Conference: SRC 2019

Persephonie Rodriguez, Cognitive
Science (Machine Learning)
Mentor: Jacques Chirazi
Project (2020): Novel Building
Materials
Conference: SRC 2020

Neha Sahota, Human Biology
Mentor: Jacques Chirazi
Project (2020): Flybility — Improving
Airport Accessibility at SAN
Conference: SRC 2020

Prem Shelat, Computer Engineering
Mentor: Jacques Chirazi
Project (2020): Novel Building
Materials
Conference: SRC 2020

Callie Suppa, Communications
Mentor: Jacques Chirazi
Project (2020): Team Rush Hour
Conference: SRC 2020

Steven Swee, Chemical Engineering
Mentor: Jacques Chirazi,
Project (2020): Novel Building
Materials
Conference: SRC 2020

Converge Incubator Students (cont.)

Amer Tabban, Computer Science

Mentor: Jacques Chirazi

Project (2020): Myze

Conference: SRC 2020

Charlie Tran, Data Science

Mentor: Jacques Chirazi

Project (2020): Municipal Microgrid Planning

Conference: SRC 2020

Cindy Tsai, Environmental Chemistry

Mentor: Briana Weisinger, MA

Project (2019): Tiscuss

Conference: SRC 2019

Nicholas Vandenberg, Mathematics (Applied)

Mentor: Vish Krishnan, PhD

Project (2019): SoundSwell

Conference: SRC 2019

Daniel Vazquez, Physics

Mentor: Jacques Chirazi

Project (2020): Team Rush Hour

Conference: SRC 2020

Tiffany Wang, Chemical Engineering

Mentor: Vish Krishnan, PhD

Project (2019): Color-Changing

Fabric for a More Circular Fashion Industry

Conference: SRC 2019

Yufei Wang, Interdisc Computing & the Arts

Mentor: Briana Weisinger, MA

Project (2019): Unia

Conference: SRC 2019

Lindsey Young, Mechanical Engineering

Mentor: Jacques Chirazi

Project (2020): The Gender

Minorities in Engineering Initiative

Conference: SRC 2020



Faculty Mentor Program

The [Faculty Mentor Program](#) (FMP) helps students of all majors build valuable relationships with UC San Diego faculty, develop research skills, and envision a future in graduate or professional school. The program is open to students with Junior or Senior standing, and research is conducted in Winter and Spring quarters.

Program Benefits

CREDIT

Get 4 units of 99 or 199 Independent Study credit for each quarter you participate in the FMP.

NETWORK

A close rapport with a faculty mentor can open up your world to a wider research community and the chance to meet leaders, future colleagues, and lifelong friends who share your intellectual curiosity.

PROFESSIONAL DEVELOPMENT

The FMP offers a variety of workshops and seminars designed to help you become better researchers, writers, and explore the possibility of attending graduate school.

80 Students participated in FMP

This number includes McNair Scholars who are automatically part of FMP

FMP Students

Faiza Abid, Biochemistry and Cell Biology
Mentor: Willis Li, PhD
Project (2020): Transcription factors. Pax3 and Pax9
Conference: OURS 2020 ([View Presentation Here](#))

Kayla Aceves, Philosophy
Mentor: Saba Bazargan-Forward, PhD
Project (2020): Unifying an Individualist Account of Responsibility with a Historical Understanding of Structural Injustice
Conference: OURS 2020 ([View Presentation Here](#))

Vinit Adani, Biochemistry and Cell Biology
Mentor: Jair Siqueira-Neto, PhD
Project (2020): A Review of the Pathogenesis of Chagas Disease
Conference: OURS 2020 ([View Presentation Here](#))

Luis Alvarez, Cogn. and Behavioral Neuroscience
Mentor: Uma Karmarkar, PhD
Project (2020): The Neural Basis of Gain/Loss Framing and Decision Making Under Risk
Conference: OURS 2020 ([View Presentation Here](#))

Michael Baluja, Cognitive Science
Mentor: Paul Siegel, PhD
Project (2020): Error Correction for Natural Language Processing Neural Networks
Conference: OURS 2020 ([View Presentation Here](#))

Elizabeth Bennette, Psychology (Developmental)
Mentor: Adena Schachner, PhD
Project (2020): Children's understanding of perception & physical interaction over video chat
Conference: OURS 2020 ([View Presentation Here](#))

FMP Students (cont.)

Sharad Bhagwat, Cognitive Science

Mentor: Nigel Calcutt, PhD

Project (2020): The Effects of Pirenzepine in Preventing and Reversing Nerve Damage Caused by Chemotherapy

Conference: OURS 2020 ([View Presentation Here](#))

Bryant Cao, Biology

Mentor: Matthew Daugherty, PhD

Project (2020): Rewiring the Mosquito Heat Shock Response with Helitron Transposable Elements

Conference: OURS 2020 ([View Presentation Here](#))

Kenneth Chen, Computer Science

Mentors: Stephen Macneil, PhD;

Steven Dow, PhD

Project (2020): Community-driven design: How communities designed their way out of COVID-19

Conference: OURS 2020 ([View Presentation Here](#)), Invited to present at OURS roundtable discussion

Zhixian Chen, Computer Engineering

Mentor: Amarnath Gupta, PhD

Project (2020): Performance Ontology Reasoning on OWL Data Using In-Memory Data Structure

Avery Coble, Marine Biology

Mentor: Stuart Sandin, PhD

Project (2020): The Role of Colony Integration and Growth Rate in Lesion Regeneration within population of massive coral Porites around Jarvis Island

Conference: OURS 2020 ([View Presentation Here](#))

Lauryn Crudele, Cognitive Science (Neuroscience)

Mentor: Georgia Robins Sadler, PhD

Project (2020): A Literature Review of Factors Influencing Undergraduate Students in the United States and Instruments to Measure Student Success

Anika Dandekar, Political Science (Public Policy)

Mentor: LaGina Gause, PhD

Project (2020): Travel Ban Framing Analysis

Conference: OURS 2020 ([View Presentation Here](#))

FMP Students (cont.)

Valeria Gomez, Human Biology
Mentor: Pei-an (Betty) Shih, PhD
Project (2020): Fatty Acid Desaturase and Elongase Enzymes in Individuals with Anorexia Nervosa
Conference: OURS 2020 ([View Presentation Here](#))

James Holcomb, Molecular and Cell Biology
Mentors: Samara Reck-Peterson, PhD; Jenna Christensen, PhD
Project (2020): Studying microtubule-based transport in filamentous fungi using cell biology and bioinformatic approaches
Conference: OURS 2020 ([View Presentation Here](#))

Joshua Hussong, Psychology
Mentor: Raenne Moore, PhD

Megan Li, Physics (Astrophysics)
Mentor: Karin Sandstrom, PhD
Project (2020): Active Galactic Nuclei
Conference: OURS 2020 ([View Presentation Here](#))

Jennifer Nguyen, Pharmacological Chemistry
Mentor: Anjan Debnath, PhD
Project (2020): Search for New Potential Drug Leads Against *Naegleria Fowleri* Using High-Throughput Screening
Conference: OURS 2020 ([View Presentation Here](#))

Elizabeth Peek, Cogn and Behavioral Neuroscience
[Read Student Spotlight Article Here](#)
Mentor: Colin Depp, PhD
Project: Sleep, Psychosis, and Social Cognition
Conference: OURS 2020 ([View Presentation Here](#))

Haihao Sun, Computer Engineering
Mentor: Amarnath Gupta, PhD
Project (2020): Label-Specific Reachability in Property Graphs

Nicole Tran, Human Biology
Mentor: Job Godino, PhD
Project (2020): User Engagement for Weight Loss DBCIs
Conference: OURS 2020 ([View Presentation Here](#))

FMP Students (cont.)

Cindy Tsai, Environmental Chemistry
Mentor: Georgia Robins Sadler, PhD
Project (2020): A Literature Review of Factors Influencing Undergraduate Students and Instruments to Measure Student Success

Joey Truong, Molecular and Cell Biology
Mentor: Samara Reck-Peterson, PhD
Project (2020): The Mechanism of FHF-Mediated Dynein Attachment to Cargo
Conference: OURS 2020 ([View Presentation Here](#))

Shiva Upadhye, Cognitive Science (Machine Learning and Neural Computation)
Mentor: Andrew Kehler, PhD
Project (2020): Investigating Discourse Modeling in Neural Language Models

Yixing Wang, Computer Science
Mentor: Won Bae, PhD
Project (2020): Deep Learning in Medical Image Registration
Conference: OURS 2020 ([View Presentation Here](#))

Si Wu, Computer Engineering
Mentor: Paul Siegel, PhD
Project (2020): Flash Memory Failure Prediction Using Machine Learning Techniques.
Conference: OURS 2020 ([View Presentation Here](#))

Luna Xia, Computer Engineering
Mentor: Won Bae, PhD
Project (2020): Accelerating T2-mapping for Quantitative MRI using Machine Learning and Multithreading
Conference: OURS 2020 ([View Presentation Here](#))

Rachel Kai-Xin Yim, Global Health
Mentor: Michael R. Gorman, PhD
Project (2020): Sex Differences in Circadian Biology
Conference: OURS 2020 ([View Presentation Here](#))

Yuxin Yuan, International Studies
Mentor: Marc Muendler, PhD
Project (2020): Within and across regions Income inequality in the U.S.
Conference: OURS 2020 ([View Presentation Here](#))

FMP Students (cont.)

Zhen Zhai, Electrical Engineering/
Mathematics
Mentor: Paul Siegel, PhD
Project (2020): Belief propagation list
decoder for polar code
Conference: OURS 2020 ([View
Presentation Here](#))

Haiyue Zhang, Mathematics
(Applied)
Mentor: Titan Alon, PhD
Project (2020): Development of
Reclamation Areas in China
Conference: OURS 2020 ([View
Presentation Here](#))

Junchen Zhao, Probability and
Statistics
Mentor: Amarnath Gupta, PhD
Project (2020): Exploratory Analysis
for Knowledge Graph by Probabilistic
Sampling
Conference: OURS 2020 ([View
Presentation Here](#))

Genentech Scholars Program

The [Genentech Scholars Program](#) is a 10-week full-time summer research program that is a sister program to the UC Scholars Program; the program's objectives are to provide skills to become research scholars, stimulate students' serious consideration of graduate study, and increase learning and networking opportunities.

The Genentech Foundation seeks to support students in life science and technology fields who may have faced barriers to engaging in research in the past.

10 Genentech Scholars { **3 Summer 2019**
7 Summer 2020

Genentech Scholars

Natalia Avina-Ochoa, Molecular and Cell Biology

Mentors: Susan Kaech, PhD; Steven Zhao, PhD

Project (2020): T cell gene expression in Pancreatic ductal adenocarcinoma
Conference: SRC 2020

Skylar Bird, Biochemistry and Cell Biology

Mentor: Eric Schmelz, PhD

Project (2020): Maize terpene synthase 8 contributes to a complex blend of fungal-elicited antibiotics
Conference: SRC 2020

Brian Dinh, Molecular and Cell Biology

Mentor: Peter Shaw, PhD

Project (2020): CFH and HTRA1 exhibit an antagonistic effect on inhibiting oxidized phospholipids uptake in human retinal pigment epithelial cells
Conference: SRC 2020

Carla Espinoza, Biochemistry and Cell Biology

Mentor: Jerry Yang, PhD

Project (2019): Segmental Labeling of Fascin for Detection of BTA Binding
Conference: SRC 2019, The Annual Biomedical Research Conference for Minority Students (ABRCMS) 2019

Delina Kambo, Bioengineering

Mentor: Trey Ideker, PhD

Project (2020): The effect of cancer cell's genomic mutations and gene expression on cancer cell's genetic dependencies.
Conference: SRC 2020

Lee Diego Lacasa, Biochemistry and Cell Biology/Cogn and Behavioral Neuroscience

[Read Student Spotlight Article Here](#)

Mentor: Taylor Alan Doherty, MD

Project (2020): The Effect of the STING Pathway on Innate Lymphoid Cell Changes During Type 2 Lung Inflammation
Conference: SRC 2020

Genentech Scholars (cont.)

Mariela Lopez-Valencia, Cogn and Behavioral Neuroscience

Mentor: Christina Gremel, PhD

Project (2019): Effects of Alcohol Dependence on Incentive learning

Conference: SRC 2019, The Annual Biomedical Research Conference for Minority Students (ABRCMS) 2019

Erin Rosales, Human Biology

Mentor: Leonardo Nogueira, PhD

Project (2020): The effects of the lung treatment of SARS-CoV-2 spike proteins in mice on Lung and diaphragm ACE2 expression and plasma Ang II levels

Conference: SRC 2020

Soyoung Shin, Chemical Engineering

Mentor: Jinhye Bae, PhD

Project (2020): Diffusivity of water in homogeneous polyacrylamide (PAAm) hydrogels

Conference: SRC 2020

Geneva Walters, Molecular and Cell Biology

Mentor: Roger Sunahara, PhD

Project (2019): G Protein's Role in the Up-Regulation of ERK Signaling

Conference: SRC 2019



Ronald E. McNair, PhD.

The McNair Scholars Program

Ronald E. McNair was nationally recognized for his work in the field of laser physics. He was selected by NASA for the space shuttle program in 1978 from a pool of ten thousand applicants. After his death in the Challenger Space Shuttle accident, the Ronald E. McNair Post-Baccalaureate Achievement Program was funded by Congress. The [McNair Program](#) is a federal TRIO program funded by the U.S.

Department of Education to provide low-income, first generation college students, and students from groups underrepresented in graduate education, with doctoral study preparation.

64 McNair Scholars { **30** Summer 2019
34 2019-2020 AY
↳ **30** Summer 2020

McNair Scholars

Michael Alvarez, Philosophy
Mentor: Monte Johnson, PhD
Project (2019): Sagehood and Civic Duty: Conceptions of the Sage in Ancient Wisdom Traditions
Conference: SRC 2019

Enrique Arcilla, Urban Studies and Planning
Mentor: Isaac Martin, PhD
Projects: (2020 Winter/Spring) Whose Yard Is It Anyway? Collaboration, Community, and Control; (2020 Summer) Agenda Control and Conflict Mitigation in General Plan Workshops
Conferences: SRC 2020, OURS 2020 ([View Presentation Here](#))

Alberto (Fredo) Avalos, Nanoengineering
Mentor: Saikat Chakraborty Thakur, PhD
Project (2019): Characterization of a high power helicon plasma device
Conference: SRC 2019

Jazlyn Barrientos, Public Health
Mentor: Abigail Andrews, PhD
Project (2019): Transformation of Central American Identity Seen Through Caravan Utilization
Conference: SRC 2019

Pio Blanco Campos, Bioengineering
Mentor: Pedro Cabrales Arrevalo, PhD
Project (2020 Winter/Spring): Mechanical Hemolysis induction and Microcirculation effects
Conference: OURS 2020 ([View Presentation Here](#))

Apollo Blatchley, Literature (Writing)
Mentor: Seth Lerer, PhD
Project (2019): Transcendence from Melancholia
Conference: SRC 2019

Amanda Breton, Bioengineering (BioSystems)
Mentor: Pedro Cabrales Arrevalo, PhD
Project (2019): Using Hyperspectral Analysis to Understand Tissue Oxygenation Rates
Conferences: Society for Advancement of Chicanos/Hispanics and Native Americans in Science 2019, SRC 2019

McNair Scholars (cont.)

Angelina Campos, Literature
(Writing)

Mentor: Amelia Glaser, PhD

Project (2019 Summer): Communists, Socialists, and leftists in American Children's literature

Conference: SRC 2019

Kelly Clemen, Literature (Cultural Studies)

Mentor: K. Wayne Yang, PhD

Project (2019 Summer): Black Like Water: A Place-Based Approach to Student Retention at UCSD

Conference: SRC 2019

Rigoberto Carreto, Computer Engineering

Mentor: Tara Javidi, PhD

Project (2019): Neural Networks and Drones

Conference: SRC 2019

Alexis Corona, Human Developmental Sciences

Mentor: Lauren Brookman-Frazee, PhD

Project (2019 Summer): Exploring Predictors of Therapist Use of Homework in Community Mental Health

Conference: SRC 2019

Alberto Castanedo, Molecular Synthesis

Mentor: Dionicio Siegel, PhD

Project (2020): Synthesis of Diazirine-Alkyne Probes to Identify FAHFA Interacting Proteins

Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Marin Cross, Biochemistry and Cell Biology

Mentor: Amy Non, PhD

Project (2020): Can acupuncture improve mental health and increase telomerase activity to promote healthy cellular aging?

Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Vanessa Cervantes, Cogn. Science

Mentor: Michael R. Gorman, PhD

Project (2020): Sex differences in circadian clock flexibility: does it depend on an exercise wheel?

Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

McNair Scholars (cont.)

Sabrina Diaz, Molecular and Cell Biology
Mentor: Nan Hao, PhD
Project (2020): Allele switching in TERT gene in different cancer conditions
Conferences: SRC 2020, OURS 2020 ([View Presentation Here](#))

Viviana Dominguez, Microbiology
Mentor: Matthew Daugherty, PhD
Project (2020): An Evolutionary Perspective on Picornavirus Proteases and their Host Targets
Conferences: SRC 2020, OURS 2020 ([View Presentation Here](#))

Alexandra Escobar, Anthropology (Biological)
Mentor: Amy Non, PhD
Project (2019): Protocol Design for RNA Extraction from Human Breast Milk Exosomes
Conference: SRC 2019

Samuel Figueroa, NanoEngineering
[Read Student Spotlight Article Here](#)
Mentor: Kenneth Vecchio, PhD
Project (2020 Winter/Spring): Engineering Ductility in Carbides for Ultra-High Temperature Resistant Applications
Conference: OURS 2020 ([View Presentation Here](#))

Hatchly Galindo Moreno, Political Science
Mentor: Gloria Chacon, PhD
Project (2019): Redefining la loca Through Latina Cultural Production
Conference: SRC 2019

Isabella Garcia, Anthropology (Archaeology)
Mentor: Jade d'Alpoim Guedes, PhD
Project (2019): Reconstructing Prehistoric Famine Using Paleodemography
Conference: SRC 2019

James Garrafa-Luna, Environmental Chemistry
Mentor: David Quarfoot, PhD
Project (2019): Problem Transformations: A Framework for Developing Students' Concept Images
Conference: SRC 2019

McNair Scholars (cont.)

Aayushma Gautam, Bioengineering
(Biotechnology)
Mentor: Nicole Steinmetz, PhD
Project (2019): Plant virus
combination immunotherapy to treat
ovarian cancer
Conference: SRC 2019

James Giles King, Mathematics
(Applied)
Mentor: K. Wayne Yang, PhD
Project (2020): Math Education for
Black Students Juxtaposed to the
Social Movements of the Past
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Monica Gonzalez, Human
Developmental Sciences
Mentor: Frances Contreras, PhD
Project (2019): Amor y Apoyo:
Leciones de Latinx Families in
Nourishing Resilience to First and
Second-Generation College Students'
Conference: SRC 2019

Daniel Hain, Psychology
Mentor: Vilayanur Ramachandran,
PhD
Project (2020): New approaches to
affect the efficiency of personality
and synchronicity of working
experiments in laboratory settings
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Jasmin Hernandez Santacruz,
Linguistics, Psychology (Cognitive)
Mentor: Tamar Gollan, PhD
Project (2020): Cost-Benefit Analysis
of Inhibition in Second-Language
Learning
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Stephen Hoefler, Biochemistry/
Chemistry
Mentor: Jose Burgos, MD
Project (2019): Volunteer Medical
Scribe program for undergraduate
students provides opportunities for
low-resource clinics
Conference: SRC 2019

McNair Scholars (cont.)

Tingfei Hu, Biochemistry and Cell Biology
Mentors: Darren Casteel, PhD; Renate Pilz, MD
Project (2020): The Function of MYPT2, a Myosin Regulatory Subunit for Myosin Phosphatase in Cardiac Myocytes
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Anahi Ibarra, Sociology (Social Inequality)
Mentor: Frances Contreras, PhD
Project (2019): Food and Housing: Assessing Basic Needs Efforts and Understanding the Experiences of Underrepresented Undergraduate Students at UCSD
Conference: SRC 2019

Jose Jimenez, Cogn and Behavioral Neuroscience
Mentor: Sarah Creel, PhD
Project (2020): Cross-Language Activation in Spanish-English Bilinguals
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Unduwap Kandage Don, Computer Engineering
Mentor: Vikash Gilja, PhD
Project (2020): Automated Bird Song Analysis
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Julissa Limatu, Political Science (Comparative Politics)
Mentor: Sebastian Saiegh, PhD

Andrea Lin, Structural Engineering
Mentors: Shabnam Semnani, PhD; Kenneth Loh, PhD
Projects (2020): (1) Computer Modeling of a Passively Adaptive Stiffness Ankle Brace Smart Material; (2) Machine Learning Data-Driven Method to solve the Mechanical Behavior of Heterogeneous Materials
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Yang Lu, Psychology (Clinical)
Mentor: Susan Tapert, PhD
Project (2020): Adolescents' Perceptions of Substance Use Harms are Contingent on Mode of Administration
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

McNair Scholars (cont.)

Josue Luna, Mechanical Engineering
Mentor: Joanna McKittrick, PhD
Project (2019): Characterizing the Torsional Properties of the Helical Macro-Porosity Structure of the Cholla Cacti
Conference: SRC 2019

Stacy Maciel, Cogn and Behavioral Neuroscience
Mentor: Vilayanur Ramachandran, PhD
Project (2019): Head Bobbing Effect and The Upside-Down World
Conference: SRC 2019

Haneen Mohamed, Urban Studies and Planning
Mentor: Shaista Patel, PhD
Project (2020): An Identity Oriented Towards the Past: Nostalgia in Sudanese Cultural Production
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Morgan Montoya, Cogn and Behavioral Neuroscience
Mentor: Jyoti Mishra, PhD
Project (2020): Investigating Cognitive Function in Individuals from Different Racial and Ethnic Backgrounds & Its Interactions with Resilience
Conferences: SRC 2020, Ours 2020
([View Presentation Here](#))

Jaqueline Munive, Sociology (Social Inequality)
Mentor: Makeba Jones, PhD
Project (2020): Understanding the Educational Journey of Undergraduate Latinx Students or Understanding the Experiences of Undergraduate Latinx Students?
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Nay Chi (Tiffany) Naing, Molecular and Cell Biology
Mentor: Pamela Mellon, PhD
Project (2020): In vitro regulation of the Kiss1 promoter by VAX1
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

McNair Scholars (cont.)

Lucia Nishizawa-Rodriguez, International Studies (Literature)
Mentors: Carol Arcos-Herrera, PhD;
Luis Martin-Cabrera, PhD
Project (2020): El performance, la mujer, el ser y la (r)evolución
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Syreeta Nolan, Psychology/Human Health
Mentor: Francesca Telese, PhD
Project (2020): A Systematic Review of Methamphetamine Use Disorder Considering Syndemic Factors in HIV
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))
Award: Undergraduate Library Research Prize, 1st Place

Naama Nunez, Sociology
Mentor: Abigail Andrews, PhD
Project (2020): Across Borders: The Role of Education in Transnational Students' Career Trajectory
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Dora Ogbonna, Chemical Engineering
[Read Student Spotlight Article Here](#)
Mentor: Nisarg Shah, PhD
Project (2020): Literature Review on Cytokine Release Syndrome in Autoimmune Diseases
Conference: SRC2020
Award: Barry Goldwater Scholarship

Thuy Trang Sabrina Pham-Vu, Ethnic Studies/Psychology (Clinical)
Mentor: Yến Lê Espiritu, PhD
Project (2020): Refugee Precarity: Examining the Impact of COVID-19 on Vietnamese Americans and Intergenerationality & Identity-Building within the Oakland Vietnamese Community
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Chantal Rabay, Biological Anthropology
Mentor: Amy Non, PhD
Project (2020): Analyzing Clinician Views on Race and Genetic Ancestry
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

McNair Scholars (cont.)

Brenda Rincon, Human Biology
Mentor: Gail Heyman, PhD
Project (2019): How do lay people evaluate social scientists who study their own racial/ethnic populations?
Conference: SRC 2019

Nayeli Rincon, Psychology (Social)
Mentor: Pamela K. Smith, PhD
Project (2020): Exploring Pathways to Power for Individuals in Consensually Non-monogamous Relationships
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Vanessa Rodarte, Psychology
Mentor: Christopher Oveis, PhD
Project (2019): The Role of Physiological Responses in Supporting Positive Empathy
Conference: SRC 2019

Dulce Rodriguez-Ponciano, Psychology (Health)
Mentor: Linda Brubaker, MD
Project (2019): Patient Preferences for management of Recurrent Urinary Tract Infections and Assessment of Peezy Midstream urine collection device for ease of use, ease of learning and patient satisfaction
Conference: SRC 2019

Ha'ani San Nicolas, General Biology
Ethnic Studies Honors Program
Mentor: Shaista Patel, PhD
Project (2019): Setting the Table: An Exploration of Chamoru Fiestas as a Site of Indigenous Survivance in the Wake of White Settler Colonialism
Conference: SRC 2019

Miguel Sanchez, Human Biology
Mentors: Jacob Garrigues; Amy Pasquinelli, PhD
Project (2019): Determining the Role of Heat-Shock Factor 1 (HSF-1) in Different Tissues of *Caenorhabditis elegans* during Heat Stress
Conference: SRC 2019

McNair Scholars (cont.)

Laura Santos, Ethnic Studies

Mentor: Dennis Childs, PhD

Project (2019): California Justice

System: Subjection of Womxn through
a Mask of Neutrality

Conference: SRC 2019

Rabia Syed, Public Health

Mentor: Leslie Lewis, PhD

Project (2020): Somali Refugees:
Access to Healthcare

Conferences: SRC 2020, OURS 2020

([View Presentation Here](#))

David Sibrian, Spanish Literature

Mentors: Carol Arcos-Herrera, PhD;

Luis Martin-Cabrera, PhD

Project (2020): La disidencia

homosexual en Desde Allá (2015) de

Lorenzo Vigas: Un análisis de la

sexualidad disidente venezolana y

Sudamericana

Conferences: SRC 2020, OURS 2020

([View Presentation Here](#))

Yordanos Tesfai, Public Health

Mentor: Laramie Smith, PhD

Project (2020): Socio Structural

Impacts: A Focus on the Relationship

between Respect, Trust, and

Healthcare Service Engagement

among HIV MSM in Tijuana, Mexico

Conferences: SRC 2020, OURS 2020

([View Presentation Here](#))

Kisanet Sium, Pharmacological

Chemistry

Jzov Stith Gambles, Political Science

Mentor: Makeba Jones, PhD

Project (2019): The Criminalization of
Black Girls (K-12): A Public Health

Issue

Conference: SRC 2019

Tiffany Tran, Economics

Mentor: Prashant Bharadwaj, PhD

Project (2020): Using Pupil Services

Spending and Resources to Predict

Student Performance: Understanding

the Role of District Leadership and

Analyzing Student Performance in

California School Districts

Conference: SRC 2020

McNair Scholars (cont.)

Iris Ulloa, Cogn and Behavioral Neuroscience
Mentor: Natacha Akshomoff, PhD
Project (2019): Brain Development and The Relationship of Movement Abilities in Preschoolers Born Very Preterm
Conferences: SRC 2019, Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) 2019
Award: SACNAS 2019 Travel Scholarship

Abraham Velasquez, Education
Mentor: Frances Contreras, PhD
Project (2019): Core theme behind the motivations and concern of the teaching field and how it fits into existing work
Conference: SRC 2019

Anh Vo, Global Health
Mentors: Rebecca Fielding-Miller, PhD; Richard Garfein, PhD
Projects: (2019) Affective Factors for Satisfaction of Video Directly Observed (VDOT) amongst Tuberculosis Patients Cohort; (2020) #GameChangers: Sexual Resistance Program in Eswatini
Conferences: SRC 2019, SRC 2020, OURS 2020 ([View Presentation Here](#))

Yvonne Yee, Chemical Engineering
Mentor: Nisarg Shah, PhD
Project (2019): Sustained delivery of small molecule regulators of autoimmune T-cells
Conference: SRC 2019



Triton Research & Experiential Learning Scholars

The [Triton Research & Experiential Learning Scholars](#) (TRELS) program is sponsored by the Council of Provosts of the Undergraduate Colleges at UC San Diego and the office of Academic Enrichment Programs. TRELS empowers students to pursue intellectual opportunities beyond the classroom, by providing support in the form of funding and mentorship.

279 Awards

25	Summer 2019
54	Fall 2019
78	Winter 2020
92	Spring 2020
30	Summer 2020

199 Unique students participated in the TRELS program

Triton Research & Experiential Learning Scholars

Caesar Aceituno, Sociology (Social Inequality)

Mentors: Bennetta Jules-Rosette, PhD, Frances Contreras, PhD

Project (2020 Spring, 2020 Summer): The Transfer Experience

Conference: SRC 2020

Elisa Ady, Literatures in English

Mentor: Stephanie Jed, PhD

Project (2020 Spring): The Glossary of Unknowable Nouns

Sultan Al Azzawi, Human Biology

Mentor: Luz Chung, PhD

Project (2020 Spring): Bilingual Learners Project

Ryan Alvey, Aerospace Engineering

Mentor: Nicolas Boechler, PhD

Project (2020 Winter, 2020 Spring): Modified Auxetic 4-Star with Sign-Tunable Poisson's Ratio

David Anyakora, Int'l Studies (Int'l Business)

[Read Student Spotlight Here](#)

Mentor: Georgia Robins Sadler, PhD

Project (2019 Summer): Assessing Impact of University of California, San Diego Pilot Outreach Initiative on Community Competency of Health Disparities and First-Generation Student's Navigation of the College Application Process

Conference: SRC 2019

Yutong Bao, Human Biology

Mentor: Leslie Carver, PhD

Project (2020 Spring): Stability of dynamic audio-visual sensitivities through time

Conference: OURS 2020 ([View Presentation Here](#))

Destany Barnett, Global Health

Mentor: Laramie Smith, PhD

Project (2020 Winter, 2020 Spring): Medical Mistrust and Contraceptive Beliefs Among Black Women
Conference: CRASSH Spring 2020

Triton Research & Experiential Learning Scholars (cont.)

Ella Bayi, Political Science (Int'l Relations)
Mentor: Sebastian Saiegh, PhD
Project (2019 Summer): Indigenous Territories and Deforestation in the Brazilian Amazon
Conference: SRC 2019

Daniela Becerra, Electrical Engineering
Mentor: Michael Davidson, PhD
Project (2020 Spring): Data Collection for Forecast Optimization

Valerie Berumen, Public Health
Mentor: Robert Castro, MFA
Project (2020 Winter): Pa' La Raza

Rachel Brand, Global Health
Mentor: Berenice Jau
Project (2019 Summer): Methodology on Foster Youth Academic Outcomes: Assessing the Needs and Understanding the Experiences of Foster Youth Students in UCSD

Jacqueline Brinkmann, Urban Studies and Planning
Mentor: Leslie Lewis, PhD
Project (2019 Summer): Study Abroad: What We Can Gain from Engaging in Uncomfortable Conversations and Entering Uncomfortable Situations

Tajairi Brown-Neuson, Literature (Writing)
Mentor: Jane Teranes, PhD
Project (2020 Spring): Analyzing How UC San Diego Can Address The Climate Crisis With Student Input

Marc Camanag, Political Science (Int'l Relations)
Mentor: Nancy Grey Postero, PhD
Project (2020 Spring): Pachamama or Death: Identity Conflict and Environmental Attitudes within Bolivia's Indigenous Population

Triton Research & Experiential Learning Scholars (cont.)

Christopher Carbajal-Carbajal, Sociology and Political Science
Mentor: John Skrentny, PhD
Project (2020 Summer): “They’re Making It Hard for Us to Exist” - an Empirical Analysis of How Policing Affects the Quality of Life for Black and Brown Communities in the Militarized City of San Diego
Conference: SRC 2020

Mariana Carrola, Education Studies and Public Health
Mentors: Gerardo Arellano, PhD; Frances Contreras, PhD
Project (2019 Fall, 2020 Winter, 2020 Spring): Chicanas/Latinas in Higher Ed: Negotiating Family Roles & Responsibilities as Students
Conference: OURS 2020 ([View Presentation Here](#))

Ben Carfano, Human Biology
Mentor: John Serences, PhD
Project (2020 Spring): Pinging Feedback Driven Memories using EEG
Conference: OURS 2020 ([View Presentation Here](#))

Mara Casebeer, Physics (Biophysics)
Mentor: Dimitri Deheyn, PhD
Project (2020 Spring): Numerical Model of DNA for the Investigation of High Frequency Bioelectrodynamics

Gino Carfano, Electrical Engineering
Mentor: Prasad Gudem, PhD
Project (2019 Fall): Positioning Using 5G NR Communication Technology Proposal

Jaideep Chakladar, Biochemistry and Cell Biology
Mentor: Weg Ongkeko, MD, PhD
Project (2019 Fall): Pan-cancer analysis of immune-associated mechanisms induced by tobacco smoke

Parker Carnahan, Bioengineering
Mentor: Georgia Kayser, PhD
Project (2019 Fall, 2020 Spring): Kachieng Project

Geeling Chau, Computer Engineering
Mentor: Virginia de Sa, PhD
Project (2019 Fall, 2020 Winter, 2020 Spring): NeuroFeedback for Focus and Flow in Work Sessions

Triton Research & Experiential Learning Scholars (cont.)

Besma Chaudry, Biology

Mentor: Olivia Osborn, PhD

Project (2019 Fall, 2020 Winter, 2020 Spring): Biomarkers of Antipsychotic Induced Weight Gain

Data Analysis Internship: dkNET

Summer of Data Student Internship Program

Brenda Chavez, Political Science

Mentor: Robert Castro, MFA

Project (2020 Winter, 2020 Spring): Pa' La Raza

Derek Chen, Bioengineering

Mentor: Christian Metallo, PhD

Project (2020 Winter, 2020 Spring): Reconstructing the Metabolic Pathway of β -Hydroxy β -methylbutyric acid (HMB)

Abinav Teja Chilukuri, Human Biology

Mentor: Mahadevan Rajasekaran, PhD

Project (2019 Fall, 2020 Spring): Microbiome Presence and Its Relation to Bladder Cancer

Harrison Cho, Economics

Mentor: Andrea Chiba, PhD; Leanne Chukoskie, PhD

Project (2020 Winter, 2020 Spring): Learning to Play Video Games

Rosalyn Cho, Structural Engineering

Mentor: Rodrigo Carreño Vallejos, PhD

Project (2020 Winter): Experimental Stress-Strain Response of Steel Reinforcement Under Cyclic Loading, Including Buckling for Variable Unsupported Lengths

Kelly Clemen, Literature (Cultural Studies)

Mentor: K. Wayne Yang, PhD

Project (2019 Fall): On Black Belonging and the Politics of Acknowledgement

Isabelle Danforth, Marine Biology

Mentor: Amro Hamdoun, PhD

Project (2020 Winter): ABCB4-associated gene expression and morphological changes in embryonic purple sea urchin following exposure to *Vibrio diazotrophicus*

Triton Research & Experiential Learning Scholars (cont.)

Kypros Dereschuk, Human Biology
Mentor: Weg Ongkeko, MD, PhD
Project (2020 Winter): Identification and characterization of the intra-articular microbiome in osteoarthritic knee

Paola Diaz, Theatre
Mentors: Robert Castro, MFA; Jade Power-Sotomayor, PhD
Project (2019 Fall, 2020 Winter): Famous Women in Stand Up
Conferences: SRC 2019, CRASSH Spring 2020; OURS 2020 ([View Presentation Here](#))

Brian Dinh, Molecular and Cell Biology
Mentor: Peter Shaw, PhD
Project (2020 Winter, 2020 Spring): CFH and HTRA1 exhibit an antagonistic effect on inhibiting oxidized phospholipids uptake in human retinal pigment epithelial cells

Alexandria Do, NanoEngineering
Mentor: Marc Meyers, PhD
Project (2019 Fall, 2020 Winter): Nature's Material World

Nicholas Dorn, Chem. Engineering
Mentor: Nisarg Shah, PhD
Project (2019 Fall, 2020 Winter): Engineering Anti-Inflammatory Biomaterials for Gut Autoimmune Disorders
Conference: OURS 2020 ([View Presentation Here](#))

Manuel Duran, Political Science (Data Analytics)
Mentors: Gerardo Arellano, PhD; José Fusté, PhD
Project (2019 Fall, 2020 Winter, 2020 Spring): Campaigning Against Capitalism
Conference: OURS 2020 ([View Presentation Here](#))

Rachael Ehlen, Physiology and Neuroscience
Mentor: Peter Shaw, PhD
Project (2020 Spring): The ARMS2-HTRA1 Locus in Age-Related Macular Degeneration

Mariam Eick, Bioengineering
Mentor: Adam Engler, PhD
Project (2019 Summer): Correlation of EGFRv3 and Cell-Matrix Adhesion within Invasive Glioblastoma
Conference: SRC 2019

Triton Research & Experiential Learning Scholars (cont.)

Pamela Elguezabal, Sociology
(Science and Medicine)

Mentor: Abigail Andrews, PhD

Project (2020 Spring): Sin Fronteras:
Programa de Enriquecimiento
Educativo

Conference: OURS 2020 ([View
Presentation Here](#))

Richard Ellks, Cogn and Behavioral
Neuroscience

Mentor: Pamela Cosman, PhD

Project (2020 Winter, 2020 Spring):
Real World Gaze Behavior in Typically
Developing and Attention Disorder
Populations

Jehan Ezzulddin, Human Biology

Mentor: Sandra Daley, MD

Project (2020 Summer): Relationship
Between Social Determinants of
Health and Allostatic Overload

Conference: SRC 2020, CRASSH
Summer 2020

Marisa Felix, Physiology and
Neuroscience

Mentor: Christoforos Mamas, PhD

Projects: (2020 Winter) High-Speed
Wireline Transceiver Emulations;
(2020 Spring) Gender Differences
Observed From Social Networks in a
Highly Diverse Classroom

Conference: OURS 2020 ([View
Presentation Here](#))

Travis Fleming, Biochemistry and
Cell Biology

Mentor: Amro Hamdoun, PhD

Project (2019 Summer, 2020 Spring):
CRISPR/Cas9 mutagenesis reveals a
role for ABCB1a in 2 protection of sea
urchin embryos from pathogenic gut
bacteria

Conference: SRC 2019

Award: 2020 NSF Graduate Research
Fellowship Winner

Omar Flores, Interdisc Computing
and the Arts

Mentor: Sarah Hankins, PhD

Project (2020 Summer): Political Sap
vs Authentic Rap: Authentic Political
Discourse within Contemporary
Commercial Rap

Conference: SRC 2020

Triton Research & Experiential Learning Scholars (cont.)

Kaiyun Fu, Mathematics (Computer Science)
Mentor: Jurgen Schulze, PhD
Project (2020 Winter): Guidelines to adapt VR applications for airplane use

Alexander Fuentes, Sociology
Mentor: Abigail Andrews, PhD
Project (2020 Winter, 2020 Spring): Cannot Go Back, Cannot Move Forward - The Migration Paradox: Understanding the story of migrants from Central America

Parke Funderburk, Applied Mathematics
Mentor: Thomas Levy, PhD
Project (2020 Summer): Sedimentology and geochemistry of a wetland record from NW Israel: new insights utilizing X-ray fluorescence
Conference: SRC 2020

Aditi Gnanasekar, Bioengineering (Biotechnology)
Mentor: Weg Ongkeko, MD, PhD
Project (2020 Winter, 2020 Spring): Etiology-based differences in immune landscape in head and neck squamous cell carcinoma

Marisol Gonzalez, Mathematics (Applied)
Mentor: Jonathan Novak, PhD
Project (2020 Winter, 2020 Spring, 2020 Summer): An Introduction to Compress Sensing and Its Applications
Conference: SRC 2020

Samantha Gray, Cognitive and Behavioral Neuroscience
Mentor: Douglas Nitz, PhD
Project (2020 Summer): Spatial Firing Patterns of Retrosplenial Cortex Neurons at Low Versus High Gamma Frequencies
Conference: SRC 2020

Anthony Grubbs, Speculative Design
Mentor: Edwin Cruz, MDesS
Project (2020 Winter): Data-Driven Architecture

Alexandra Gunn, Int'l Studies (Political Science)
Mentor: Ivan Evans, PhD
Project (2019 Summer): Inclusivity in the Changing Climate in South Africa

Triton Research & Experiential Learning Scholars (cont.)

Jeeho Ha, Visual Arts (Studio)
Mentor: Christoforos Mamas, PhD
Project (2019 Summer): Jeeho makes a movie!
Conference: SRC 2019

Mehrshad Hairani, Human Biology
Mentor: Matthew Hangauer, PhD
Project (2020 Spring): Western Blot Analysis of DFFB in Cancer Cells

Michael Hanson, Mechanical Engineering
Mentor: Saikat Chakraborty Thakur, PhD
Project (2019 Fall, 2020 Winter, 2020 Spring): Characterization of a High Power Helicon Plasma Device

Lien Hardister, Biochemistry and Cell Biology
Mentor: Amy Pasquinelli, PhD
Project (2019 Summer): The Importance of Personal Accounts in Breaking the Silence Around Intimate Partner Violence
Conference: SRC 2019

Samantha Harmer, Political Science
Mentor: Bonnie Kaiser, PhD
Project (2020 Summer): Are UCSD's Resources Sufficient for Foster Youth's Needs?
Conference: SRC 2020

Khaila Hartung-Dallas, Psychology
Mentors: Joseph Hankins, PhD; Karen Shelby, PhD
Project (2020 Winter, 2020 Spring): Capitalism, Marriage, and Queer Identity

Henry Helmuth, Structural Engineering
Mentor: Richard Chavez, PE
Project (2020 Summer): UC San Diego Active Commute Plan
Conference: SRC 2020

Brandon Hernandez Pacheco, Bioengineering (Biotechnology)
Mentor: Kevin King, MD, PhD
Project (2019 Fall): The Validation of BedScales for Obtaining the Weight of Heart Failure Patients

Joyous Herron, Literature (Writing)
Mentor: Megan Wesling, PhD
Project (2020 Spring): Prego Short Film

Triton Research & Experiential Learning Scholars (cont.)

Mische Holland, Biochemistry and Cell Biology
[Read Student Spotlight Here](#)
Mentor: Victor Nizet, MD
Project (2019 Fall, 2020 Winter): Fluoroquinolone Activity Assessment in Host Mimicking Conditions

Susan Hou, Bioengineering (BioSystems)
Mentor: Stanley Lo, PhD
Project (2019 Summer, 2020 Winter, 2020 Spring) Undergraduate Experiences and Responses to Recognition

Kyra Hulse, Bioengineering (Bioinformatics)
Mentor: Ferhat Ay, PhD
Project (2020 Summer): Improving Resolution of HiChIP data with a Generative Adversarial Network
Conference: SRC 2020

Anahi Ibarra, Sociology (Social Inequality)
Mentor: Frances Contreras, PhD
Project (2019 Fall, 2020 Winter): How We Can Foster Student and Faculty Connections to Support the Career and Professional Development of First Generation College Students at UCSD ([View The Research Guide Here](#))

Lauren Ibarra, Biochemistry and Cell Biology
Mentor: Eric Hekler, PhD
Project (2020 Summer): Development of Digital Adherence Technology for Tuberculosis Treatment in Kampala, Uganda
Conference: SRC 2020

Ye Jin, Bioengineering (Bioinformatics)
Mentor: Pamela Mellon, PhD
Project (2020 Spring): Circadian rhythm analysis in genetically modified mice
Conference: OURS 2020 ([View Presentation Here](#))

Triton Research & Experiential Learning Scholars (cont.)

Tanish Jindal, Speculative Design
Mentor: Elizabeth Cartwright, PhD
Project (2020 Winter): Machine learning vehicle: fastron and MPnet

Christian Johnson, Political Science (Public Law)
Mentor: Robert Castro, MFA
Project (2020 Spring): Found Space

Shane Jost, Marine Biology
Mentor: Lakshmi Chilikuri, PhD
Project (2020 Winter, 2020 Spring): Early History of Sixth College, and the establishment of a permanent Sixth College Special Collection

Tommy Jung, Political Science (Data Analytics)
Mentor: Sean Ingham, PhD
Project (2020 Spring): Difficult Games: Challenges to Game Theory Instruction
Conference: OURS 2020 ([View Presentation Here](#))

Jacob Kattoula, Molecular and Cell Biology
Mentor: Ruben Abagyan, PhD
Projects: (2019 Summer) Small Molecule Modulators for Cancer Immunotherapy; (2019 Fall): Small Molecule Modulators for SARS-CoV-2 Main Protease
Conference: SRC 2019

Karanjot Kaur, Cognitive Science (Neuroscience)
Mentor: Federico Rossano, PhD
Project (2020 Summer): An ethnographic investigation of child begging in India
Conference: SRC 2020

Helen Khuu, Biochemistry and Cell Biology
Mentor: Christina Sigurdson, DVM, PhD
Project (2019 Summer): Pathology of Prion Disease
Conference: SRC 2019

Triton Research & Experiential Learning Scholars (cont.)

Allison Kifer, Molecular Biology
Mentor: Marco Wilkinson, MFA
Project (2020 Winter): The Science Communication Crisis: How the Acknowledgement of Societal Influence Could Decrease Climate Change Stigma

Jonathan Kim, Political Science
Mentor: Leslie Carver, PhD
Project (2019 Fall, 2020 Winter): Botanical Decolonization at UCSD

Rhiannon Koh, Urban Studies and Planning
Mentor: Leslie Lewis, PhD
Project (2019 Summer): Reclaiming Storytelling and Place in Singapore: Lessons on Identity, Community, and Belonging
Conference: SRC 2019

Yuko Koike, Bioengineering (Biotechnology)
Mentor: Bernhard Palsson, PhD
Project (2020 Spring): Modeling Dynamic States of Alzheimer's Disease in Human Red Blood Cells
Conference: OURS 2020 ([View Presentation Here](#))

Eliana Kontokanis, Visual Arts (Media)
Mentor: Dino Dinco
Project (2020 Summer): IN HER OWN IMAGE ([View Images Here](#))
Conference: SRC 2020

Oleksandr Kubichka, Computer Engineering
Mentor: Truong Nguyen, PhD
Project (2020 Winter): 3D Printing

Tiffany Kuo, Biochemistry and Cell Biology
Mentor: Sonya Neal, PhD
Project (2020 Spring): Unfolded Protein Response

Breanna Lam, Molecular and Cell Biology
Mentor: Randolph Hampton, PhD
Project (2020 Winter): Allosteric as a Mechanism for Regulated Degradation: Evolving From Allostery to Mallosteric
Conference: SRC 2019

Triton Research & Experiential Learning Scholars (cont.)

Molly Lasher, Theatre
Mentor: Emily Roxworthy, PhD
Project (2020 Spring): Hindsight is 2020: The Never-Ending Struggle for Female Theatre-Makers

Nathan Lau, Neurobiology
Mentor: Cory Root, PhD
Project (2020 Winter): Tracing The Olfactory Tubercle Circuit

Nicolette Olivia Le, Global Health
Mentor: Leslie Lewis, PhD
Project (2019 Summer): Preserving an Unwritten History: Using Oral Histories to Highlight the Voices of Immigrants
Conference: SRC 2019

Ringo Leung, Cogn and Behavioral Neuroscience
Mentor: John Ravits, MD, PhD
Project (2020 Winter, 2020 Spring): hnRNP A1 and hnRNP A2B1 association with TDP-43 proteinopathies in ALS
Conference: OURS 2020 ([View Presentation Here](#))

Alexander Levine, Cognitive Science
Mentor: Ramaohan Paturi, PhD
Project (2020 Winter): Aerodynamics of Drones and Boomerangs

Gabriel Lopez, Molecular and Cell Biology
Mentors: Don Cleveland, PhD; Ksenia Krupina, PhD
Project (2019 Summer, 2019 Fall): Aneuploidy in TRIP13-Deficient Mice
Conference: SRC 2019

Stephanie Luedtke, Human Biology
Mentor: Anthony O'Donoghue, PhD
Project (2020 Winter, 2020 Spring): Biochemical Analysis of Breast Milk Proteolysis and the Role of Milk Protein and Peptides in NEC

Alina Luk, Pharm. Chemistry
Mentor: Colleen McHugh, PhD
Project (2020 Winter, 2020 Spring): Identification of MALAT1 mascRNA's Protein Binding Partners in Human Cells

Triton Research & Experiential Learning Scholars (cont.)

Yoshii Ma, Biology (Bioinformatics)
Mentor: Weg Ongkeko, MD, PhD
Project (2020 Spring):
Immunotherapy & Hepatocellular Carcinoma

Vivian Maldonado, Global Health
Mentor: Jay Silverman, PhD
Project (2019 Fall, 2020 Winter, 2020 Spring): "This Is Something I'm Doing for Me:" The Influence of Mexican and U.S. Culture on the Reproductive Health Decisions of Female Adolescents Living in the San Diego/Tijuana Border Region
Conference: UC Global Health Day Conference 2020 ([View Presentation Here](#))

Kate Mallari, Sociology
Mentor: April Sutton, PhD
Project (2020 Summer): "An Email Can Only Go So Far," The Gap Between University Support and Students of Color
Conference: SRC 2020

Steve Anthony Maravillo, Public Health/Education Sciences
Mentor: Paula Saravia, PhD
Project (2020 Summer): Assessing Health Disparities Amidst the COVID-19 Pandemic: Vulnerabilities in Black Homelessness in Los Angeles County, California
Conference: SRC 2020

Chad Marks, Theatre
Mentor: Eva Barnes, MFA
Project (2020 Summer): Take Two: Drama Therapy From An Actor's Point Of View
Conference: SRC 2020

Nicholas Martin, Environmental Systems (Earth Sciences)
Mentor: Jack Silberman, PhD
Project (2020 Winter, 2020 Spring): Intel Realsense

Brice McKane, Marine Biology
Mentor: Greg Rouse, PhD
Project (2020 Spring): An Ongoing Investigation into the Biodiversity of the South Pacific Gyre

Triton Research & Experiential Learning Scholars (cont.)

Kaylee McMillen, International Studies (Political Science)
Mentor: Matthew Herbst, PhD
Project (2020 Spring): “Stop and Frisk” and the Underlying Condition of Discrimination that pervades the United States Criminal Justice System

Keyona Meeks, Int’l Studies (Int’l Business)
Mentors: Kirstie Dorr, PhD; Lawana Richmond, EdD
Project (2019 Summer, 2019 Fall): The Future of Ethical Fashion: Sustainability in a Climate Conscious Fashion Industry
Conference: SRC 2019

Ipek Midillioglu, Molecular Biology
Biological Sciences Honors Program
Mentor: Amy Kiger, PhD
Project (2019 Fall): Role of Dynamin in T-tubule Maintenance and Remodeling

Haneen Mohamed, Urban Studies and Planning
Mentor: Keith Pezzoli, PhD
Project (2019 Summer): Zikra: An Homage to Memory
Conference: SRC 2019

Xelestíal Moreno-Luz, Visual Arts (Media)
[Read Student Spotlight Here](#)
Mentors: Rubén Ortiz-Torres, MFA; Mariana Wardwell, PhD
Projects: (2020 Winter, 2020 Spring) The Institutionalization of Transgender Visuality and Death: Existing and Insisting within Media, Social Media, and Social Movements; (2020 Summer) Transgender Movements of Color and Audio-Visual Culture: Insisting Till Our Last Breath
Conference: SRC 2020

Michael Murphy, Anthropology (Sociocultural)
Mentor: Rihan Yeh, PhD
Project (2020 Spring): The Lens and Who Holds It: Digital Autoethnography and Narrative in "Nowhere to Hide" & On Disaster and Crises

Faustina Ngo, Public Health
Mentor: Claire Edington, PhD
Project (2020 Spring): COVID-19 Impacts on Minority Student Experiences

Triton Research & Experiential Learning Scholars (cont.)

Chloe Nguyen, Bioengineering
Biotechnology)
Mentor: Jeff Hasty, PhD
Project (2019 Fall): Characterizing
the role and distribution of the
mitochondrial protein Cox6a2 in the
brain

Hung Nguyen, Speculative Design
Mentor: Zachary Osborn
Project (2019 Fall): Community Food
Wall

Aoife O'Farrell, Bioengineering
(Biotechnology)
Mentor: Georgia Kayser, PhD
Project (2020 Winter): Project
FogCatchers - An Innovative
Humanitarian-Based Engineering
Project

Dora Ogbonna, Chemical
Engineering
[Read Student Spotlight Article Here](#)
Mentor: Nisarg Shah, PhD
Project (2019 Fall): Engineering
Biomaterials for the Delivery of Short
Chain Fatty Acids
Conference: OURS 2020 ([View
Presentation Here](#))

Ethan Olson, International Studies
(Political Science)
Mentor: Alexander Gershunov, PhD
Project (2020 Winter, 2020 Spring):
Thawing Apathy: A Literature Review
on the Comparative Strengths and
Weaknesses of the Kyoto Protocol and
the Paris Agreement as Mechanisms
Against Climate Change

Jocelyn Ornelas Munoz,
Mathematics (Applied)
Mentor: Luz Chung, PhD
Project (2020 Winter, 2020 Spring):
Creating Equitable Mathematics
Education

Yunchun Pan, Applied Mathematics
Mentor: Art Miller, PhD
Project (2020 Winter): Modeling of
California Current Ecosystem's
Response to Climate Change

Emily Paris, Biochemistry and Cell
Biology
Mentor: Gerald D'Spain, PhD
Project (2019 Fall): Orca
Bioacoustics: Above the Arctic Circle
Other Presentation: 2019 Scripps
Institution of Oceanography
Undergraduate Research Symposium

Triton Research & Experiential Learning Scholars (cont.)

Meera Patel, Biochemistry and Cell Biology

Mentor: Pamela Mellon, PhD

Project (2020 Spring): Molecular Regulation of Circadian Rhythms

Conference: OURS 2020 ([View Presentation Here](#))

Patrick Paxson, Computer Science

Mentor: Ryan Kastner, PhD

Project (2019 Summer): Triton Robosub

Conference: SRC 2019

Award: Semifinals at an international competition in 2019 ([Read Info Here](#))

Francisco Peralta-Vargas,

International Studies (Int'l Business)

Mentor: Kristene Ehrich, PhD

Project (2019 Summer): A closer look to DACA recipients at the frontlines of activism in the San Diego-Tijuana border

Conference: SRC 2019

Zeltzin Perez Reyes, Sociology (Science and Medicine)

Mentor: Abigail Andrews, PhD

Project (2020 Winter): Mexican Migrant Field Research Program Blogs

Yana Pyryalina, Cognitive Science (Machine Learning and Neural Computation)

Mentor: Douglas Nitz, PhD

Project (2020 Summer): Role of Axis-Tuned Neural Activity and Head Direction Encodings in Construction of Neural Maps of Space

Conference: SRC 2020

Anthony Quach, Human Biology

Mentor: Philip Gordts, PhD

Project (2020 Spring, 2020 Winter): Liver Heparan Sulfate Proteoglycans impact on FGF1 binding in the Adipose Tissue

Luis Gustavo Ramirez Chappero, Spanish Literature

Mentor: Max Parra, PhD

Project (2020 Spring): Feminismos Interseccionales y Disidentes: Modernidad Mexicana, Cuerpo, y Poder

Simran Randev, Human Biology

Mentor: Mohit Jain, MD, PhD

Project (2019 Summer): Profiling and Characterizing Plasma Metabolites or Characterizing the Plasma Exposome Using Mass Spectrometry
Conference: SRC 2019

Triton Research & Experiential Learning Scholars (cont.)

Boya Ren, Cognitive Science (Design and Interaction)

Mentor: Steven Dow, PhD

Project (2019 Summer, 2019 Fall):

How can the features of a civic design challenge facilitate participation among a wide range of stakeholders?

Conference: SRC 2019

Alex Rodriguez, Literatures in English

Mentor: K. Wayne Yang, PhD

Projects: (2019 Summer) Memoir

Methodology: How to Write

Autobiographical Creative

Nonfiction; (2019 Fall, 2020 Spring)

The Light at the End of the Road

Conference: SRC 2019

Miguel Sanchez, Human Biology

Mentor: Amy Pasquinelli, PhD

Project (2019 Fall): Determining the Role of Heat-Shock Factor 1 (HSF-1) in Specific Tissues of *Caenorhabditis elegans* during Heat Stress

Daniel Sandoval, Cognitive Science (Neuroscience)

Mentor: Bonnie Kaiser, PhD

Project (2020 Winter, 2020 Spring):

Depression: Psychopathology as Defined By Underrepresented Adolescents

Conference: SRC 2020

Abigail Sanford, Environmental Systems (Ecol, Behav & Evol)

Mentor: Jane Teranes, PhD

Project (2020 Spring): Scripps

Climate Science Field Trip:

Lancetfish Video Project

Prithvi Setty, Molecular and Cell Biology

Mentor: Matthew Shtrahman, MD, PhD

Project (2020 Winter): Random Maze Elongation Experiment

Goonja Shah, Biochemistry and Cell Biology

Mentor: Louise Laurent, MD, PhD

Project (2020 Spring): Using computational and mouse models to study early-embryonic development

Conference: OURS 2020 ([View Presentation Here](#))

Triton Research & Experiential Learning Scholars (cont.)

Omar Shalakhti, Global Health
Mentors: Victoria Ojeda, PhD; Jose Burgos, MD
Project (2019 Fall): Implementing a Leadership Course for Public Health and Pre-Health Students

Eman Sherif, Computer Science
Mentor: Christine Alvarado, PhD
Project (2020 Summer): Exploring Equitable Pathways to Computer Science
Conference: SRC 2020

Aman Shihora, Pharmacological Chemistry
Mentor: Lalit Deshmukh, PhD
Project (2020 Spring): The Interplay between HIV-1, Alzheimer's disease, and Diabetes and their Protein Signaling Pathways within Cellular Systems

Soyoung Shin, Chemical Engineering
Mentor: Jinhye Bae, PhD
Project (2020 Spring): Liquid Droplet Impacts

William Simpson, Computer Science
Mentor: Alina Bucur, PhD
Project (2020 Spring): Teaching Cryptography

Narinderbir Singh, Biology
[Read Student Spotlight Here](#)
Mentor: Sonya Neal, PhD
Project (2019 Fall, 2020 Winter, 2020 Spring): Characterizing Dfm1's Features in ERAD Retrotranslocation of Integral Membrane Proteins
Conference: The Annual Biomedical Research Conference for Minority Students (ABRCMS) 2019

Marco-Landon Siu, Ethnic Studies
Mentor: Luz Chung, PhD
Project (2020 Winter, 2020 Spring): Queer Safety in Educational Institutions

Justin Skaggs, Chemical Engineering
Mentor: David Fenning, PhD
Project (2020 Summer): Accelerating the Characterization of Perovskite Solar Cells Via Automated IV Testing and Efficiency Loss Analysis
Conference: SRC 2020

Triton Research & Experiential Learning Scholars (cont.)

Theresa Slaiwa, Bioengineering (BioSystems)
Mentor: Pamela Mellon, PhD
Project (2020 Winter): Investigating the Regulation of FSHB Transcription Through Novel 5' Upstream Enhancers
Conference: OURS 2020 ([View Presentation Here](#))

Haili Song, Psychology
Mentor: Dredge Byung'chu Kang, PhD
Project (2019 Summer): Comparing attitudes toward interracial marriage among Chinese Americans and Chinese international students at UCSD with Chinese local university students at Peking University
Conference: SRC 2019

Miranda Song, Bioengineering (Bioinformatics)
Mentor: Niema Moshiri, PhD
Project (2020 Spring): Analyzing SARS-CoV-2 Using ViReport
Preprint Publication: Song, M., & Moshiri, N. (2020). An Analysis of SARS-CoV-2 Using ViReport, BioRxiv, 2020 ([View Preprint Here](#))

Rohan Sreedhar, Computer Engineering
Mentor: Michael Davidson, PhD
Project (2020 Spring): Energy Interest Groups

Gregory Stocker, Biology
Mentor: Stanley Lo, PhD
Project (2020 Summer): Transitioning Sophomore Experiences and the Perceived Usefulness in Supporting their Academic, Social, Personal, and Professional Development
Conference: SRC 2020

Luke Sztajnkrzyer, Cognitive Science (Machine Learning and Neural Computation)
[Read Student Spotlight Article Here](#)
Regents Scholar Research Initiative Program
Mentor: Angela Yu, PhD
Project (2020 Spring): Perception-Based Empathy and Compassion

Donovan Tamkin, Psychology
Mentor: Michael McCullough, PhD
Project (2020 Summer): Measures of Morality
Conference: SRC 2020

Triton Research & Experiential Learning Scholars (cont.)

Sirui Tao, Data Science

Mentor: Shannon Ellis, PhD

Project (2020 Spring): Improving the Economic Feasibility of “Local Farm-Institution” Collaboration Model: A Case Study on UC San Diego

Alice Tor, Bioengineering (BioSystems)

Mentors: Weg Ongkeko, MD; PhD

Mahadevan Rajasekaran, PhD

Project (2019 Fall, 2020 Spring): Pan-cancer Analysis of Adenosine Receptors and Related Pathways to Identify Possible Immunotherapy Targets

Alessandra Torres-Rojas, Global Health

Mentor: Joseph Hankins, PhD

Project (2020 Winter/Spring): How are formerly incarcerated and system-impacted students supported, or not supported, across community colleges compared to the UC system?

Alan Tram, Cognitive Science (Design and Interaction)

Mentor: Haijun Xia, PhD

Project (2020 Winter): The Integration of Graphene Electrodes and Miniature Microscope in In Vivo Sampling

Tracy Tran, Human Biology

Mentor: Mana Parast, MD, PhD

Project (2020 Winter, 2020 Spring): Maternal CHD and its effects on hypertensive disorders of pregnancy and placental pathology

Socorro Trujillo, Global Health

Mentor: Abigail Andrews, PhD

Project (2020 Winter, 2020 Spring): On becoming a transnational student

Vy Truong, Mathematics (Computer Science)

Mentor: Alina Bucur, PhD

Project (2020 Spring): AKS Primality Test

Steven Tsan, Computer Science

Mentor: Javier Duarte, PhD

Project (2020 Summer): Autoencoders for Anomaly Detection
Conference: SRC 2020

Triton Research & Experiential Learning Scholars (cont.)

Tat Hei Tsin, Biology (Bioinformatics)
Mentor: Kay Tye, PhD
Project (2020 Spring): Classifying mice facial expression with computer vision methods

Swan Van, Biochemistry/Chemistry
Mentors: Elizabeth Komives, PhD
Alexis Komor, PhD
Project: (2020 Winter, 2020 Spring)
3D Scene Reconstruction for VR
Conference: SRC 2020

Gabriel Van Konynenburg, Visual Arts (Media)
Mentor: Stephanie Jed, PhD
Project (2020 Summer): Aging in Film
Conference: SRC 2020

Maya Vannini, Psychology (Clinical)
Mentor: Dawn Schiehser, PhD
Project (2019 Fall, 2020 Winter, 2020 Spring): Differences between gender and disease status in their effect on sensitivity to punishment and reward in Parkinson's Disease

Arely Vasquez, Data Science
[Read Student Spotlight Article Here](#)

Mentor: Jingbo Shang, PhD
Project (2020 Summer): Using Machine Learning Models to Support First-generation Students attend College
Conference: SRC 2020

Christian John Ventura, Bioengineering (Biotechnology)
Mentor: Liangfang Zhang, PhD
Project (2020 Spring): STING Nanovaccines against Cancer and Pathogens

Anh Vo, Global Health
Mentors: Javier Cepeda, PhD; Natasha Martin, PhD
Project (2019 Fall, 2020 Spring): Assessing HIV and Overdose Risk Outcomes for Individuals Exposed to Compulsory Drug Abstinence Programs (CDAP): An Integrative Systematic Review and Meta-Analysis

Lily Vu, Neurobiology
Mentor: Susan Taylor, PhD
Project (2020 Winter, 2020 Spring): Effects of Phosphorylation on the Activity and Structure of Protein Kinase A Catalytic Subunit

Triton Research & Experiential Learning Scholars (cont.)

Phoenix Wang, Psychology (Clinical)
Mentor: Clinton Tolley, PhD
Project (2020 Winter): Philosophy and Feminist Ethics

Christine Wenzel, Global Health
Mentor: Jennifer Wagman, PhD
Project (2019 Fall, 2020 Winter): Let's Talk About Sex [Education]

Xuanyu Wu, Data Science
Mentor: Douglas Nitz, PhD
Project (2020 Winter, 2020 Spring): An Egocentric Approach to Subiculum Neuron Firing Patterns Analysis
Conference: OURS 2020 ([View Presentation Here](#))

Nancy Xu, Visual Arts (Media)
Mentor: Jordan Crandall
Project (2020 Summer): Big Brother — A short story and screenplay by Nancy Xu
Conference: SRC 2020

Gordon Ye, Cognitive Science (Machine Learning and Neural Computation)
Mentor: Sidney Zisook, MD
Project (2020 Spring): Firearm Use in Nurse Suicide: Quantitative Analysis of Qualitative Data
Conferences: UCSD Inquiry and Innovations e-Conference 2020, Lewis L. Judd Young Investigators Symposium 2020

Donna Yerat-Rodriguez, Political Science
Mentor: Luz Chung, PhD
Project (2020 Summer): Redefining Success in Higher Education through Testimonios (testimonies) First-Generation College Students at UCSD
Conference: SRC 2020

Ada Yu, Psychology (Developmental)
Mentor: Christoforos Mamas, PhD
Project (2020 Spring): Social Networks In Education
Conference: OURS 2020 ([View Presentation Here](#))

Triton Research & Experiential Learning Scholars (cont.)

Eric Yu, Computer Science
Mentor: Sicun Gao, PhD
Project (2020 Summer): Modular Policies for Robotic Control
Conference: SRC 2020

Hanin Zayat, Spanish Literature
Mentor: Max Parra, PhD
Project (2020 Summer): Transcultural Translation: Subtitling and Captioning Accents in Spanish Language Films
Conference: SRC 2020

Kate Zegans, Sociology
Mentors: Charles Thorpe, PhD; John Skrentny, PhD
Project (2019 Summer, 2020 Winter): Exploring the Online Manosphere
Conference: SRC 2019

Yujie Zhang, Bioengineering (Bioinformatics)
Mentor: Nathan Lewis, PhD
Project (2019 Fall, 2020 Winter): A consensus-based and readable extension of Linear Code for Reaction Rules (LiCoRR)
Preprint Publication: Benjamin P. Kellman, Yujie Zhang, et al. A consensus-based and readable extension of Linear Code for Reaction Rules (LiCoRR). bioRxiv 2020.05.31.126623 ([View Preprint Here](#))

Annie Zhou, Political Science
Mentor: Pamela Ban, PhD
Project (2020 Summer): Media Bias and What it Reveals About Political Power during the COVID-19 Pandemic
Conference: SRC 2020

UC Scholars

The [UC Scholars Program](#) is an 8-week, full-time summer research experience for undergraduates, supported by UC San Diego's Office of Student Affairs and Academic Enrichment Programs.

Program Objectives

SKILLS

Provide students with the skills to become research scholars.

GRADUATE STUDY

Stimulate students' serious consideration of graduate study.

LEARNING AND NETWORKING

Increase learning and networking opportunities for students committed to pursuing either a professional or academic research career.

16

Students participated in the UC Scholars Program

8 Summer 2019
8 Summer 2020

UC Scholars

Luis Alvarez, Cognitive Behavioral Neuroscience

Mentor: Angela Yu, PhD

Project (2020): How Facial Features Influence Social Traits Judgments

Conference: SRC 2020

Haozhe An, Computer Science

Mentor: Russell Impagliazzo, PhD

Project (2019): Fine-grained complexity and algorithm design

Conference: SRC 2019

Publication: Xingjian Li, Haoyi Xiong, Haozhe An, Dejing Dou, and Cheng-Zhong Xu. RIFLE: Backpropagation in Depth for Deep Transfer Learning through Re-Initializing the Fully-connected LayEr. International Conference on Machine Learning (ICML'20), Vienna, Austria, 2020. ([View Abstract Here](#))

Xiaohe Bi, Bioengineering (Biotechnology)

Mentor: Jonathan Lin, MD, PhD

Project (2019): Mouse Model to Investigate The Role of XBP1 in P23H Rhodopsin Protein Degradation

Conference: SRC 2019

Mirelle Castaneda, Education Studies

[Read Student Spotlight Article Here](#)

Mentor: Sherice Clarke, PhD

Project (2020): The pandemic hits teacher pedagogy

Conference: SRC 2020

Angela Chapman, Psychology (Clinical)

Mentors: Savita Bhakta, MD; Neal Swerdlow, MD, PhD

Project (2020): ERP Biomarkers in Schizophrenia: A Systematic Review

Conference: SRC 2020

Zijing Di, Computer Science

Mentor: Zhuowen Tu, PhD

Project (2020): Improved label to image generation

Conference: SRC 2020

UC Scholars (cont.)

Chinmay Kalluraya, General Biology
Mentor: Matthew Daugherty, PhD
Project (2019): A Novel Method to Infer Horizontal Gene Transfer
Conference: SRC 2019, The Annual Biomedical Research Conference for Minority Students (ABRCMS) 2019
Award: “Outstanding Poster” - ABRCMS 2019: Computational and Systems Biology Category

Jianan Liang, Management Science and Cognitive Science
Mentor: Shannon Ellis, PhD
Project (2020): PeAce: Integrating AI-based Tutoring and Collaborative Learning into an Educational System
Conference: SRC 2020

Can Liu, Cognitive Science (Neuroscience)
Mentor: Douglas Nitz, PhD
Project (2020): Encoding of Task Phase Versus Environmental Location in Hippocampal CA1 Neurons During Search for Buried Rewards
Conference: SRC 2020

Gayatri Mainkar, Molecular Biology
Mentor: Mohit Jain, MD, PhD
Project (2019): Identifying Lipid Mediators of Pluripotency Maintenance and Cardiomyocyte Differentiation
Conference: SRC 2019, The Annual Biomedical Research Conference for Minority Students (ABRCMS) 2019
Award: “Outstanding Poster” - ABRCMS 2019: Cell Biological category

Ivette Martinez, Sociology
Mentor: Luz Chung, PhD
Project (2020): We Do Not All Have A Traditional College Experience
Conferences: CRASSH Summer 2020, SRC 2020

Animesh Mohapatra, Nanoengineering UC Scholars
Mentor: Liangfang Zhang, PhD
Project (2020): Long-Circulating Nanoparticles Inspired by Nature
Conference: SRC 2020

UC Scholars (cont.)

Vu Nguyen, Education

Mentor: Cristian Popescu, PhD; Claus M. Sorensen, PhD

Project (2019): Galois Infinite Extensions

Conference: SRC 2019

Kathy Ramirez, Political Science (Public Policy)

Mentor: Shana Cohen, PhD

Project (2019): Autism Spectrum Disorder (ASD) Diagnosis Pathway among Border Community

Conference: SRC 2019

Fan Xu, Bioengineering (Biotechnology)

Mentor: Brian Zid, PhD

Project (2019): Role of DOM34 in Regulating Ribosome-Stalling Protein Translation

Conference: SRC 2019

Dean Zhou, Biochemistry and Cell Biology/Economics

[Read Student Spotlight Article Here](#)

Mentors: Michael Karin, PhD; Shabnam Shalapour, PhD

Project (2019): Platinoids augment immunotherapy by inducing histone acetylation of MHCII machinery genes

Conference: SRC 2019



Undergraduate Research Scholarships

In UC San Diego's **Undergraduate Research Scholarship (URS)** program, several different donor-funded scholarships are available across multiple research areas. Undergraduate students use the funds for a research project to be completed over the summer under the guidance of a UC San Diego faculty mentor.

160 Awards

92 Summer 2019

68 Summer 2020

- Chancellor's Research Scholarship for Arts and Humanities
- Chancellor's Research Scholarship for Social Sciences
- David Marc Belkin Memorial Research Scholarship for Environment and Ecology
- David Jay Gambia Memorial Research Scholarship for Governance and Social Impact Projects
- Doris A. Howell Foundation Research Scholarship for Women's Health
- Eureka! Scholarship for Biological Sciences Majors
- Springboard Eureka! Scholarship for Biological Science Majors (Hong Kong)
- Frances Hellman Research Scholarships for Physics
- HIV Institute - Transgender/Gender Non-Binary Community Health Research Scholarship
- Julia Brown Research Scholarship for Health and Medical Professions
- Ledell Family Research Scholarship for Science and Engineering
- NEW Scholars Program
- Philip and Elizabeth Hiestand Scholarship for Cross-Disciplinary Research in SIO and Engineering
- Robert C. Dynes and Ann Parode Dynes Research Scholarships for Physics
- Starbucks Sustainable Solutions and Learning Opportunities Research Scholarship

Undergraduate Research Scholarships

Recipients

Chancellor's Research Scholarships

Manar Alkuzweny, Public Health
Mentor: Sanjay Mehta, MD
Project (2019): Factors Associated with Visceral Leishmaniasis Burden in Bihar, India
Conference: SRC 2019

Patricia Almaraz, Human Developmental Sciences
Mentor: Gerardo Arellano, PhD
Project (2020): Immigrants in Higher Education

Rawnaq Behnam, Global Health
Mentor: Thomas Csordas, PhD
Project (2019): Assessing barriers to contraceptive care among resettled refugee women: a mixed-methods investigation of disparities in quality and access

Taylor Campbell, Sociology (Science and Medicine)
[Read Student Spotlight Article Here](#)
Mentor: Christena Turner, PhD
Project (2019): Mental Health Systems
Conference: CRASSH Fall 2019

Mariana Carrola, Education Studies and Public Health
Mentor: Frances Contreras, PhD
Project (2020): Chicanas/Latinas engaging in Transformative Resistance Motivated by their Families and Social Justice
Conference: SRC 2020

Brenda Chavez, Political Science
Mentor: Rosauar Sánchez, PhD
Project (2019): Sex Tourism, The Nation, and the Non-Heteronormative/ Gender Non-Binary
Conference: SRC 2019

Brian Chen, Visual Arts (Media)
Mentor: Brian Cross, MFA
Project (2020): 408

Yoori Cho, Biochemistry and Cell Biology
Mentors: Jin Young Huh, PhD; (PI) Alan Saltiel, PhD
Project (2019): Finding the Role of Hepatic TBK1 in the Regulation of Mitophagy
Conferences: SRC 2019, Harvard University National Collegiate Research Conference 2020

Undergraduate Research Scholarships

Recipients (cont.)

Emily Eisner, Biological Anthropology URS-Chancellor's
Mentor: Amy Non, PhD
Project (2019): Epigenetics, Social Stress, and Obesity Risk Over Time in Children of Hispanic Immigrants

David Gonzalez-Maldonado, Cognitive Science (Machine Learning and Neural Computation)
Mentor: Timothy Brown, PhD
Project (2019): Event Related Potential Paradigm Development, Validation and Data Collection for the New Vistas Study

Conrad Jones, Visual Arts (Media)
Mentor: Nicole Miller, MFA
Project (2020): The Techno-Poe Anthology

Afelix Le, Biochemistry/Chemistry
Mentor: Margaret Loose, PhD
Project (2019): Sylvia Plath and the Madonna-Whore Complex

Kathy Le, Biology
Mentor: Amro Hamdoun, PhD
Project (2020): Identification of CRISPR target sites in *Lytechinus pictus* ABCC1 and ABCC4

Abby Lee, Human Biology
Mentor: Jessica Wang-Rodriguez, MD
Project (2020): Intratumor Microbiome in Prostate Cancer and Clinical Outcomes

Jina Lee, Biology (Bioinformatics)
Mentor: Joseph Pogliano, PhD
Project (2020): Analysis of macrophage and application of the CRISPR-Cas9 system

Amir Lehman, Anthropology (Sociocultural)
Mentor: Paula Saravia, PhD
Project (2019): Electronic Dance Music in Kampala, Uganda
Conferences: CRASSH Spring 2020, 2020 Music Festival Studies Conference at MIT

Undergraduate Research Scholarships

Recipients (cont.)

Marina Ramsey, Molecular Biology
Mentor: Ellen Lee, MD
Project (2020): Link Between Compassion and Health in People with Schizophrenia
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))
Award: 2020 Silagi Award for Undergraduate Excellence in Aging Research
Publication: Lee, E. E., Bangen, K. J., Avanzino, J. A., Hou, B., Ramsey, M., *et al.* (2020). Outcomes of randomized clinical trials of interventions to enhance social, emotional, and spiritual components of wisdom: A systematic review and meta-analysis. *JAMA Psychiatry*, 77(9), 925–935.
DOI: 10.1001/jamapsychiatry.2020.0821
([View Abstract/Request Article Here](#))

Lucie Samarkova, Visual Arts (Studio)
Mentors: Norman Bryson, PhD; Janelle Iglesias, MFA
Projects: (2019) Wabi sabi - aesthetics or life philosophy; (2020) Role of State Sovereignty in Czech Avant garde Art in the first half of the 20th century

Zixiang Tang, Mechanical Engineering
Mentor: Marc Meyers, PhD
Project (2019): Mechanical Properties of Horn Shark Egg Capsules

Justin Yang, Cognitive Science (Machine Learning and Neural Computation)
Mentor: Judith Fan, PhD
Project (2020): Communicating what we perceive and know about objects by drawing
Conference: SRC 2020

David Marc Belkin Memorial Research Scholarship for Environment and Ecology

Nicole Adamson, Marine Biology
Mentor: Martin Tresguerres, PhD
Project (2020): Soluble adenylyl cyclase activity modulates hemoglobin deoxygenation rates in fish red blood cells

Undergraduate Research Scholarships

Recipients (cont.)

Isabelle Danforth, Marine Biology
Mentor: Amro Hamdoun, PhD
Project (2019): Investigating the gene expression of ABC (ATP binding cassette) transporters in embryonic purple sea-urchin (*Strongylocentrotus purpuratus*) following exposure to *Vibrio diazotrophicus*
Conference: SRC 2019

Helen Jannke, Marine Biology
Mentor: Richard Norris, PhD
Project (2020): Fish Production in the Aegean During the Rise of Early Mediterranean Civilizations
Conference: SRC 2020

Ryan Kich, Marine Biology
Mentor: Eric Allen, PhD
Project (2019): Virulence of *Photobacterium damsela* in Wild Fishes in Coastal Southern California

David Jay Gambee Memorial Research Scholarship for Governance and Social Impact Projects

Xelestíal Moreno-Luz, Visual Arts (Media)

[Read Student Spotlight Here](#)

Mentor: Mariana Wardwell, PhD
Project (2019): Actions towards resisting trans/queer-phobia in Colombia and Mexico

Ethan Olson, Int'l Studies (Political Science)

Mentor: Alexander Gershunov, PhD
Project (2020): Getting Real: Accounting for Domestic Factors in International Climate Agreements
Conference: SRC 2020

Undergraduate Research Scholarships

Recipients (cont.)

Doris A. Howell Foundation Research Scholarship for Women's Health

Anahid Foroughishafiei,
Bioengineering (Biotechnology)
Mentor: Jing Yang, PhD
Project (2019): Defining the
Molecular Mechanisms Underlying
Epithelial-Mesenchymal Transition
(EMT) Upon Dynamic Matrix
Stiffening
Conference: SRC 2019

Aditi Gnanasekar, Bioengineering
(Biotechnology)
Mentor: Weg Ongkeko, MD, PhD
Project (2019, 2020): Etiology-based
differences in immune landscape in
head and neck squamous cell
carcinoma

Michelle He, Molecular and Cell
Biology
Mentor: Pamela Mellon, PhD
Project (2020): Androgen-mediated
effects on ovarian morphology in an
AMH-induced mouse model of
Polycystic Ovary Syndrome (PCOS)

Kaitlin Sung, Human Biology
Mentor: Pamela Mellon, PhD
Project (2019): Validation of IGD
mutations
Conference: SRC 2019

Alexandria Tso, Global Health
Mentor: Ju Chen, PhD
Project (2020): The Role of Neuronal
Precursor Cell-expressed
Developmentally Downregulated 4
(Nedd4) in Cardiac Development
Conference: SRC 2020

Lindsay Wong, Molecular Biology
Mentor: Weg Ongkeko, MD, PhD
Project (2020): Immune landscape of
cancers caused by viral factors
Conference: SRC 2020

Eureka! Scholarship for Biological Sciences Majors

Adriana Aguilar-Maldonado,
Biochemistry and Cell Biology
Mentor: Samara Reck-Peterson, PhD
Project (2019): Screen for unknown
protein-protein interactions of PxdA
linker protein in *Aspergillus nidulans*
Conference: SRC 2019

Undergraduate Research Scholarships

Recipients (cont.)

Maya Ambroziak, General Biology
Mentors: Carlisle Bascom, PhD; Mark Estelle, PhD
Project (2020): Co-expression and loss-of-function analysis of the E3 ubiquitin ligase substrate adaptors, the BPMs, in the model bryophyte *Physcomitrium patens*

Lauren Apostol, Biochemistry/
Chemistry
Mentor: Weg Ongkeko, MD, PhD
Project (2020): Dysbiosis of the oral microbiome affects head and neck tumor immunology
Conference: SRC 2020

Julia Asay, General Biology
Mentors: Tristan de Rond, PhD; Bradley S. Moore, PhD
Project (2019): Biosynthetic Studies of Oxazolone Natural Products
Other Presentations: 2019 UCSD Biology Research Showcase, 2019 Scripps Institution of Oceanography Undergraduate Research Symposium, and the 2019 Undergraduate Research Scholarship Summer Research Showcase
Award: 2019 American Society of Pharmacognosy Undergraduate Research Award

Elizabeth Brown, General Biology
Mentor: Rachel Dutton, PhD
Project (2019): Characterizing mechanisms of growth of *Brevibacterium linens* within a biofilm community
Conference: SRC 2019

Bryant Cao, Biology
Mentor: Matthew Daugherty, PhD
Project (2019): An Evolution-Guided Approach to Discover New Human Polymorphisms Associated with Host-Pathogen Interactions
Conference: SRC 2019

Jaideep Chakladar, Biochemistry and Cell Biology
Mentors: Mentor: Weg Ongkeko, MD, PhD; Jessica Wang-Rodriguez, MD
Projects: (2019) Pan-cancer analysis of immune-associated mechanisms induced by tobacco smoke; (2020) Osteopontin (OPN) as a central regulator for e-cigarette and tobacco smoking-mediated cancer progression
Conferences: SRC 2019, SRC 2020

Undergraduate Research Scholarships

Recipients (cont.)

Diana De La Toba, Human Biology

Mentor: Karl Wahlin, PhD

Project (2019): Tools for the Endogenous Regeneration of Photoreceptors

Conference: SRC 2019

Daryl Dorsey, Physiology and Neuroscience

Mentor: Mary Corr, MD

Project (2019): The Role of Type I Interferon Receptors on Mechanical Allodynia in Arthritic Mice

Conference: SRC 2019

Kian Faizi, Molecular Biology

Mentor: Kuo-Fen Lee, PhD

Project (2019): Discovery & Development of RNA-Targeting CRISPR Effectors for Transcriptome Engineering

Conference: SRC 2019

Elijah Garcia, Human Biology

Mentor: Thomas Rogers, MD, PhD

Project (2019): Anti-Plasmodium falciparum Circumsporozoite Protein Antibodies Elicit in vitro NK-Mediated Antibody-Dependent Cellular Cytotoxicity

Conference: SRC 2019

John Girardini, Physiology and Neuroscience

Mentor: Matthew Banghart, PhD

Project (2019): Analyzing the Functional Role of Endogenous opioids in the Striatum in Regulation of Behavior Through Region-Specific Restoration of Mu-Opioid Receptor Expression

Conference: SRC 2019

Andrew Jespersen, Biochemistry and Cell Biology

Mentor: Joseph Pogliano, PhD

Project (2019): Exploring the Differential Antibiotic Mechanism of Action of Flavones

Conference: SRC 2019

Kyle Kim, Molecular Biology

Mentor: Jonathan Lin, MD, PhD

Project (2019): Is PERK/EIF2AK3 a Risk Factor for Alzheimer's Disease?

Conference: SRC 2019

Undergraduate Research Scholarships

Recipients (cont.)

Elijah Lawrence, Biochemistry and Cell Biology

Mentor: Tatum Simonson, PhD

Project (2019): Hemodilution as a treatment for Chronic Mountain Sickness and a mediator of systemic inflammation at high altitude

Conference: SRC 2019

Dominique Lie, Molecular and Cell Biology

Mentor: Stella-Rita Ibeawuchi, PhD

Project (2020): The interaction of enteric bacterial effectors with the host engulfment pathway regulates inflammatory responses

Conference: SRC 2020

Irene Mai, Biochemistry and Cell Biology

Mentor: Amir Zarrinpar, MD

Project (2019): Curative Treatment for Phenylketonuria

Conference: SRC 2019

Kevin Mazo, Neurobiology

Mentor: Karl Wahlin, PhD

Project (2020): The role of miRNA in late morphogenesis of retinal organoids

Conference: SRC 2020

Emily Paris, Biochemistry and Cell Biology

Mentor: Bradley S. Moore, PhD

Project (2019): Domesticating Marine Bacteria in Chitosan-Alginate Micro-Orbs

Peter Pham, Biochemistry/Chemistry

Mentor: Mary Corr, MD

Project (2020): Cell Specific Type I Interferon Receptor Signaling Critical for Arthritis Pain in Mice

Conferences: SRC 2020, OURS 2020

([View Presentation Here](#))

Christine Peng, Human Biology

Mentor: James Nieh, PhD

Project (2019): Affect of Virus Infection in Honeybees on Olfactory Learning

Conference: SRC 2019

Anthony Quach, Human Biology

Mentor: Philip Gordts, PhD

Project (2019): Liver Heparan Sulfate Proteoglycans impact on FGF1 binding in the Adipose Tissue

Conference: SRC 2019

Undergraduate Research Scholarships

Recipients (cont.)

Lily Quach, Physiology and Neuroscience
Mentor: Mohit Jain, MD, PhD
Project (2019): Metabolites Associated With Immune Related Adverse Events (irAEs) in Cancer Patients of Immunotherapy
Conference: SRC 2019

Neil Shende, Biochemistry and Cell Biology
Mentor: Weg Ongkeko, MD, PhD
Project (2020): Characterization of Small Nucleolar RNA Dysregulation in Head and Neck Squamous Cell Carcinoma
Conference: SRC 2020

Salma Sheriff, Human Biology
Mentor: Roberto Malinow, PhD
Project (2019): Sex-Based Differences In Depression
Conference: SRC 2019

Margaret Sten, Physiology and Neuroscience
Mentor: Yishi Jin, PhD
Project (2019): Effects of cod liver oil on wound healing and axon regeneration
Conference: SRC 2019

Maria Tiu, Human Biology
Mentor: Amir Zarrinpar, MD
Project (2020): Sex Specific Adaptations of E. coli Nissle in the Gut
Conference: SRC 2020

Joseph Tsai, Molecular and Cell Biology
Mentor: Weg Ongkeko, MD, PhD
Project (2019, 2020): Characterization of the age-associated intratumoral microbiome in pancreatic adenocarcinoma
Conference: SRC 2020

Nathaniel Tsai, Molecular Biology
Mentor: Eric Bennett, PhD
Project (2019): Investigating the role of HUWE1 in orphan protein degradation pathways
Conference: SRC 2019

Alan Tung, Molecular Biology
Mentor: Reuben Shaw, PhD
Project (2019): Bridging the Gap Between Energy Sensing and Mitophagy: Characterization of the Regulation of Mitophagy Receptors by ULK1 or TBK1
Conference: SRC 2019

Undergraduate Research Scholarships

Recipients (cont.)

Li Wang, Biology

Mentor: Ju Chen, PhD

Project (2019): The Role of Eukaryotic Elongation Factor 1A2 (eEF1A2) in Developing Cardiomyocytes
Conference: SRC 2019

Jin Yi Wu, Biology

Mentor: Sandra Sanchez-Roige, PhD

Project (2020): CADM2, cell adhesion molecule, and its effects on impulsivity and synapse morphology
Conferences: SRC 2020, Genes and Addiction National Institute on Drug Abuse Center Student Summer Conference

Bar Yosef, Human Biology

Decision Making by Dyads

Biological Sciences Honors Program

Mentor: Gedeon Deák, PhD

Project (2019): Probabilistic Learning in a Social Setting: Behavioral & Physiological Patterning
Conference: SRC 2019

Springboard Eureka! Scholarship for Biological Science Majors (Hong Kong)

Anu Chaparala, General Biology

Mentors: Sunny Wong; Emily (Ka Yi) Kong; Thomas Kwong, PhD

Project (2019): Virulence of *Clostridioides difficile* Infection (CDI) of Common Ribotypes of Hong Kong
Publication: Kong, K.Y., Kwong, T. N. Y., Chan, H., Wong, K, Wong, S. S. Y., Chaparala, A., *et al.* (2020). Biological characteristics associated with virulence in *Clostridioides difficile* ribotype 002 in Hong Kong. *Emerging Microbes & Infections*, 9(1), 631-638.
DOI: 10.1080/22221751.2020.1739564 ([View Article Here](#))

Ryan Park, Microbiology

Mentor: Ronald Ma,

Project (2019): Haptoglobin Genotype and Cardiovascular and Renal Complications in Type 2 Diabetes

Undergraduate Research Scholarships

Recipients (cont.)

Frances Hellman Research Scholarships for Physics

Kartik Choudhary, NanoEngineering

Mentor: Darren Lipomi, PhD

Project (2019): The influence of deposition techniques on the mechanical, morphological and electronic properties of semiconducting polymers

Conference: 2020 Inter-sustainability

Research Symposium ([View Presentation Here, Presentation 3](#))

Publication: Runser, R., Root, S. E., Ober, D. E., Choudhary, K., *et al.*

(2019). Interfacial drawing: Roll-to-roll coating of semiconducting polymer and barrier films onto plastic foils and textiles. *Chemistry of Materials*, 31(21), 9078- 9086. DOI:

10.1021/acs.chemmater.9b03343

([View Abstract/Request Article Here](#))

Clyde Sanvictores, Physics (Biophysics)

Mentor: Matthew Shtrahman, MD, PhD

Project (2020): Designing and Testing Parts for a Two-Photon Microscope with Additional Work on a Color Segmenting Algorithm for Analyzing Muscle Fibers

HIV Institute - Transgender/Gender Non-Binary Community Health Research Scholarship

David Everly, Public Health

Mentor: Jill Blumenthal, MD

Project (2020): What constitutes a good vs a bad clinical program for transgender patients

Conference: SRC 2020

Julia Brown Research Scholarship for Health and Medical Professions

Enio Hodzic, Bioengineering (Biotechnology)

Mentor: Adam Engler, PhD

Project (2019): Standard of Care Breast Cancer Drugs effects on Cell Adhesion Strength

Conference: SRC 2019

Lyhour Lay, Bioengineering (Biotechnology)

Mentor: Koichi Masuda, MD

Project (2019): The Effect of NFkB on Graft's Cell Apoptosis and Cell Viability

Undergraduate Research Scholarships

Recipients (cont.)

Tiffani Le, Global Health
Mentor: Satchidananda Panda, PhD
Project (2020): Time-Restricted Feeding as a Therapeutic Intervention against Cardiovascular Disorders
Conference: SRC 2020

Harrison Wei Li, Bioengineering (Biotechnology)
[Read Student Spotlight Article Here](#)
Mentor: Weg Ongkeko, MD, PhD
Project (2019): Integrative modeling of cancer-immune pathways interactions through network propagation and deep belief net
Conference: SRC 2019

Savannah Maw, Psychology (Cognitive)
Mentor: Matthew Shtrahman, MD, PhD
Project (2019): Temporal Pattern Separation in the Hippocampus
Conference: SRC 2019

Jason Nideffer, Microbiology
Mentor: Joseph Pogliano, PhD
Project (2019): Uncovering a New Antibiotic Mechanism of Action: Inhibition of Protein Synthesis via Ribosome Aggregation
Conference: SRC 2019

Cameron Ormiston, Global Health
Global Health Department Honors Program; Eleonor Roosevelt Honors Program
Mentor: Pam Taub, MD
Project (2020): Influence of time-restricted eating (TRE) on circadian regulation of glucose homeostasis and mitochondrial function
Conference: SRC 2020

Alisha Poudel, Physiology and Neuroscience
[Read Student Spotlight Article Here](#)
Mentor: Alan Hargens, PhD
Project (2020): Ground Reaction Force Distribution and Gait Patterns during Lower Body Positive Pressure Treadmill Exercise
Conference: SRC 2020

Samuel Shing, Microbiology
Mentor: Victor Nizet, MD
Project (2019): The Role of Antimicrobial Peptide LL-37 During Systemic Candida Infection
Conference: SRC 2019

Undergraduate Research Scholarships

Recipients (cont.)

Claire Zhang, Bioengineering
(Biotechnology)
Mentor: Kevin King, MD, PhD
Project (2020): Time-Resolved Single
Cell Analysis of Neutrophil Diversity
In Myocardial Infarction
Conference: SRC 2020

Raymond Zurich, Biochemistry and
Cell Biology
Mentor: Jeffrey Esko, PhD
Project (2019): Enhanced Wound
Induced Neogenesis of Hair and Fat
through Heparan Sulfate Deficiency
Conference: SRC 2019

Ledell Family Research Scholarship for Science and Engineering

Amanda Calcetas, Cogn and
Behavioral Neuroscience
Mentor: Christina Gigliotti, PhD
Project (2019): Community Memory
Screening as a Strategy for
Recruitment of Older Adults for
Dementia Research
Conference: SRC 2019, Society for
Advancement of Chicanos/Hispanics
and Native Americans in Science 2019

Grant Castaneda, Biology
(Bioinformatics)
Mentor: Weg Ongkeko, MD, PhD
Project (2020): The role of the
microbiome in the pathogenesis of
rheumatoid and osteoarthritis

Zoe Challacombe, Cognitive Science
(Machine Learning and Neural
Computation)
Mentors: Daniel McDonald, PhD;
Robin Knight, PhD
Project (2019): The use of random
forests and quadrees to construct
geographic partitions of microbiome
data
Conference: SRC 2019

Miles Corley, Microbiology
Mentor: Matthew Daugherty, PhD
Project (2020): Evolutionary-Guided
Analysis of Human Host Factors to
Gain Insight into Host-Pathogen
Conflicts

Isabelle Del Rios, Chemical
Engineering
Mentor: Ping Liu, PhD
Project (2020): Simulation of Ion
Transport through a Protective Layer

Undergraduate Research Scholarships

Recipients (cont.)

Sharlene Diep, Human Biology
Mentor: Kyle Gaulton, MD
Project (2020): The Role of Hypoxia in Pancreatic Islet Regulation and Diabetes Risk
Conference: SRC 2020

Hope Do, Microbiology
[Read Student Spotlight Article Here](#)
Mentor: Karl Wahlin, PhD
Project (2020): Cell cycle regulation and miRNA function during early development of human stem cell-derived retinal organoids
Conference: SRC 2020

Peter Emanuel, Molecular Biology
Mentor: Stanley Lo, PhD
Project (2019): Reliability of student-collected data in a course-based undergraduate research experience (CURE)
Conferences: SRC 2019, Society for the Advancement of Biology Education Research West 2020

Michael Fernandez, Microbiology
Mentor: Karl Wahlin, PhD
Project (2020): Mapping developmental pathways in early ocular growth for stem cell derived retinal organoids
Conference: SRC 2020

Nadia Haghani, Biology
Mentors: Sreekanth Chalasani, PhD; Molly Matty, PhD
Project (2020): Characterization of *Caenorhabditis elegans* skin microbiome and the effects of naturally-correlated bacteria on nematode undulatory behavior
Conference: SRC 2020

Holly Hamada, Biology
Mentor: Koichi Masuda, MD
Project (2020): Multi-Dimensional Efficacy Evaluation of ECM in a Rabbit Annular-Puncture Disc Degeneration Model

Undergraduate Research Scholarships

Recipients (cont.)

James Holcomb, Molecular and Cell Biology
Mentors: Samara Reck-Peterson, PhD; Jenna Christensen, PhD
Project (2020): Studying microtubule-based transport in filamentous fungi using cell biology and bioinformatic approaches

Sun Woo Hong, Biology
Mentor: Takaki Komiyama, PhD
Project (2019): Study of the Role of Corticostriatal and Thalamostriatal Projections During Movement and Their Reciprocal Connectivity

Val Jackson-Hundley, Microbiology
Mentor: Rachel Dutton, PhD
Project (2019): Investigating RUSTI (iRon Uptake Siderophore Transport Island) Effects and Mobility within a Cheese Model Microbial Community
Conference: SRC 2019

Olivia Jeffris, Cognitive Science (Neuroscience)
Mentor: Douglas Nitz, PhD
Project (2019): The Role of the Posterior Parietal Cortex in Learning the Shapes of Routes Taken Under Target Pursuit

Kevin Joslin, Bioengineering
Mentor: Frank Talke, PhD
Project (2019): Towards Characterization of an Implantable Circular Membrane Intraocular Pressure Sensor
Award: 2020 NSF Graduate Research Fellowship Winner

Tiffany Kuo, Biochemistry and Cell Biology
Mentor: Sonya Neal, PhD
Project (2019): Understanding a Novel Stress Pathway Involved with ERADicating Misfolded Proteins from the Endoplasmic Reticulum
Conferences: SRC 2019, Society for Advancement of Chicanos/Hispanics and Native Americans in Science 2019

Breanna Lam, Molecular and Cell Biology
Mentor: Randolph Hampton, PhD
Project (2019): Evolving Ligand-Regulated Misfolding from a Classic Allosteric Protein
Conferences: San Diego Biomedical Engineering Society Lab Expo 2020, Annual Southeastern Undergraduate Research Conference 2020, Southern California Conference for Undergraduate Research 2019

Undergraduate Research Scholarships

Recipients (cont.)

Nathan Lau, Neurobiology
Mentor: Cory Root, PhD
Project (2020): Creating a Behavioral Data Analysis Pipeline

Khoi Le, Bioengineering (Biotechnology)
Mentor: Stephanie Fraley, PhD
Project (2019): A microfluidic platform to model the breast cancer tumor microenvironment In-Vitro
Conference: SRC 2019

Brendan Lee, Biochemistry and Cell Biology
Mentor: Jessica Wang-Rodriguez, MD
Project (2019): Electronic cigarettes and their role in cancer

Cherry Lin, Cogn and Behavioral Neuroscience
Mentors: Ryan Place, PhD; Douglas Nitz, PhD
Project (2019): Activation of the Subiculum and adjacent Regions DURING spatial-specific tasks
Conference: SRC 2019

Sapna Mehta, Human Biology
Mentor: Dennis Kuo, MD
Project (2020): Universal Cancer Predisposition Screening Protocol within the Pediatric Hematology Oncology Population
Conference: SRC 2020

Asim Mohiuddin, Neurobiology
Mentor: Mary Corr, MD
Project (2020): Regulation of Bone Erosion in Arthritis
Conferences: SRC 2020, OURS 2020
([View Presentation Here](#))

Mayuresh Mujumdar, Global Health
Mentor: Gene Yeo, PhD
Project (2020): Cloning ZNF RBP Candidates to Verify RBP Classification Algorithm

Undergraduate Research Scholarships

Recipients (cont.)

Dibyabrata Mukhopadhyay, Human Biology

Mentor: Soumita Das, PhD

Publication: Sayed, I. M., Sahan, A. Z., Venkova, T., Chakraborty, A., *et al.*

(2020). Helicobacter pylori infection downregulates the DNA glycosylase NEIL2, resulting in increased genome damage and inflammation in gastric epithelial cells. *The Journal of Biological Chemistry*, 295(32), 11082–11098. DOI: 10.1074/jbc.RA119.009981 ([View Abstract/Request Article Here](#))

An Nguyen, Biochemistry and Cell Biology

Mentor: Joseph Gleeson, MD

Project (2019): Somatic Structural Variation Detection in Human Genomes with Machine Learning

Chloe Nguyen, Bioengineering (Biotechnology)

Mentor: Jeff Hasty, PhD

Project (2019): Employing bacteria to deliver therapeutic agents to cancer tumors

Vikram Padala, Molecular Biology

Mentor: Jeffrey Esko, PhD

Project (2020): The Role of Heparan Sulfate in SARS-CoV-2 Pathophysiology

Matthew Romero, Bioengineering (Biotechnology)

Mentor: Bryan Sun, MD, PhD

Project (2020): Skin Cell Alternative Splicing Analysis through rMATS Software

Kristen Rosenberg, Biochemistry/Chemistry

Mentor: Jessica Wang-Rodriguez, MD

Project (2019): Investigating genetic dysregulation and potential causes for dysregulation in hepatocellular carcinoma

Reeya Shah, Neurobiology

Mentor: Varykina Thackray, PhD

Project (2020): Effects of increased fiber diets on PCOS metabolic phenotype

Conference: SRC 2020

Undergraduate Research Scholarships

Recipients (cont.)

Meenakshi Singhal, Bioengineering (BioSystems)
Mentor: Adam Engler, PhD
Project (2019): Development of A Vascularized Cardiac Patch to Identify Transcriptomic Differences Associated with the Maturation of hESC-derived Cardiomyocytes

Theresa Slaiwa, Bioengineering (BioSystems)
Mentor: Pamela Mellon, PhD
Project (2020): Activin Signaling is Necessary for the Activity of a Novel FSHB Enhancer
Conference: SRC 2020

Ella Stimson, Bioengineering
Mentor: Frank Talke, PhD
Project (2019): Assessment of Biocompatibility of Implantable Intraocular Pressure Sensor
Conference: SRC 2019

Megan Tjuanta, Bioengineering (Biotechnology)
Mentor: Karsten Zengler, PhD Livia Zaramela, PhD
Project (2020): synDNA: A Standardization Approach for Metagenomics
Conference: SRC 2020

Christina Trinh, Biochemistry and Cell Biology
Mentor: Judy Kim, PhD
Project (2019): Minimal Media Expression and Spectroscopic Characterization of Azurin with isotopically substituted L-Trp-d5

Joey Truong, Molecular and Cell Biology
Mentor: Samara Reck-Peterson, PhD
Project (2020): Quantifying the Motile Properties of Dynein in the Presence of a Cargo Adaptor Complex
Conference: SRC 2020

James Wang, Chemical Engineering
Mentor: Nisarg Shah, PhD
Project (2020): Modeling effects of immunosuppressive PD-L1 biomaterials on T cell proliferation in the lymph node microenvironment
Conference: SRC 2020

Ryan Wing, NanoEngineering
Mentor: Jesse Jokerst, PhD
Project (2019): Application of a Novel Multispectral Advanced Nanoparticle Tracking Analysis Technique for the Real-Time Measurement of Amyloid- β Aggregation Dynamics
Conference: SRC 2019

Undergraduate Research Scholarships

Recipients (cont.)

Nicholas Wong, Microbiology
Mentor: Milton Saier, PhD
Project (2019): Proprietary Novel
Delivery of CRISPR/Cas via
Bacteriophage to Disrupt Antibiotic
Resistance Genes

Jinyu Zhang, Biochemistry and Cell
Biology
Mentors: Jin Young Huh, PhD; (PI)
Alan Saltiel, PhD
Project (2019): Investigating the role
of hepatic TBK1 in the regulation of
obesity-induced liver inflammation
Conferences: SRC 2019, Harvard
University National Collegiate
Research Conference 2020, Asian
Undergraduate Research Symposium

Michael Yiu, Mechanical Engineering
(Renewable Energy and
Environmental Flows)
Mentor: Renkun Chen, PhD
Project (2019): Adaptative Thermal
Photometry for Measurement of
Concentrated Solar Power Plants

NEW Scholars Program

Mariana Carrola, Education Studies
and Public Health
Mentor: Frances Contreras, PhD
Project (2019): Advanced Placement
in Cooper Unified: Access and Impact
Conference: SRC 2019

Jaquelin Dezha Peralta,
Bioengineering
Mentor: Nicholas Gravish, PhD
Project (2019): A Coherent Collective
Swarm System for Dexterous
Manipulation and Efficient Mobility
Conference: SRC 2019

Min Ju Kim, Public Health
Mentor: Luz Chung, PhD
Project (2019): Tail of a Dragon or
Head of a Snake—Is School
Performance Worth Pursuing?
Conference: SRC 2019

Hoyoung Moon, Biochemistry and
Cell Biology
Mentor: Joan Brown, PhD
Project (2019): RhoA signaling and
YAP dependent gene expression in
cardiomyocytes
Conference: SRC 2019

Undergraduate Research Scholarships

Recipients (cont.)

Jorge Nunez, Aerospace Engineering
Mentor: Veronica Eliasson, PhD
Project (2019): Efficacy of shock cancellation mechanisms in gas turbines
Conference: SRC 2019

Tania Quintero Rico, Human Developmental Sciences
Mentor: Sarah Creel, PhD
Project (2019): Engagement in an After-School Heritage Language Club: A Case Study
Conference: SRC 2019

Barbara (Ruth) Velazquez, Public Health
Mentor: José Suárez, MD, PhD
Project (2019): A dietary intervention with nuts or olestra to enhance the excretion of Persistent Organic Pollutants

Philip and Elizabeth Hiestand Scholarship for Cross-Disciplinary Research in SIO and Engineering

Alberto (Fredo) Avalos, Nanoengineering
Mentor: Ryan Kastner, PhD
Project (2020): Fish Sense

Tyler Barbero, Ocean and Atmospheric Sciences
Mentor: Amato Evan, PhD
Project (2019, 2020): Quantifying the Temporal Variation of Aridity Increase in the Salton Basin by Application of GNSS Data; (2020) Mechanisms Forcing the Diurnal Cycle of Dust in an Arid Closed Basin
Conference: SRC 2019

Sierra Byrne, Ocean and Atmospheric Sciences
Mentor: Anela Choy, PhD
Project (2020): Quantifying and categorizing macroplastic consumption by longnose lancetfish (*Alepisaurus ferox*) in the central North Pacific Subtropical Gyre
Conference: SRC 2020

Luke Colosi, Oceanic and Atmospheric Sciences
Mentors: Sarah Gille, PhD; Bia Villas Bôas, PhD
Project (2019): The Seasonal Cycle of Significant Wave Height in the Ocean: Local vs Remote Forcing
Conference: 2020 Ocean Sciences Meeting

Undergraduate Research Scholarships

Recipients (cont.)

Trenton Adonis Grimes, Mechanical Engineering

Mentor: Amato Evan, PhD

Project (2020): Evaluating Aerosol Optical Depth Retrievals from Space-Born Imagers at a Dusty AERONET site in Southeastern California

Julia Guerrero, Mechanical Engineering

Mentor: Ryan Kastner, PhD

Project (2020): Fish Sense
Conference: SRC 2020

Arden Ma, Electrical Engineering

Mentors: Ryan Kastner, PhD; Curt Schurgers, PhD

Project (2019): Mangrove Mapping, Image Segmentation, and Classification

Clair Ma, Computer Science (Bioinformatics)

Mentor: Jules Jaffe, PhD

Project (2020): Accuracy of Multi-view Correspondence for Particle Tracking Velocimetry in Marine Environments

Ryan Myers, Marine Biology

Mentor: Martin Tresguerres, PhD

Project (2020): Unique strategies for life at hydrothermal vents in the giant tubeworm *Riftia pachyptila*
Conference: SRC 2020

Amirhossein Rashidi Moakhar, Computer Science

Mentor: Sarah Gille, PhD

Project (2019): Infra-Gravity Waves at the Ross Ice Shelf, Antarctica

Benjamin Werb, Oceanic and Atmospheric Sciences

Mentor: Ryan Kastner, PhD

Project (2020): Smartfin: Gathering Oceanic Data from Recreational Surfers
Conference: SRC 2020

***Robert C. Dynes and Ann Parode**
Dynes Research Scholarships for Physics*

Jacob Buckman, Mech. Engineering

Mentor: Michael Simmonds, PhD;

Saikat Chakraborty Thakur, PhD

Project (2020): Impact of Helium Plasma on Plasma Facing Component of PISCES-RF Device
Conference: SRC 2020

Undergraduate Research Scholarships

Recipients (cont.)

Michael Hanson, Mechanical Engineering
Mentor: Saikat Chakraborty Thakur, PhD
Project (2019): Characterization of a High Power Helicon Plasma Device
Conference: SRC 2019

Starbucks Sustainable Solutions and Learning Opportunities Research Scholarship

Joseph Vechinski, Marine Biology
Mentor: Eric Allen, PhD
Project (2020): Trends in Microbial Communities of Southern California Marine Fishes
Conference: SRC 2020
Multiple URS Scholarships

Narinderbir Singh, Biology
Chancellor's (2019), Eurka (2020)
[Read Student Spotlight Here](#)
Mentor: Sonya Neal, PhD
Project (2019, 2020): Characterizing Dfm1's Features in ERAD Retrotranslocation of Integral Membrane Proteins
Conferences: SRC 2019, SRC 2020

Kirollos Tadrousse, Human Biology
Ledell (2019); Howell (2020)
Mentor: Kellie Breen Church, PhD
Projects: (2019) Can exposure to unpredictable chronic mild stressors disrupt estrus cyclicity and fertility in female mice? (2020) Investigating neuronal activation during the response to psychosocial stress in female mice
Conferences: SRC 2019, SRC 2020

Will Tanaka, NanoEngineering
Starbucks (2019), Chancellor's (2020)
Mentor: Keith Pezzoli, PhD
Project (2019, 2020): Mushrooms from campus waste: tackling waste and food insecurity with edible fungus
Conference: SRC 2019

Clara Wong, Human Biology
Ledell (2019), Julie Brown (2020)
Mentor: Stephen Howell, MD
Project (2019, 2020): Efficacy of RSP01-fusion Protein against Cancer Cells containing LGR receptors
Conference: SRC 2020

Additional UC San Diego Research Programs

In addition to the programs offered through Academic Enrichment Programs, there are many additional undergraduate research programs at UC San Diego.

Nine of these programs and their students are recognized in this section.

- American Heart Association (AHA) Summer Undergraduate Student Fellowship Program
- UC San Diego Computer Science and Engineering Early Research Scholars Program (CSE-ERSP)
- Creating Scientists to Address Cancer Disparities Program
- Electrical and Computer Engineering Summer Research Internship Program (ECE SRIP)
- Engineers for Exploration Research Experience for Undergraduates (E4E REU)
- Halicioğlu Data Science Institute (HDSI) Undergraduate Scholarship Program
- Summer Training Academy for Research Success (STARS)
- UC LEADS (Leadership Excellence through Advanced Degrees)
- Youth Enjoy Science (YES): Multidisciplinary Educational Approach to Reducing Cancer Disparities

American Heart Association Summer Undergraduate Student Fellowship

The American Heart Association Summer Undergraduate Student Fellowship Program (AHA Program) is a 10-week intensive research program that provides undergraduate students with faculty-mentored research experiences in cardiovascular-related fields. The program is sponsored and supported by the Academic Enrichment Programs office and the Departments of Medicine and Bioengineering at UC San Diego, in conjunction with the American Heart Association and the Institute of Engineering in Medicine. In addition to conducting research, participants also engage in a number of professional development activities.

2 Students participated in the 2019 AHA Program

AHA Students

Andrea Biju, Human Biology

Mentor: Stephan Lange, PhD

Project: Investigating the role of non-muscle actinin in nemaline myopathy

Conference: SRC 2019

Sophie Siemsgluess, Molecular and Cell Biology

Mentor: Farah Sheikh, PhD

Project: Investigation of the Role of GJA1-20k in ARVC-Afflicted Cardiomyocytes in Vitro

Conference: SRC 2019



UC San Diego Computer Science and Engineering Early Research Scholars Program

The [UCSD Computer Science and Engineering Early Research Scholars Program](#) (CSE-ERSP) is a team-based research apprentice experience for computer science and engineering majors in their second year of the program.

Students work in teams of four, and each team is matched with an active research project in the department. Students learn about research in computer science and then propose and carry out an independent research project over the course of an academic year.

49 **Students participated in the ERSP program in 2019-2020**

CSE-ERSP Students

Kimberly Almaraz, Computer Engineering
Mentor: Niema Moshiri, PhD
Project: SEPIA: Simulation-based Evaluation of Prioritization Algorithms
Conference: Dynamics & Evolution of HIV 2020 ([See Poster Here](#))
Award: Jacobs School Student Travel Fund

Sravya Balasa, Computer Science
Mentors: Julian McAuley, PhD; Jianmo Ni, PhD
Project: Workout Prediction ([See Poster Here](#))

Tyler Jang, Computer Science/ Psychology
Mentor: Jyoti Moshiri, PhD
Project: SEPIA: Simulation-based Evaluation of Prioritization Algorithms
Conference: Dynamics & Evolution of HIV 2020 ([See Poster Here](#))

Andy Liu, Computer Science
Mentors: William Griswold, PhD; Sorin Lerner, PhD
Project: Gamification to Aid the Learning of Test Coverage Concepts

Keshav Mittal, Computer Engineering
Mentors: Alex Snoeren, PhD; George Porter, PhD
Project: Power Metrics Tool for Optimizing Data Center Networks
Other Presentation: ERSP Poster Presentation

Brian Nguyen
Mentors: William Griswold, PhD; Sorin Lerner, PhD
Project: Gamification to Aid the Learning of Test Coverage Concepts

Anh Pham
Mentors: Debashis Sahoo, PhD; Christine Alvarado, PhD; Vignesh Gokul
Project: Automated Gene Target Report Card for Inflammatory Bowel Disease

Eman Sherif, Computer Science
Mentors: William Griswold, PhD; Sorin Lerner, PhD
Project: Gamification to Aid the Learning of Test Coverage Concepts

Creating Scientists to Address Cancer Disparities Program

Creating Scientists to Address Cancer Disparities Program was a National Cancer Institute-funded eight-week program during the summer of 2019. This program was a joint SDSU-UC San Diego project run by Dr. Vanessa Malcarne (SDSU) and Dr. Georgia Robins Sadler (UC San Diego). The program taught students how disparities can influence the outcomes of cancer.

Students learned the scientific process in bio-behavioral science labs and a theoretical understanding of the development and sustainment of cancer disparities. Students also gained experience in conducting in-depth analysis of scientific literature and preparing an abstract and poster for national conferences.

15

UC San Diego Students participated in the Creating Scientists to Address Cancer Disparities Program

Creating Scientists to Address Cancer Disparities

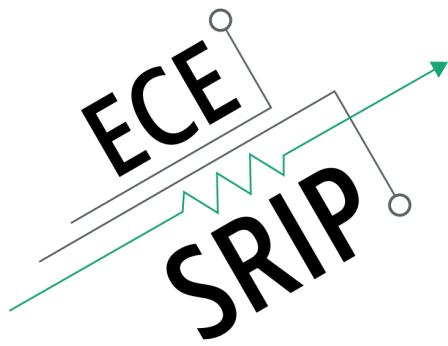
Program Students

Anthony Cirilo, Microbiology
Mentors: Georgia Robins Sadler, PhD;
Suzi Hong, PhD
Project: Examining Barriers to
Participation in Cancer Studies in the
Hispanic Community, Does
Radioactive Diagnostic Testing in
Infants Increase their Risk for
Developing Adolescent Cancer?
Conference: International Cancer
Education Conference Poster
Presentation 2019

Mariah Romero, Sociology
Mentor: Georgia Robins Sadler, PhD
Project: Differential Smoking
Practices Impact on Lung Cancer
Rates among Native Americans Living
in Oklahoma and California
Conference: International Cancer
Education Conference Poster
Presentation 2019

Esau Estrada, Cognitive Science
(Neuroscience)
Mentor: Miguel Lopez-Ramirez, PhD
Project: Potential Genetic Differences
in Glioblastomas between Non-
Hispanic White and Han Chinese
Conference: International Cancer
Education Conference 2019

Eduardo Gonzalez, Public Health
Mentors: Pei-an (Betty) Shih, PhD;
Georgia Robins Sadler, PhD; José
Suárez MD, PhD
Project: Promoting the diversity of
the health sciences workforce is a
first step to reducing cancer
disparities



Electrical and Computer Engineering Summer Research Internship Program

ECE Summer Research Internships were full-time commitments in ECE labs where interns had the opportunity to observe and participate in the activities of a research group under the supervision of the PI or a member of his/her lab group. The program included an enrichment component for students consisting of workshops on research communication, research writing, and other pertinent topics.

178 Undergraduate students participated in the ECE SRIP

{	101	Summer 2019
	77	Summer 2020

ECE SRIP Students

Jared Acord, Electrical Engineering and Mathematics
Mentor: Curt Schurgers, PhD
Project (2020): Development of Educational Technologies for Flipped Classroom
Conference: SRC 2020

Matthew Aguilar, Electrical Engineering
Mentor: Saharnaz Baghdadchi, PhD
Project (2019): Spatial and Spectral Probing for the Early Detection of Cervical Cancer
Conference: SRC 2019

Juan Alapizco Vega, Electrical and Computer Engineering
Mentor: Saharnaz Baghdadchi, PhD
Project (2020): Optical Waveguide-based Biosensor
Conference: SRC 2020

Justin Andal, Computer Engineering
Mentor: Curt Schurgers, PhD
Project (2020): Burrowing Owl Classifier
Conference: SRC 2020

John Angiuli, Electrical Engineering
Mentor: Jack Silberman, PhD
Project (2019): Smart Wheelchair: Microcontroller PCB and I2C
Conference: SRC 2019

Jamshed Ashurov, Electrical Engineering
Mentor: Sam Hessenauer
Project (2019): Python Integration of Alignment and Docking and Collaborative Mobile Augmented Reality Visualization of Molecules
Conference: SRC 2019

Allan Ateek, Electrical Engineering
Mentors: Daniel Cleary, MD, PhD; Saharnaz Baghdadchi PhD
Projects: (2019) Development of Neurosurgical Simulations for Training Resident Physicians;(2020) Optical Waveguide-based Biosensor
Conferences: SRC 2019, SRC 2020

Jacob Ayers, Electrical Engineering
Mentor: Curt Schurgers, PhD
Project (2020): Acoustic Species Identification
Conference: SRC 2020

ECE SRIP Students (cont.)

Branson Beihl, Computer Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Spatial Audio Demonstration
Conference: SRC 2020

Shivani Bhakta, Electrical Engineering
Mentors: Jack Silberman, PhD; Dinesh Bharadia PhD
Projects: (2019) Triton Town; (2020) BLE Localization / COVID
Conferences: SRC 2019, SRC 2020

Jon Carlo Bibat, Computer Engineering
Mentor: Nuno Vasconcelos, PhD
Project (2020): Mathematical and Computational Methods for Accurate Social Distancing Detection

Micah Bryant, Electrical Engineering
Mentor: Sebastian Obrzut, MD
Project (2019): Application of Machine Learning Techniques to Predicting Parkinson's Disease Progression.
Conference: SRC 2019

Yuliang Cai, Computer Engineering
Mentors: Jack Silberman, PhD; Truong Nguyen, PhD
Projects: (2019) A SLAM-based Navigation method on wheelchair
Conference: SRC 2019; (2020) Unity-based data collection for object detection in autonomous vehicles
Conference: SRC 2019, SRC 2020

Marlon Calderon, Electrical Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2019): Reverse Engineering of Apple Watch
Conference: SRC 2019

Yisu Cang, Electrical Engineering
Mentor: Tzu-chien Hsueh, PhD
Project (2019): Digital Scan-chain Interfaces
Conference: SRC 2019

Zhidong Cao, Electrical Engineering
Mentor: Behrouz Touri, PhD
Project (2019): Diffusion and epidemics over random graphs
Conference: SRC 2019

ECE SRIP Students (cont.)

Gino Carfano, Electrical Engineering
Mentor: Prasad Gudem, PhD
Project (2019): Measurement of the Flight Trajectory of a Boomerang using Ultra-Wideband Position Location System
Conference: SRC 2019

Benjamin Chang
Mentor: Truong Nguyen, PhD
Project (2019): Real-World Coordinate and Distance Estimation from Depth
Conference: SRC 2019

Joseph Chang
Mentor: Truong Nguyen, PhD
Project (2019): Real-World Coordinate and Distance Estimation from Depth
Conference: SRC 2019

Tyler Chang, Electrical Engineering
Mentor: Dinesh Bharadia, PhD
Project (2020): Robotic SLAM Platform Development
Conference: SRC 2020

Xiaowen Chen, Electrical Engineering
Mentor: Prasad Gudem, PhD
Project (2019): Ultra-wideband Technology for Tracking Athletes
Conference: SRC 2019

Vivian Chiong, Computer Engineering
Mentor: Pamela Cosman, PhD
Project (2020): Real-time Detection of Interruptions and Conversational Engagement Cues
Conference: SRC 2020

Austin Choe, Electrical Engineering
Mentor: Michael Yip, PhD
Project (2019): Fastron RC Car
Conference: SRC 2019

Vincent Chu, Computer Science
Mentor: Steven Dow, PhD
Project (2019): Supporting sensemaking on design examples
Conference: SRC 2019

ECE SRIP Students (cont.)

Aramis Conde, Computer Engineering
Mentor: Jack Silberman, PhD
Project (2019): Affordable Smart Wheelchair
Conference: SRC 2019

Brandon Cramer, Electrical Engineering
Mentor: Prasad Gudem, PhD
Project (2020): Impact of FR1 5G NR Jammers on UWB Indoor Position Location Systems
Conference: SRC 2020

David Ding, Electrical Engineering
Mentor: Duygu Kuzum, PhD
Project (2019): Evaluation of Durability of Transparent Graphene Electrodes for Chronic In vivo Experiments
Conference: SRC 2019

Bang Du, Electrical Engineering
Mentor: Truong Nguyen, PhD
Project (2019): Multi-camera 3D Reconstruction
Conference: SRC 2019

Jinglong Du, Computer Science
Mentor: Aaron Thode, PhD
Project (2019): Embedded real-time classification of whale and noise signals on a marine mammal bioacoustic tag
Conference: SRC 2019

Xuanxi Du, Electrical Engineering
Mentor: Xinyu Zhang, PhD
Project (2020): mmWave Software Defined Radio
Conference: SRC 2020

Sicong Duan, Computer Engineering
Mentor: Jack Silberman, PhD
Project (2019): A SLAM-based Navigation method on wheelchair
Conference: SRC 2019

Raelyn Dybicz, Electrical Engineering
Mentor: Nicholas Abi Samra
Project (2019): Study of the Impacts of Series Capacitors on Extra High Voltage (EHV) Transmission Systems
Conference: SRC 2019

ECE SRIP Students (cont.)

Hassan Eid, Electrical Engineering
Mentor: Ira Zukanović
Project (2019): Maya Archaeology
Tunnel Mapping
Conference: SRC 2019

Jesus Fausto, Electrical Engineering
Mentor: Jack Silberman, PhD
Project (2019): Smart Wheelchair:
User Safety and Software
Development
Conference: SRC 2019

Ivan Ferrier, Electrical Engineering
Mentor: Jack Silberman, PhD
Project (2019): Triton Town
Conference: SRC 2019

Jiajian Fu, Computer Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Feature detection and
matching
Conference: SRC 2020

Benhur Ghebrecristos, Electrical
Engineering
Mentor: Gholamreza Esmaili, PhD
Project (2019): Solar Power Plant for
Residential Application
Conference: SRC 2019

Isabella Gomez Torres, Electrical
Engineering
Mentor: Jack Silberman, PhD
Project (2019): The Affordable Smart
Wheelchair
Conference: SRC 2019

Qichun Gui, Electrical Engineering
Mentor: Chris Mi, PhD
Project (2020): Modeling of a electric
power system for all-electric aircraft
for 200 passengers
Conference: SRC 2020

Yayi Guo, Computer Engineering
Mentor: Xinyu Zhang, PhD
Project (2019): Robust Pedestrian
Dead Reckoning
Conference: SRC 2019

Zijia Guo, Electrical Engineering
Mentor: Dinesh Bharadia, PhD
Project (2020): Hitchhike Mother-
board
Conference: SRC 2020

ECE SRIP Students (cont.)

Miriam Hamidi, Electrical Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Spatial Audio Demonstration
Conference: SRC 2020

Chang Han, Electrical Engineering
Mentor: Zhichao Li
Project (2019): SLAM Quadrotor
Conference: SRC 2019

Bassel Hatoum, Electrical Engineering
Mentor: Truong Nguyen, PhD
Project (2019): Looking at the Driver in Autonomous Vehicles to Predict Switching to Autonomous Mode
Conference: SRC 2019

Scott He, Electrical Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Spatial Audio Demonstration
Conference: SRC 2020

Alireza Heydarpourdiba, Electrical Engineering
Mentor: Gholamreza Esmaili, PhD
Project (2019): Power Converters and Control for wind turbine Application
Conference: SRC 2019

Bao Hoang, Computer Engineering
Mentors: Jack Silberman, PhD;
Ramsin Khoshabeh PhD
Projects: (2019) Triton Town; (2020) IOT communication API for PCB RC car
Conference: SRC 2019, SRC 2020

Hyun Hong, Electrical Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2019): Machine Learning Vehicle: Fastron and MPnet
Conference: SRC 2019

Jun Hao Hu, Electrical Engineering
Mentor: Sonia Martinez Diaz, PhD
Project (2019): Multi-Agent Kinodynamic Planning for Autonomous Underwater Vehicles
Conference: SRC 2019

ECE SRIP Students (cont.)

Yaocong Hu, Electrical Engineering
Mentor: Sabur Hassan Baidya, PhD
Project (2019): QoS Prediction of V2X Collaborative Computations over Heterogeneous Multi-hop Wireless Networks
Conference: SRC 2019

Yihan Hu, Electrical Engineering
Mentor: Nicholas Abi Samra, PhD
Project (2019): Understanding Social Behavior Through Audio Recording
Conference: SRC 2019

Gaopo Huang, Electrical and Computer Engineering
Mentor: Saharnaz Baghdadchi, PhD
Project (2020): Optical Waveguide-based Biosensor
Conference: SRC 2020

Po Hsiang Huang, Electrical Engineering
Mentor: Nuno Vasconcelos, PhD
Project (2019): Large Scale 3D Dataset Collection
Conference: SRC 2019

Hannah Hui, Computer Engineering
Mentor: Nikolay Atanasov, PhD
Project (2020): Autonomous Robot Exploration and Occupancy Mapping in a 3-D Python Simulation
Conference: SRC 2020

James Hutchinson, Electrical Engineering
Mentor: Jack Silberman, PhD
Project (2019): Smart Wheelchair: Controls & Prototype
Conference: SRC 2019

Tanish Jain, Electrical Engineering
Mentors: Jack Silberman, PhD; Tara Javidi PhD
Projects: (2019) Smart Wheelchair: User Safety and Software Development; (2020) UV-C Drone: Drone Localization / COVID
Conferences: SRC 2019, SRC 2020

Armin Jamshidi Bahmani, Electrical Engineering
Mentor: Won Bae, PhD
Project (2019): Application of Deep Learning Segmentation in a Translational Workflow Involving Quantitative Knee MRI
Conference: SRC 2019

ECE SRIP Students (cont.)

Adam Kadwory, Bioengineering
Mentor: Vikash Gilja, PhD
Projects: (2019) Development
Towards a Headcap with an
Integrated Counterweight System for
Electrophysiology in Small Animals;
(2020) Development of an automated
recording and analysis pipeline for
avian song
Conferences: SRC 2019, SRC 2020

Sean Kamano, Electrical Engineering
Mentor: Nuno Vasconcelos, PhD
Projects: (2019) Large Scale 3D
Dataset Collection; (2020) Datasets
for Natural World 3D Computer
Vision
Conferences: SRC 2019, SRC 2020

Kevin Kao, Electrical Engineering
Mentor: Gholamreza Esmaili, PhD
Project (2019): Power Converters and
Control for Wind Turbine Application
Conference: SRC 2019

Merve Kilic, Electrical Engineering
Mentor: Siavash Mir Arabbaygi, PhD
Project (2020): A Fast
Implementation of Root-to-Tip
Rooting for Virus Phylogenies
Conference: SRC 2020

Zephaniah Kim, Electrical
Engineering
Mentor: Gholamreza Esmaili, PhD
Project (2019): Solar Power Plant For
Residential Application
Conference: SRC 2019

Saikiran Komatineni, Electrical
Engineering
Mentor: Truong Nguyen, PhD
Project (2019): 3D Reconstruction of
the Human Body
Conference: SRC 2019

Chunjhen Lai, Electrical and
Computer Engineering
Mentor: Pamela Cosman, PhD
Project (2020): Quantifying Reading
Order and Completeness Using Eye-
tracking
Conference: SRC 2020

Kaustubh Lall, Computer
Engineering
Mentor: Won Bae, PhD
Project (2019): Application of Deep
Learning Segmentation in a
Translational Workflow Involving
Quantitative Knee MRI
Conference: SRC 2019

ECE SRIP Students (cont.)

Isaias Larios, Electrical Engineering
Mentor: Duygu Kuzum, PhD
Project (2020): Radio modulation classification with neuromorphic computing
Conference: SRC 2020

Hao Le, Global Health
Mentor: Truong Nguyen, PhD
Project (2020): An Automated and Synthetic Testbed for Diverse Driving Data Generation
Conference: SRC 2020

Nicolette Olivia Le, Electrical Engineering
Mentor: Georgia Robins Sadler, PhD
Project (2020): Disparities in the Patient Pain Experience
Conference: SRC 2020

Guanqing Li, Signal and Image Processing
Mentor: Pamela Cosman, PhD
Project (2020): Real-time Detection of Interruptions and Conversational Engagement Cues
Conference: SRC 2020

James Li, Computer Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2020): Not-So-Smart PCB Racer
Conference: SRC 2020

Michael Li
Mentor: Jack Silberman, PhD
Project (2019): Smart Wheelchair: Controls & Prototype
Conference: SRC 2019

Muzhou Li, Computer Engineering
Mentor: Sam Hessenauer
Project (2019): Python Integration of Alignment and Docking and Collaborative Mobile Augmented Reality Visualization of Molecules
Conference: SRC 2019

Yejun Li, Electrical Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2020): 3D Machine Learning Training Environment for PCB RC car
Conference: SRC 2020

Yidong Li, Computer Engineering
Mentor: Dinesh Bharadia, PhD
Project (2020): Universal IoT Gateway
Conference: SRC 2020

ECE SRIP Students (cont.)

Zhimin Lin, Computer Engineering
Mentor: Xinyu Zhang, PhD
Project (2019): Indoor Positioning and Navigation Using Visible Lights
Conference: SRC 2019

Tyus Liu, Computer Science
Mentors: Truong Nguyen, PhD; Peter Shin
Project (2019): Canvass for Security: Automating the Detection of Vulnerabilities in Software
Conference: SRC 2019

Zack Liu, Electrical Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2020): Brushed DC Motor Driver Printed Circuit Board (PCB) & Battery Management System (BMS) For Autonomous Remote Control (RC) Car
Conference: SRC 2020

Samantha Long, Electrical Engineering
Mentor: Dinesh Bharadia, PhD
Project (2020): Programming ScatterMIMO Smart Surfaces via BLE links
Conference: SRC 2020

Songyu Lu, Computing Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Spatial Audio Demo
Conference: SRC 2020

Mia Lucio, Computer Engineering
Mentor: Curt Schurgers, PhD
Project (2020): Radio Collar Telemetry
Conference: SRC 2020

Jiachen Luo, Electrical Engineering
Mentor: Truong Nguyen, PhD
Project (2020): electronic harness to assist elbow movement
Conference: SRC 2020

Jiayi Luo, Electrical Engineering
Mentor: Cheolhong An, PhD
Project (2020): Lensless camera: Simultaneous Depth and Scene reconstruction
Conference: SRC 2020

Harsh Maheshwary, Electrical Engineering
Mentor: Nicholas Abi Samra
Project (2019): Study of the Impacts of Series Capacitors on Extra High Voltage (EHV) Transmission Systems
Conference: SRC 2019

ECE SRIP Students (cont.)

Anastasiia Makhniaieva, Computer Engineering

Mentors: Michael Yip, PhD; Dimitri Schreiber

Project (2020): Surgical Robotic System Tracking within an MRI Scanner

Conference: SRC 2020

Greg Maki, Electrical Engineering

Mentor: Hanh-Phuc Le, PhD

Project (2020): Extremely High Voltage Power Converter for Soft Robots

Conference: SRC 2020

Fanhang Man, Electrical Engineering

Mentor: Jack Silberman, PhD

Project (2019): Triton Town

Conference: SRC 2019

Punit Mehta, Electrical Engineering

Mentor: Gholamreza Esmaili, PhD

Project (2019): Power Converters and Control for Wind Turbine Application

Conference: SRC 2019

Jonathan Mi, Electrical Engineering

Mentor: Truong Nguyen, PhD

Project (2020): A New Computer Vision Platform

Conference: SRC 2020

Jake Millhiser, Electrical Engineering

Mentor: Piya Pal, PhD

Project (2020): Overcoming Diffraction Limits with Correlation-based Super-Resolution Algorithms

Conference: SRC 2020

Jesi Miranda-Santos, Electrical Engineering

Mentor: Jack Silberman, PhD

Project (2019): Smart Wheelchair: Microcontroller PCB and I2C

Conference: SRC 2019

Keshav Mittal, Computer Engineering

Mentor: Dinesh Bharadia, PhD

Project (2019): Accurate Indoors BLE based localization for smart devices

Conference: SRC 2019

ECE SRIP Students (cont.)

Jason Morris, Electrical Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2020): Brushed DC Motor
Driver Printed Circuit Board (PCB) &
Battery Management System (BMS)
For Autonomous Remote Control (RC)
Car
Conference: SRC 2020

Nicholas Munoz, Elec. Engineering
Mentor: Curt Schurgers, PhD
Project (2020): Burrowing Owl
Classification
Conference: SRC 2020

Hector Murguia Gastelum, Electrical Engineering
Mentor: Prasad Gudem, PhD
Project (2019): Impact of FR1 5G NR
Jammers on UWB Indoor Position
Location Systems
Conferences: SRC 2019, International
conference on Indoor Positioning and
Indoor Navigation 2019 ([See Video Here](#))
Publications: IEEE, Indoor Position
Location Systems ([See Article Here](#));
AIAA, Flight Dynamics of
Boomerangs: Impact of Drag Force
and Drag Torque ([See Article Here](#))

Ariane Nazemi, Electrical Engineering
Mentor: Jack Silberman, PhD
Project (2019): Power System for
Miniature Autonomous Vehicle
Testbed
Conference: SRC 2019

Weifan Ou, Computer Engineering
Mentor: Nikolay Atanasov, PhD
Project (2020): Autonomous Robot
Exploration and Occupancy Mapping
in a 3-D Python Simulation
Conference: SRC 2020

Zhenhao Pan, Electrical Engineering
Mentor: Tse Nga (Tina) Ng, PhD
Project (2019): Printable Organic
Light-emitting Electrochemical Cell
(OLEC)
Conference: SRC 2019

Eamon Patamasing, Electrical Engineering
Mentor: Dinesh Bharadia, PhD
Project (2020): Large-scale
Retrodirective mm-Wave Tags for
Traffic Sign Identification
Conference: SRC 2020

ECE SRIP Students (cont.)

Ilya Petrov, Electrical Engineering
Mentor: Xinyu Zhang, PhD
Project (2020): mmWave Software
Defined Radio
Conference: SRC 2020

Jason Pham, Electrical Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Generating Depth
Maps for Autonomous Driving
Applications
Conference: SRC 2020

Jacob Pollard, Computer
Engineering
Mentor: Nuno Vasconcelos, PhD
Project (2020): Exploring Methods
for 3D Reconstruction
Conference: SRC 2020

Jia Ming (Jimmy) Qiu, Computer
Engineering
Mentor: Sonia Martinez Diaz, PhD
Project (2019): Distributed
Controllers for Microgrid Frequency
Regulation
Conference: SRC 2019

Tian Qiu, Electrical and Computer
Engineering
Mentor: Pamela Cosman, PhD
Project (2020): Viewport-adaptive
360-degree video streaming
Conference: SRC 2020

Jarrett Ratelle, Computer
Engineering
Mentor: Jack Silberman, PhD
Project (2019): Triton Town
Conference: SRC 2019

Timothy Ries, Electrical Engineering
Mentor: Nicholas Abi Samra
Project (2019): Study of the Impacts
of Series Capacitors on Extra High
Voltage Transmission Systems
Conference: SRC 2019

Reed Rouland, Electrical
Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2020): Optical Blood
Pressure Sensing
Conference: SRC 2020

ECE SRIP Students (cont.)

Keshav Rungta, Electrical Engineering
Mentor: Dinesh Bharadia, PhD Kshitiz Bansal
Projects: (2019) All Weather Radar for Autonomous Driving; (2020) Sensor Fusion: Imaging for Autonomous Driving
Conferences: SRC 2019, SRC 2020

Evan Serrano, Computer Engineering
Mentor: Jack Silberman, PhD
Project (2019): Smart Wheelchair: Navigation Stack
Conference: SRC 2019

Prem Shelat, Computer Engineering
Project (2019): Wearable Neurotechnology for Brain-Computer Interface
Conference: SRC 2019

Jesse Soto, Electrical Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2020): RC Car Chassis
Conference: SRC 2020

Justin Sun, Computer Engineering
Mentor: Curt Schurgers, PhD
Project (2020): Development of Educational Technologies for Flipped Classrooms
Conferences: SRC 2020, International Conference on Indoor Positioning and Indoor Navigation 2019

William Sun, Computer Engineering
Mentor: Pamela Cosman, PhD
Project (2020): Quantifying Reading Order and Completeness Using Eye-tracking
Conference: SRC 2020

Haaris Tahir-Kheli, Computer Engineering
Mentor: Saharnaz Baghdadchi, PhD
Project (2019): Spatial and Spectral Probing for the Early Detection of Cervical Cancer
Conference: SRC 2019

Hong Tang, Electrical Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2020): 3D Machine Learning Training Environment for PCB RC car
Conference: SRC 2020

ECE SRIP Students (cont.)

Richard To, Computer Engineering
Mentor: Jack Silberman, PhD
Project (2019): Smart Wheelchair:
Navigation Stack
Conference: SRC 2019

Manh Truong, Electrical Engineering
Mentor: Gholamreza Esmaili, PhD
Project (2019): Solar Power Plant For
Residential Application
Conference: SRC 2019

Tai Truong, Electrical Engineering
Mentor: Pamela Cosman, PhD
Projects: (2019) Speech Processing;
(2020) Renewable Power Supply
System for Remote Area
Conferences: SRC 2019, SRC 2020

Cole Tynan-Wood, Computer
Engineering
Mentor: Sonia Martinez Diaz, PhD
Project (2019): Distributed
Controllers for Microgrid Frequency
Regulation
Conference: SRC 2019

Carson Valdez, Electrical
Engineering
Mentors: Abdelkrim El Amili, PhD;
Saharnaz Baghdadchi PhD
Projects: (2019) Opto-Electric Probes
for Silicon Chip Testing; (2020)
Integrated Optical Phased Arrays for
Optical Trapping
Conferences: SRC 2019, SRC 2020

Minh Vo, Computer Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Fall Risk Detection
From Video Using Key Joint Locations
Conference: SRC 2020

Brandon Wade, Electrical
Engineering
Mentor: Sebastian Obrzut, MD
Project (2019): Application of
Machine Learning Techniques to
Predicting Parkinson's Disease
Progression.
Conference: SRC 2019

Nihar Wahal, Electrical Engineering
Mentor: Pamela Cosman, PhD
Project (2019): Speech Processing for
Quality of Life Tools
Conference: SRC 2019

ECE SRIP Students (cont.)

Henry Wang, Electrical Engineering
Mentor: Saharnaz Baghdadchi, PhD
Project (2020): Integrated Optical
Phased Arrays for Optical Trapping
Conference: SRC 2020

Hong Wang, Electrical Engineering
Mentor: Chris Mi, PhD
Project (2020): Modeling of an
extremely high power charging
system for all electric airplanes
Conference: SRC 2020

Kaiwen Wang, Electrical Engineering
Mentor: Tzu-chien Hsueh, PhD
Project (2019): High-Speed Wireline
Transceiver Emulations
Conference: SRC 2019

Karl Wang, Computer Engineering
Mentor: Dinesh Bharadia, PhD
Project (2019): Capttery: a human-
safe, long range wireless power
transfer technology
Conference: SRC 2019

Chenfeng Wu, Electrical Engineering
Mentor: Dinesh Bharadia, PhD
Project (2019): Indoor Navigation
Using WiFi
Conference: SRC 2019

Gaotong Wu, Electrical Engineering
Mentors: Ramsin Khoshabeh, PhD;
Pengtao Xie PhD
Projects: (2019) Machine learning
vehicle: fastron and Mpnet; (2020)
Self-supervised learning for time-
series classification
Conferences: SRC 2019, SRC 2020

Raini Wu, Electrical Engineering
Mentor: Dinesh Bharadia, PhD
Project (2020): Viewport-adaptive
360-degree video streaming
Conference: SRC 2020

Si Wu, Computer Engineering
Mentor: Paul Siegel, PhD
Project (2019): NAND Flash Memory
Error Detection Using Machine
Learning Techniques
Conference: SRC 2019

ECE SRIP Students (cont.)

Tony Wu, Electrical Engineering
Mentor: Drew Hall, PhD
Project (2019): BioCoin
Conference: SRC 2019

Anfeng Xu, Electrical Engineering
Mentors: Curt Schurgers, PhD; Tara Javidi PhD
Projects: (2019) Reef-Sensor Encased Application; (2020) Mathematical Underpinning of Information Acquisition Systems
Conferences: SRC 2019, SRC 2020

Haoru Xue, Electrical Engineering
Mentor: Ramsin Khoshabeh, PhD
Project (2020): CV-Based Localization on Educational Autonomous Robotic Car
Conference: SRC 2020

Nuoyi Yang, Electrical Engineering
Mentor: Saharnaz Baghdadchi, PhD
Project (2019): Spatial and Spectral Probing for the Early Detection of Cervical Cancer
Conference: SRC 2019

Ziyi Ye, Computer Engineering
Mentor: Prasad Gudem, PhD
Project (2019): Aerodynamics of Drones and Boomerangs
Conference: SRC 2019

Alexander Yeh, Electrical Engineering
Mentor: Gholamreza Esmaili, PhD
Project (2019): Power Converters and Control for Wind Turbine Application
Conference: SRC 2019

Fei Yin, Electrical Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Multi-view Reconstruction
Conference: SRC 2020

Weginbara Youpele, Electrical Engineering
Mentor: Jyoti Mishra, PhD
Project (2019): Wearable Neurotechnology for Brain-Computer Interface
Conference: SRC 2019

ECE SRIP Students (cont.)

Xinyang Yu, Electrical Engineering
Mentor: Zhichao Li
Projects: (2019) SLAM Quadrotor;
(2020) Autonomous Quadrotor
Robots
Conferences: SRC 2019, SRC 2020

Zhaowei Yu, Electrical Engineering
Mentor: Dimitri Schreiber,
Project (2019): CT Robot
Conference: SRC 2019

Zhicheng Yu, Electrical Engineering
Mentor: Truong Nguyen, PhD
Project (2020): Spatial Audio
Demonstration
Conference: SRC 2020

Mohammad Zarei, Electrical
Engineering
Mentor: Tzyy-Ping Jung, PhD
Project (2019): A Wearable Multi-
Modal Bio-Sensing System
Conference: SRC 2019

Jiawen Zeng, Computer Engineering
Mentors: Behrouz Touri, PhD;
Pengtao Xie PhD
Projects: (2019) A Study of
Preferential Attachment Network;
(2020) Contrastive Self-supervised
Learning for Graph Classification
Conferences: SRC 2019, SRC 2020

Xiangjian Zeng, Elect. Engineering
Mentors: Duygu Kuzum, PhD;
Imanuel Lerman MD
Projects: (2019) The Integration of
Graphene Electrodes and Miniature
Microscope in In Vivo Sampling;
(2020) RLS Harmonic Powerline
Noise Cancellation in Median Nerve
Recording
Conferences: SRC 2019, SRC 2020

Zhen Zhai, ECE and MATH
Mentor: Paul Siegel, PhD
Project (2020): Belief Propagation
List Decoder for Polar Code
Conference: SRC 2020

ECE SRIP Students (cont.)

Qingyuan Zhang, Computer Engineering
Mentor: Truong Nguyen, PhD
Projects: (2019) 3D Scene Reconstruction for VR; (2020) Human Inspired Computer Vision Platform
Conferences: SRC 2019, SRC 2020

Shengzhe Zhang, Electrical Engineering
Mentor: Jack Silberman, PhD
Project (2019): Power System for Miniature Autonomous Vehicle Testbed
Conference: SRC 2019

Weifan Zhang, Electrical Engineering
Mentor: Drew Hall, PhD
Project (2019): BioCoin
Conference: SRC 2019

Minghui Zhao, Electrical Engineering
Mentor: Dinesh Bharadia, PhD
Projects: (2019) VR Tracking; (2020) ULoc - Robust, Scalable, cm-accurate UWB based localization
Conferences: SRC 2019, SRC 2020

Yiming Zhao, Computer Engineering
Mentor: Siavash Mir Arabbaygi, PhD
Project (2019): Effectiveness of Removing Errors in Multiple Sequence Alignments
Conference: SRC 2019

Siyuan Zhu, Electrical Engineering
Mentor: Dinesh Bharadia, PhD
Projects: (2019) 4D Radar for Autonomous Driving; (2020) FMCW Radar Imaging for Autonomous Driving
Conferences: SRC 2019, SRC 2020

Ehsan Ziaeikajbaf, Electrical Engineering
Mentor: Todd Hylton, PhD
Project (2019): A Smart Camera Using Predictive Machine Learning
Conference: SRC 2019

Mohammad Ali Zolfaghari, Electrical Engineering
Mentor: Jack Silberman, PhD
Project (2019): Triton Town
Conference: SRC 2019



ENGINEERS
FOR
EXPLORATION

Engineers for Exploration Research Experience for Undergraduates

Engineers for Exploration (E4E) is a one of kind program promoting multidisciplinary and collaborative research projects with the broad goals of protecting the environment, studying wildlife, uncovering mysteries related to cultural heritage, and providing hands-on learning experiences for undergraduate students. We team student engineers with scientists from a wide range of disciplines to create innovative technologies that are deployed around the world.

40 Approximately 40 students participated in E4E REU

{	~20	Summer 2019
	~20	Summer 2020

Halicioğlu Data Science Institute

Undergraduate Scholarship Program

The [Halicioğlu Data Science Institute](#) Undergraduate Research Scholarship Program at University of California San Diego awards \$2,500 to each student project, all of them guided by experienced mentors. The yearlong fellowships focus on providing hands-on training to emerging data science talent. All UC San Diego undergraduate students enrolled full-time are eligible to apply for research funding. Each researcher works with a mentor to develop analytical skills, data science portfolios, and foster novel data-driven approaches to problem solving. The research program is geared to producing results, with students submitting final reports highlighting accomplishments.

27 **Students received awards
for the 2019-2020 year**

E4E Students

Arden Ma, Electrical Engineering
Mentors: Ryan Kastner, PhD; Curt Schurgers, PhD
Project: Mangrove Mapping, Image Segmentation, and Classification

Benjamin Werb, Oceanic and Atmospheric Sciences
Mentor: Ryan Kastner, PhD
Project (2020 Summer): Smartfin: Gathering Oceanic Data from Recreational Surfers
Conference: SRC 2020

HDSI Scholarship Program Students

Catherine Eng, Cogn. and Behavioral Neuroscience
Psychology Honors Program
Mentor: Drew Walker, PhD
Project: Students' gender biases toward professors

Kian Faizi, Molecular Biology
Mentor: Kuo-Fen Lee, PhD
Project: Single-cell transcriptomics and web mining for rapid reverse genetics in plants

Advitya Gemawat, Data Science
Project: Vista: An end-to-end declarative transfer learning system for multimodal analytics with deep neural networks

Arunav Gupta, Data Science
Project: Quantifying the effect of redlining policies on racial segregation in America's urban centers

Karthik Guruvayurappan, Data Science
Project: Quantifying tennis player performance

HDSI Scholarship Program Students (cont.)

Stanley Hicks, Electrical Engineering
Project: Mangrove mapping, image segmentation, and classification

Zhaoyi Hou, Data Science
Project: Using machine learning for diagnosis in oculofacial plastic surgery

Eric Jiang, Data Science
Project: Quantifying tennis player performance

Justin Kang, Data Science
Project: Predicting the outcome of an NFL play using pursuit curve features

Alexandra Keamy, Data Science
Project: A supervised machine learning approach to predicting mild cognitive impairment (MCI) among diverse Latinos

Shweta Kumar, Data Science
Project: Quantifying tennis player performance

Nicole Lee, Data Science
Project: Building an inference model to classify Chinese computational propaganda bots

Alex Liebscher, Cognitive Science
Project: Effects of battle and journey metaphors on charitable donations for cancer patients

Xiang Lu, Applied Mathematics
Project: Weather forecasting using hybrid model

Arden Ma, Electrical Engineering
Project: Mangrove mapping, image segmentation, and classification

Shone Patil, Data Science
Project: Predicting the outcome of an NFL play using pursuit curve features

Nikolas Racelis-Russell, Data Science
Project: Building an inference model to classify Chinese computational propaganda bots

HDSI Scholarship Program Students (cont.)

Sasami Scott, Data Science
Project: Video games and player retention

Katherine Qi, Marine Biology
Project: Mangrove mapping, image segmentation, and classification

Samson Qian, Data Science
Project: Reassessment of P2P credit risk modeling with macroeconomic factors

Justin Yang, Cognitive Science/Math (Computer Science)
Mentor: Judith Fan, PhD
Project: How do humans convey what they perceive and know about objects in visual form?

Shuyi Judy Yang, Data Science
Project: Using geographic data and social media to predict the potential health problems

Eric Yu, Data Science
Project: Identifying biomarkers in recurrent Chronic Thromboembolic Pulmonary Hypertension (CTEPH) patients

Julia Xu, Cognitive Science (Machine Learning and Neural Computation)
Mentor: Judith Fan, PhD
Project: How does visual context influence sketched representations of faces?

Xinrui Zhan, Data Science
Project: ASL (American Sign Language) signs recognition

Haoming Zhang, Data Science
Project: 3D Wireframe Detection

Summer Training Academy for Research Success

The University of California, San Diego [Summer Training Academy for Research Success \(STARS\)](#) program is an eight-week summer research academy for community college students, undergraduate students, recent college graduates, and masters students. Opened to all disciplines, STARS offers student participants a rigorous research opportunity with esteemed UC San Diego faculty, informative transfer and graduate school preparation workshops, and educational, cultural, and social activities in sunny San Diego.

30 **UC San Diego Undergraduate Students participated in STARS**

17	Summer 2019
13	Summer 2020

UC LEADS

Leadership Excellence through Advanced Degrees

The [UC LEADS program](#) prepares promising undergraduate students for advanced education in science, technology, engineering, and mathematics (STEM). This program is designed to identify educationally or economically disadvantaged undergraduates enrolled in UC San Diego who are likely to succeed in graduate school, and to provide these students with undergraduate educational experiences that will prepare them to assume positions of leadership in industry, government, public service, and academia following completion of a doctoral STEM degree.

15 **Students participated in UC LEADS** { **5** 2017-2019 Cohort
5 2018-2020 Cohort
5 2019-2021 Cohort

STARS Students

Leonard Almero, Biochemistry and Cell Biology
Mentor: Francisco Villarreal, MD, PhD
Project (2019): Therapeutic Effect Of An ACE Inhibitor On The Global Passive Mechanics Of The Left Ventricle After Myocardial Infarction
Conference: SRC 2019

Natalia Avina-Ochoa, Molecular and Cell Biology
Mentors: Steven Mayfield, PhD; Yasin Torres-Tiji
Project (2019): Expression of myoglobin in the microalgae *Chlamydomonas reinhardtii* for the production of a sustainable algae-based meat substitute
Conference: SRC 2019

Jairo Chavez, Cognitive Science (Machine Learning and Neural Computation)
Mentor: Bradley Voytek, PhD
Project (2019): Linking spiking activity and LFP phase bands in the avian brain
Conference: SRC 2019

Janelle Coleen Dela Cueva, Electrical Engineering
Mentor: Veronica Eliasson, PhD
Project: Shear Dominated Crack Propagation
Conference: SRC 2019

Sylas Eckhart, Environmental Systems (Ecol, Behav & Evol)
Mentor: Amy Non, PhD
Project (2020): Hair Cortisol Concentrations as a Measurement of Chronic Stress
Conference: SRC 2020

Caín Alexander Elizarraras Galván, Electrical Engineering
Mentors: Dimitri Deheyn, PhD; Massimo Franceschetti, PhD
Projects: (2019) Eye Detection Through Convolutional Neural Network, (2020) Imaging of vine holding pads to find inspiration for mechanical interlocking adhesive device
Conferences: SRC 2019, SRC 2020

STARS Students (cont.)

Nicholas Fisher, Cognitive Science
(Neuroscience)

Mentor: Bradley Voytek, PhD

Project (2019): Patterns with EEG
Data

Conference: SRC 2019

Noah Gaitan, Biology

Mentor: Chris Tyler

Project (2020): Investigating the
effects of integrin $\beta 7$ blockade in an
interleukin 10 (IL-10) deficient
model of chronic colitis

Conference: SRC 2020

Ruby Gamboa, Mechanical
Engineering

Mentor: Dimitri Deheyn

Project (2020): The Potential of
Spectral Reflectance altering
Thermal Properties of Bird Feathers

Conference: SRC 2020

Jacob Gill, Mathematics

Mentor: Edwin Juárez, PhD

Project (2020): Demonstrating an
Information-Theoretic Metric's
Usefulness in Associating Gene
Expression with Cellular Phenotypes

Conference: SRC 2020

Arianna Girmai, Human Biology

Mentor: Jacobo Myerston, PhD

Project (2020): Effects of Social
Networks

Conference: SRC 2020

Raed Good, Sociology

Mentor: Akos Rona-Tas

Project (2020): Predictive Policing: A
Comparative Analysis of Four
Countries

Conference: SRC 2020

Marisa Grams, Cogn and Behavioral
Neuroscience

Mentor: Lara Rangel, PhD

Project (2019): Rhythmic
Coordination between the Dentate
Gyrus (DG) and CA3 During a Spatial
Pattern Separation Task

Conference: SRC 2019

David Hernandez, Mathematics

Mentor: Daniel Kane, PhD

Project (2020): Queen Packing on an
Infinite Chessboard

Conference: SRC 2020

STARS Students (cont.)

Maiyi Huang, Cognitive Science
(Neuroscience)
Mentor: Angela Yu, PhD
Project (2019): Computational
modeling of social face perception
and decision-making in humans
Conference: SRC 2019

Sidney Huen, Mechanical
Engineering
Mentor: Michael Tolley, PhD
Projects: (2019) Characterization of
the Mechanical Behavior of Starfish-
inspired Soft Robotic Actuators
(2020) Simulation of a Soft Robot
Walking Gait with Directionally
Adhesive Suction Discs
Conferences: SRC 2019, SRC 2020

Haniyeh Javaheri, Human Biology
Mentor: David Cauvi, PhD
Project (2019): Kinetic analysis of
Hsp70 expression during the cellular
stress response
Conference: SRC 2019

Maryam Kaka, Molecular and Cell
Biology
Mentor: Stanley Lo, PhD
Project (2019): Instructors' Views on
Diversity
Conference: SRC 2019

Aivan Kako, Human Biology
Mentor: Matthew Daugherty, PhD
Project (2019): The Constant
Evolutionary Struggle between Hosts
and Viral Pathogens
Conference: SRC 2019

Isaac Kiah, Mechanical Engineering
Mentor: Shengqiang Cai, PhD
Project (2019): Artificial Muscles
Conference: SRC 2019

Carolina Lopez, Biochemistry/
Chemistry
Mentor: Amy Non, PhD
Project (2020): The influence of
genetic ancestry data on clinician's
treatment choice for white and mixed
race patients with hypertension
Conference: SRC 2020

Samuel Mayfield, Environmental
Economics and Policy
Mentor: Richard Carson, PhD
Project (2020): Implications of
Temporal Misalignment of Reported
COVID-19 Statistics for Forecasting
the Pandemic's Progression
Conference: SRC 2020

STARS Students (cont.)

Zahra Mesrizadeh, Bioengineering
Mentor: Liangfang Zhang, PhD
Project (2020): Engineered cell membrane-coated nanoparticles functionalized with MECA-79 to target high endothelial venules for enhanced T cell activation
Conference: SRC 2020

Ali Nekouei, Chemical Engineering
Mentors: Ted Wang; Thomas Bussey, PhD
Project (2020): BioChemAR in the Classroom
Conference: SRC 2020

Derek Nguyen
Mentor: Timothy Gentner, PhD
Project (2019): Development towards an integrated Commutator with a Variable Radius Pulley for Electrophysiology Recordings in Small Animals
Conference: SRC 2019

Kha Nguyen
Mentor: Joanna McKittrick, PhD
Project (2019): 180-Degree Digital Image Correlation Setup for Materials' Torsion Test
Conference: SRC 2019

Syreeta Nolan, Psychology (Health)
Mentor: Attilio Iemolo, PhD
Project (2019): Δ FosB as a marker of long-lasting changes in animal models of THC abuse
Conference: SRC 2019

Salma Michelle Parra Pulgarin, Public Health
Mentor: Hemal H. Patel, PhD
Project (2020): Caveolin-3 Modulation of Heart Function in Type 2 Diabetes
Conference: SRC 2020

Xavier Perez, Electrical Engineering
Mentor: Vikash Gilja, PhD
Project (2020): Low-Cost Home-Made Recording Chambers for Zebra Finch Birds
Conference: SRC 2019 (Vocalization of Birds Translated to Human Speech); SRC 2020 (STARS Project)

STARS Students (cont.)

Christina Puzzanghera, Marine Biology
Mentors: Dimitri Deheyn, PhD; Diana Rennison, PhD
Projects: (2019) Self-stimulating Bioluminescence? (2020)
Determining the role of predation in the evolution of sexual dimorphism in threespine stickleback
Conference: SRC 2019, SRC 2020

Daniella Vo, Biology (Bioinformatics)
Mentor: Debashis Sahoo, PhD
Project (2019): Discovery of Logical Relationships between Microbes using Boolean Analysis
Conference: SRC 2019

UC LEADS Scholars

Jojo Chen, Cognitive Behavioral Neuroscience
Mentor: Chengbiao Wu, PhD
Project (2020): Mechanisms of Cortical-Striatal Atrophy in Huntington Disease

Sylas Eckhart, Environmental Systems (Ecol, Behav & Evol)
Mentor: Amy Non, PhD
Project (2020): Hair Cortisol Concentrations as a Measurement of Chronic Stress
Conference: SRC 2020

Janelle Coleen Dela Cueva, Electrical Engineering
Mentor: Veronica Eliasson, PhD
Projects: (2019) Shear Dominated Crack Propagation; (2020) Blast interaction with structures
Conference: SRC 2019
Other Presentation: UC LEADS 2020 Symposium
Publication: Publication: Dela Cueva, J.C.A., Zheng, L., Lawlor, B., *et al.* (2020). Blast wave interaction with structures: an application of exploding wire experiments. *Multiscale and Multidisciplinary Modeling. Experiments and Design*. DOI: 10.1007/s41939-020-00076-0 ([View Article Here](#))

Youth Enjoy Science: Multidisciplinary Educational Approach to Reducing Cancer

Multidisciplinary Educational Approaches to Reducing Cancer was a National Cancer Institute-funded program through their Youth Enjoy Science initiative. This 2019-2020 program accepted 29 students and was run by Dr. Dr. Silvio Gutkind and Dr. Georgia Robins Sadler. Through classroom and laboratory activities, students learned about cancer, the development and exacerbation of cancer disparities associated with bio-behavioral factors, and possible resolutions to these disparities. Students also gained experience in conducting in-depth analysis of scientific literature and preparing an abstract and poster for national Conference.

24 UC San Diego Students participated in the Youth Enjoy Science Program

YES Students

Richard Burnett, Microbiology
Mentor: Georgia Robins Sadler, PhD
Project: Genetic Testing Disparities
and Cancer Disparities
Conference: SRC 2020

Paola Cancino, Psychology
Mentor: Georgia Robins Sadler, PhD
Project: Improving Cancer Care with
Better Diagnostic for Autism
Spectrum Disorder
Conference: SRC 2020

Anthony Cirilo, Microbiology
Mentors: Georgia Robins Sadler, PhD;
Suzi Hong, PhD
Project: Infantile Radioactive
Diagnostic Testing as a Possible
Indicator
Conference: SRC 2020

Andres Espinoza, Human Biology
Mentor: Georgia Robins Sadler, PhD
Project: Epigenetic abnormalities and
their contribution to cancer outcomes
among African Americans
Conference: SRC 2020

Esau Estrada, Cognitive Science
(Neuroscience)
Mentor: Miguel Lopez-Ramirez, PhD
Project: Importance for using
Kazakhs in Esophageal Squamous
Cell Carcinoma

Eduardo Gonzalez, Public Health
Mentors: Pei-an (Betty) Shih, PhD;
Georgia Robins Sadler, PhD; José
Suárez MD, PhD
Project: Pesticide exposure: A risk
factor for childhood leukemia among
Hispanic Americans
Conference: SRC 2020

Dalia Koujah, Physiology and
Neuroscience
Mentors: Maximiliano D'Angelo, PhD;
Georgia Robins Sadler, PhD
Project: Exploring the Age-Related
Role of NUP210 in ER+ Breast Cancer
Conference: SRC 2020

Juan Andrew Leal, Human Biology
Mentor: Georgia Robins Sadler, PhD
Project: Childhood Cancer
Survivorship and Health Outcomes
Among Minority Populations
Conference: SRC 2020

YES Students (cont.)

Nicole Lee, Biology

Mentors: Georgia Robins Sadler, PhD;
Olivier Harismendy, PhD

Project: Ductal Carcinoma in Situ (DCIS): An overlooked risk factor for invasive breast cancer (BC) in African American Women (AAW)
Conference: SRC 2020

Joseph Morales

Mentors: Ithaar Derweesh, MD;
Georgia Robins Sadler, PhD; Paula Aristizabal, MD
Project: Renal Cell Carcinoma: Factors Correlated with Lower Survival Rates Among Hispanic Americans; Sociodemographic and Contextual Factors Associated with Trust in Physicians among Hispanic Caregivers of Children with Newly-Diagnosed Cancer
Conferences: International Cancer Education Conference Poster Presentation 2019, SRC 2020

Andrea Padilla, Biology

Mentors: Georgia Robins Sadler, PhD;
Veronica Cardenas, PhD

Project : Additional Barriers to End-of-Life Care among Hispanics with Advanced Cancer: Negative Connotations and Financial Limitations
Conference: SRC 2020

Ryan Park, Microbiology

Mentor: Jing Yang, PhD
Project: Tumor Micro-environment effects on Breast Cancer Development
Conference: SRC 2020

Hao Pham, Biochemistry/Chemistry

Mentors: Georgia Robins Sadler, PhD;
Christina Jamison, PhD
Project: Promising Strategies to improve Prostate Cancer death rate among Native Americans and Alaska Natives
Conferences: International Cancer Education Conference 2019, SRC 2020

YES Students (cont.)

Naomi Pineda, Chemistry

Mentor: Georgia Robins Sadler, PhD

Project: Genetics may put Hispanic Americans at Higher Risk of Liver Cancer and Science may not be Able to Help due to Lack of Participation
Conference: SRC 2020

Jocelyn Quiroz, Bioengineering

Mentor: Georgia Robins Sadler, PhD

Project: Cancer risk among victims of human trafficking
Conference: SRC 2020

Mariah Romero, Sociology

Mentor: Georgia Robins Sadler, PhD

Project: Cervical Cancer Screening, Practices, and Barriers among the LGBTQ+ Community: A Literature Review
Conference: SRC 2020

Sally Trinh, Biochemistry and Cell Biology

Mentor: Georgia Robins Sadler, PhD

Project: HPV oral cancer contributions and what we can do about it
Conference: SRC 2020

Rowan Ustoy, Biology

Mentors: Georgia Robins Sadler, PhD; Jason Sicklick, MD

Project: The underrepresentation of HIV+ participants in cancer clinical trials and the barriers faced involving cancer treatment
Conference: SRC 2020

Yilin Xu, Biochemistry/Chemistry

Mentors: Georgia Robins Sadler, PhD;

Angelique Richardson, MD, PhD

Project: The survival disparities and BRCA mutations in breast cancer among women of African Ancestry
Conference: SRC 2020

Ethan Yi Zhu, Biochemistry and Cell Biology

Mentors: Maximiliano D'Angelo, PhD;

Georgia Robins Sadler, PhD

Project: Help Us Help You: How Racially and Ethnically Diverse Biobank Contributions Enable Stronger Basic Biology Research
Conference: SRC 2020

Additional Undergraduate Research Experiences (AURE)

In addition to the undergraduate research programs at UC San Diego listed above, at least **222** students participated in research through external programs and other internal opportunities such as honors projects, independent study, and as a volunteer.

Neda AbuGharbiyeh, Human Biology
Mentor: Anjan Debnath, PhD
Project: Search for Potential Drug Leads Against Giardia lamblia using a High-throughput Screening Assay

Jocelyn Aguilar, Psychology (Human Health)
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Azeez Aderounmu, Structural Engineering
Mentor: Veronica Eliasson, PhD
Project: Dynamic Fracture of Carbon Fiber Laminates
Conference: SRC 2019

Jina Ahn, Psychology (Development)
MESA (Modeling the Emergence of Shared Attention) Program
Psychology Honors Program
Mentors: Gedeon Deák, PhD; Betina Karshaleva
Project: The Relationship Between Infants' Responsiveness and Maternal Speech
Conference: Biennial International Conference on Infancy Studies 2020

AURE Students (cont.)

Sifat Alam, Global Health
Mentor: Paula Saravia, PhD
Project: Global health impact of natural disasters

Fahad Alim, Psychology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Manar Alkuzweny, Public Health
Mentor: Sanjay Mehta, MD
Project: Preparing for a COVID-19 surge
Conference: OURS 2020 ([View Presentation Here](#))
Publications: (1) Alkuzweny, M., Raj, A., & Mehta, S. R. Preparing for a COVID-19 surge. EClinicalMedicine. Letter. June 4, 2020. ([Read Letter Here](#)); (2) Alkuzweny, M., Raj, A., & Mehta, S. R. Preparing for a COVID-19 Surge: ICUs. Letter. August 18, 2020. ([Read Letter Here](#))

Salam Allahwerdy, Human Biology
Mentor: Jiun Do, MD, PhD
Project: Effects of Neural Stem Cells on Retinal Ganglion Cell Survival and Axonal Regeneration
Conference: OURS 2020 ([View Presentation Here](#))

Ubaldo Alvarenga, Psychology (Clinical)
Mentor: Leslie Carver, PhD

Ashley Amaladhas, Global Health/ Psychology (Health)
Mentor: Ellen Kozelka
Project: Birds and Bees: The Effects of Comprehensive Sexual Health Education on Adolescents
Conference: OURS 2020 ([View Presentation Here](#))
Award: Undergraduate Library Research Prize, 2nd place

Riddhi Ananth, Chemistry
Mentor: Michael J. Sailor, PhD
Project: Facile, bench-top stabilization of porous silicon nanostructures using heterocyclic silane grafting chemistry
Conference: SRC 2019

Victoria Araiza, Global Health
Mentor: Bonnie Kaiser, PhD
Project: Barriers to Accessing Reproductive Health Care Services for Indigenous Women in the United States: A Call for Research and Action

AURE Students (cont.)

Mina Balen, Human Biology
Mentor: Anjan Debnath, PhD
Project: Drug discovery for
Acanthamoeba keratitis

Lawrence Balitaan, Oceanic and
Atmospheric Sciences
*California Current Ecosystem Long
Term Ecological Research, Research
Experience for Undergraduates
(CCE LTER REU)*
Mentors: Art Miller, PhD; Nathali
Cordero Quiros, MS
Project: ENSO Physical-Biological
Composites in ROMS-NEMURO
Simulations of the California Current

Veronica Barajas, Human
Developmental Sciences/Psychology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental
Health

Fernando Beltran Jr., Physiology and
Neuroscience/Cogn and Behavioral
Neuroscience
Mentor: Sam Pfaff, PhD
Project: Investigating the Role of
Spinal Circuits in Motor Control
Conference: SRC 2019

Audrey Berardi, Cogn and Behavioral
Neuroscience
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental
Health

Pushpita Bhattacharyya, Cognitive
Science (Neuroscience)
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental
Health

Anna Blanchard, Marine Biology
Mentor: Martin Tresguerres, PhD
Projects: (1) An Exploration of the
Intracellular Biomineralization Model
in the Pacific Oyster (*Crassostrea
gigas*) (2) The Involvement of SLC
Genes in Sodium Transport in
Zebrafish (*D. rerio*) Under Acidic
Conditions

Ana Boisvert, Cognitive Science
Mentor: Sara Browne, MD
Project: A Rapid Review of
Methamphetamine Use Disorder
Treatment and Adherence to
Antiretroviral Medication in HIV+
Population
Conference: SRC 2020

AURE Students (cont.)

Thomas Brailey, Political Science
(Data Analytics)
Mentor: Inbok Rhee, PhD
Project: Targeting the Core or Swing?:
Campaign Strategy during the 2017
Kenyan Presidential Election
Conference: SRC 2019

Brandon Bulger, Psychology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental
Health

Anne Cardenas, NanoEngineering
[Read Student Spotlight Here](#)
Mentor: Darren Lipomi, PhD
Project: Combining High Sensitivity
and Dynamic Range: Wearable Thin-
Film Composite Strain Sensors of
Graphene, Ultrathin Palladium, and
PEDOT:PSS
Award: 2020 NSF Graduate Research
Fellowship Winner

Parker Carnahan, Bioengineering
Mentor: Ratnesh Lal, PhD
Project: Magnetic Nanoparticles for
Diagnostics and Therapeutics

Hamish Carr Delgado,
NanoEngineering
Mentor: Darren Lipomi, PhD
Project: Exploring the limit of human
tactile perception
Conference: OURS 2020 ([View
Presentation Here](#))

Erica Chan, Public Health
*UCSD/SDSU Partnership Scholars
Program*
Mentor: Kiyomi Tsuyuki, PhD
Project: Feminine Gender Norms and
Syndemic Harmful Drinking, Sexual
Violence, and STIs Among Black
Women at Risk for HIV
Awards: Irwin Jacobs Award in Public
Health Research from the Department
of Family Medicine and Public Health
(June 2019), Independent Study in
Public Health Research Award (May
2020)

Annie Chen
*Endocrine Society Summer Research
Fellowship (2020)*
Mentor: Varykina Thackray, PhD
Project: Optimizing
dihydrotestosterone polycystic ovary
mouse model, effect of increased fiber
intake on PCOS metabolic and
reproductive phenotypes

AURE Students (cont.)

Emerson Chin, NanoEngineering
Mentor: Mickey Finn

Jeffrey Chiu, Microbiology
Mentor: Justin Shaffer, PhD
Project: Metagenome-assembled genomic insights into the gut microbiomes of animals

Yong Hoon Chung, Cogn and Behavioral Neuroscience
Mentor: John Serences, PhD
Project: Hidden Memory State
Pinging: Sensory Driven or Feedback Driven?
Conference: SRC 2019

Jane Collier, Cognitive Science
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Maxine Covello, Psychology (Clinical)
Mentor: Adena Schachner, PhD
Project: Hearing water temperature: Characterizing the development of cross-modal auditory event perception
Conference: OURS 2020 ([View Presentation Here](#))

Kenny Dao
Mentor: Willis Li, PhD
Project: Screen for heterochromatin-promoting drugs for cancer therapy
Publication: Zhang, L, Dao, K., Kang, A., *et al.* (2020). A screening method for identification of heterochromatin-promoting drugs using drosophila. *J Vis Exp*. DOI: 10.3791/60917
([View Article Here](#))

Abdul Dahman, Public Health
Mentor: Bonnie Kaiser, PhD
Project: Stigma of Former Offenders

Sydney Davey, Business Psychology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Lourdes de Jesus, Psychology (Clinical)
Mentor: Angela Lowe
Project: Facial Feedback Hypothesis and Its Effect on Emotional Response
Conference: OURS 2020 ([View Presentation Here](#))

AURE Students (cont.)

Diana De La Toba, Human Biology
Mentor: Karl Wahlin, PhD
Project: Photoreceptor trans-differentiation by CRISPR-Cas9 as a tool for endogenous regeneration
Conference: OURS 2020 ([View Presentation Here](#))

Caroline de-Ocampo, Global Health
Project: Mental Health Conditions Associated with Natural Disasters

Emma Deters, Biochemistry/
Chemistry
Regents Scholars Research Initiative
Mentor: Alexis Komor, PhD
Project: Molecular Dynamic Simulation of TRM10

Paola Diaz, Theatre
Mentor: Robert Castro, MFA
Project: How to Be Uncomfortable All the Time
Conference: SRC 2019

Juan Diaz Delgado, Cognitive Science (Machine Learning and Neural Computation); Mathematics and Econ
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Nguyen Do, Human Biology
Mentor: Louise Laurent, MD, PhD
Project: Trophoblast Stem Cell Gene Reprogramming

Kelly Dong, Physiology and Neuroscience
Mentor: Christopher Coyne, MD
Project: Improving Cancer Pain Management in the ED: An EMR Solution
Conference: OURS 2020 ([View Presentation Here](#))

Eric Duong, Bioengineering (Bioinformatics)
Mentor: Alexander Wenzel (Mesirov Lab)
Project: Evaluation of ssGSEA for sc-RNA Sequencing

Skye Edwards, Bioengineering (BioSystems)
Mentor: Joanna McKittrick, PhD
Project: Hierarchical Architecture in Jamming Technology for Soft Robotics
Conference: SRC 2019

AURE Students (cont.)

Shin Ehara, Data Science
Mentor: Michael Davidson, PhD
Project: Political economy of China's electricity market

Gabriel Espiritu, Psychology (Clinical)
Mentor: Amy Lansing, PhD
Project: Predictors of aggression among early-onset, persistent delinquent youth: Demographic considerations related to emotional intelligence, shame and guilt
Conference: SRC 2019

Kenny Ferman, Cogn and Behavioral Neuroscience
Mentor: Andrew Marin, MA

Filemoni Filemoni, Mathematics (Applied Science)
Emerging Technologies Continuing Umbrella of Research (ET CURE)
Mentor: Michael Bouvet, MD
Project: Near Infrared Photoimmunotherapy Promotes Colon Cancer Cell Death in Vitro
Conference: SRC 2019

Juliana Foley, Chemical Engineering
Mentor: Darren Lipomi, PhD
Project: Stretchable PEDOT:PSS

Samantha Fong, Mechanical Engineering
Mentor: Joanna McKittrick, PhD
Project: Project Lim(b)itless
Conference: SRC 2019

Emily Frink, Human Biology
Mentor: Edward Castillo, PhD
Project: Influenza Reporting in the UCSD Health System
Conference: OURS 2020 ([View Presentation Here](#))

Simone Froley, Human Developmental Sciences
Decision Making By Dyads
Human Development Science Honors Program
Mentor: Gedeon Deák, PhD
Project: Learning in the social multi-armed bandit task: An exploration of joint action and reward-seeking behavior

AURE Students (cont.)

Francis Galang, Interdisc Computing and the Arts/Sociology

Mentor: Juan Pablo Pardo-Guerra, PhD

Project: "I know I'll make it someday."

Aspiration and institutional logic within the digital music industries

Conference: OURS 2020 ([View Presentation Here](#))

Luis Garcia

Mentor: Joanna McKittrick, PhD

Project: Hierarchical Architecture in Jamming Technology for Soft Robotics

Conference: SRC 2019

Hobie Gementera, Biochemistry and Cell Biology

Mentor: Soumita Das, PhD

Nebiyu Getahun, Physiology and Neuroscience

Mentor: Christian Dameff, MD

Project: Exploring Opinions Around Cybersecurity Informed Consent

Conference: OURS 2020 ([View Presentation Here](#))

Amor Goetz, Biochemistry and Cell Biology

Mentor: Gary Vilke, MD

Project: Impact of Cardiology Studies on ED Length of Stay and Disposition

Conference: OURS 2020 ([View Presentation Here](#))

Jennifer Gonzalez

San Diego Nanotechnology Infrastructure

Mentor: Daniela Valdez-Jasso, PhD

Project: Silicone Casting of Vasculature in Pulmonary Arterial Hypertension-Affected Rats

Conference: SRC 2019

Gillian Grennan, Cogn and Behavioral Neuroscience

Mentor: Jyoti Mishra, PhD

Project: Brain Body Basis of Mental Health

Xingyi (Stella) Gu, Economics

Mentor: Julie Cullen, PhD

Project: Empirical tests of conditional asset pricing models

Conference: OURS 2020 ([View Presentation Here](#))

AURE Students (cont.)

Ryan Hajj, Cogn and Behavioral Neuroscience

Mentors: Robert Rissman, PhD; Shawn Firouzian, MS

Project: Drug Detection using Machine Learning

Conferences: SRC 2019, OURS 2020
([View Presentation Here](#))

Shervin Harirchian, Human Biology

Mentors: Joseph Valentine; Shannon Reilly, PhD

Erin Harryman, Molecular Biology

Mentor: Mary Corr, MD

Project: The roles of interferon regulatory factors in tactile allodynia in autoimmune arthritis

Conference: SRC 2019

Daniel Heredia, NanoEngineering
San Diego Nanotechnology Infrastructure

Mentor: Ping Liu, PhD

Project: Nb2O5 as High Performance Anode Materials for LIBs

Conference: SRC 2019

Jean Hong, Cognitive Science
(Language and Culture)

Mentor: Sarah Creel, PhD

Project: Approximant production in 3 to 5 year old clear speech: Do categories converge or diverge?

Conferences: Scarborough

Undergraduate Linguistics Conference 2020, UC San Diego Biomedical Engineering Society Lab Expo 2020

Bindhu Hosuru, Molecular and Cell Biology

Mentor: Matthew Daugherty, PhD

Project: An Evolutionary Perspective on Flaviviruses Proteases and their Host Targets

Guanwei Hu, Int'l Studies (Int'l Bus)

Mentor: Michael Davidson, PhD

Project: Chinese Electricity Markets: Political determinants of electricity market efficiency

Jennifer Huang, Human Biology
Biological Sciences Honors Program

Mentor: John Ravits, MD, PhD

Project: Sigma-1 Receptors in the Human Brainstem

Publication: Abstract in 2019-2020 Saltman Quarterly, Page 43 ([View Abstract Here](#))

AURE Students (cont.)

Troy Hussain, Physics (Biophysics)
Mentor: Tyler Seibert, MD, PhD
Project: Time course of dose-dependent hippocampal atrophy after radiation therapy
Conference: Biomedical Engineering Society (BMES) Annual Meeting 2019

Brendan Hwang, Psychology
Mentor: Caren Walker, PhD
Project: Knowing When to Quit
Conference: OURS 2020 ([View Presentation Here](#))

Lizbeth Ibarra, Sociology (Social Inequality)
Mentor: Frances Contreras, PhD
Project: Food and Housing Insecurity: Assessing Basic Need Efforts and Understanding the Experiences of Underrepresented Undergraduate Students at UCSD
Conference: SRC 2019

Alvin Igna, Mechanical Engineering
Mentor: Veronica Eliasson, PhD
Project: High-Velocity Fracture Mechanics of PMMA
Conference: SRC 2019

Michael Jaber, Mathematics (Computer Science)
Mentor: Russell Impagliazzo, PhD
Project: The fine-grained complexity of mult-dimensional ordering properties

Christyn Jackson, Linguistics (Speech and Language Science)
Mentor: Alison Wishard Guerra, PhD
Project: Child-Parent Narratives and Parent Discipline Styles
Conference: OURS 2020 ([View Presentation Here](#))

John Jun, Computer Science (Bioinformatics)
Mentor: Pablo Tamayo, PhD
Project: WNT signaling driven by R-spondin 1 and LGR6 in high grade serous ovarian cancer (HGSOC)
Conference: OURS 2020 ([View Presentation Here](#))

AURE Students (cont.)

Angela Kang, Human Biology

Mentor: Willis Li, PhD

Project: Screen for heterochromatin-promoting drugs for cancer therapy

Publication: Zhang, L, Dao, K., Kang, A., *et al.* (2020). A screening method for

identification of heterochromatin-promoting drugs using drosophila. *J*

Vis Exp. DOI: 10.3791/60917

([View Article Here](#))

Firouzeh Khoobchehr, Microbiology

Biological Sciences Honors Program

Mentor: Partha Ray, PhD

Project: Characterization of an anti-KIT aptamer

Audrey Kim

Mentor: Bonne Kaiser, PhD

Project: A Medical Anthropological Perspective on the Impact of Ebola on Maternal Health

Mahoko Kimura, Ed Abord Exch Prog

Project: Salmon industry development and associated economic impacts in Northern Patagonia, Chile

Matthew Klimper, Cogn and

Behavioral Neuroscience

Mentor: Jyoti Mishra, PhD

Project: Brain Body Basis of Mental Health

Caitlin Knight, Psychology (Cognitive)

Mentor: Teresa Lind, PhD

Project: Emergent Life Events in Community Mental Health Settings: Relationship with Therapist Use of Evidence-based Practice Techniques
Conference: OURS 2020 ([View Presentation Here](#))

Vashti Knight, General Biology

National Institute of Health Initiative for Maximizing Student Development

Mentor: Mark Lawson, PhD

Project: GLUT1 and its Role in Gonadotrope Function
Conference: SRC 2019

Aditi Krishnakumar, Cognitive Science (Machine Learning and Neural Computation)

Mentor: Jyoti Mishra, PhD

Project: Brain Body Basis of Mental Health

AURE Students (cont.)

Atharv Kulkarni, Physiology and Neuroscience
Mentor: Jyoti Mishra, PhD
Projec: Brain Body Basis of Mental Health

Shubham Kumar, Electrical Engineering
Mentors: Truong Nguyen, PhD; Sarah Graham, PhD
Projects: (1) Fall risk assessment of the elderly based on video and other physiological features (2) Depth estimation analysis for a novel camera system

Surya Kumaraguru, Cognitive Science
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Daniel Kupor, Chemical Engineering
Mentor: Joanna McKittrick, PhD
Project: Creating density-controlled wood-templated epoxy-silicon carbide composites for structural and impact resistant applications
Conference: SRC 2019

Leilani Kwe, NanoEngineering
San Diego Nanotechnology Infrastructure
Mentor: Shaochen Chen, PhD
Project: 3D Printing of Multi-Material Construction
Conference: SRC 2019

John Lauder, Physiology and Neuroscience
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Cassidy Lee, Biochemistry and Cell Biology
Mentor: Derek Welsbie, MD, PhD
Project: CRISPR Knockout of DLK/LZK as a Therapeutic Strategy to Improve RGC Survival
Conference: OURS 2020 ([View Presentation Here](#))

Doheon Lee, Mechanical Engineering
Mentor: Joanna McKittrick, PhD
Project: Characterizing the Torsional Properties of the Helical Macro-Porosity Structure of the Cholla Cacti
Conference: SRC 2019

AURE Students (cont.)

Alexandre Leonelli, Physics

Mentor: Alexey Arefiev, PhD

Project: The effect of particles exiting the simulation domain in Particle In Cell (PIC) codes

Zhuoying Lin, Chemistry

Mentor: Corrigan Craig

Project: Optimize Caffeine Extraction from Black Tea and Coffee
Conference: OURS 2020

Lehan Li, General Biology

Mentors: Brodie Ranzau, MS; (PI)

Alexis Komor, PhD

Project: Evolution of an EdU-recognizing nuclease

Weichong Ling, Mathematics (Computer Science)

Mentor: Amarnath Gupta, PhD

Project: The Exploratory Analysis for Knowledge Graph Using Graph Entropy

Conference: OURS 2020 ([View Presentation Here](#))

Zhixiong Li, Bioengineering

Mentor: Joanna McKittrick, PhD

Project: Bioinspired Ceramic Monoliths from Freeze-Casting for Filtration Applications
Conference: SRC 2019

Qing Liu

Mentor: Jeffrey Esko, PhD

Project: Genome-wide Analysis of Heparan Sulfate Biosynthesis

Kenny Lin, Bioengineering

Mentor: Jeff Omens, PhD

Project: Computing Vector Cardiograms from Patient data

Yuxin Liu

Mentors: Angela Lowe; Michael McCullough, PhD; Celeste Pilegard, PhD

Projects: (1) Effects of different note taking strategies on learning (2) How Empathic Concern and Social Evaluation affect Altruistic Behavior (3) Facial Feedback Hypothesis and Its Effect on Emotional Response
Conference: OURS 2020 (View Presentation Here [\(1\)](#), [\(2\)](#), [\(3\)](#))

Yingxi Lin, General Biology/Computer Science (Bioinformatics)

Mentor: Lukas Chavez Kuss, PhD (Mesirov and Chavez Labs)

Project: Role of p53 in Senescence

AURE Students (cont.)

Myriam Lopez, Mechanical Engineering
Mentor: Luz Chung, PhD
Project: Understanding the Needs of Underrepresented Minority Engineering Students in Developing Resources that Target Systematic and Cultural Disadvantages
Conference: OURS 2020 ([View Presentation Here](#))

Mariela Lopez-Valencia, Cogn and Behavioral Neuroscience
Mentor: Olivia Osborn, PhD
Project: Models of antipsychotic-induced food intake and weight gain in mice
Conference: The Annual Biomedical Research Conference for Minority Students (ABRCMS) 2019
Publication: Wei, H., Zapata, R. C., Lopez-Valencia, M., *et al.* (2020). Dopamine D2 receptor signaling modulates pancreatic beta cell circadian rhythms, *Psychoneuroendocrinology*, 113, 104551. DOI: 10.1016/j.psyneuen.2019.104551 ([View Article Here](#))

Xiang Lu, Mathematics (Applied)
Mentor: Won Bae, PhD
Project: Deep learning in Medical Image Registration
Conference: OURS 2020 ([View Presentation Here](#))

Rachel Luu, Mechanical Engineering
Mentor: Marc Meyers, PhD
Project: Bioinspired Horse Hoof Model
Conference: SRC 2020

Julia Madura, Psychology (Clinical)
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Hannah Mahan, Cogn and Behavioral Neuroscience/Business Psychology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Angela Mak, General Biology
Mentor: Adena Schachner, PhD
Project: Gesture Production & Theory of Mind
Conference: OURS 2020 ([View Presentation Here](#))

AURE Students (cont.)

Marigold Malinao, Chemical Engineering
Mentor: Darren Lipomi, PhD
Project: Liquid Crystal Elastomers for Haptic Feedback

Sophia McDaniel, Biochemistry and Cell Biology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Sabeel Mansuri, Computer Science (Bioinformatics)
Mentor: Niema Moshiri, PhD
Project: What to do after AP CS? A case study on short technical modules for post-AP-exam high school students

Lidia Mendoza, Psychology (Clinical)
Mentor: Adena Schachner, PhD
Project: Gesture production and theory of mind
Conference: OURS 2020 ([View Presentation Here](#))

Garrett Martin, Sociology (Law and Society)
Mentor: Jeff Haydu, PhD
Project: Mortality Salient Activism
Conference: OURS 2020 ([View Presentation Here](#))
Award: Undergraduate Library Research Prize, 1st Place

Sarah Meng, Computer Science
Department of Biomedical Informatics (DBMI) Summer Internship Program
Mentor: Niema Moshiri, PhD
Project (2020): An end-to-end profiling of standard viral phylogenetics workflows
Conference: 2020 DBMI Internship Symposium

Joseph Martin
Mentor: Joanna McKittrick, PhD
Project: Project Lim(b)itless
Conference: SRC 2019

Yinuo Meng, Biochemistry and Cell Biology
Mentor: Francesca Telese, PhD
Project: The Function of CASK in Regulation of Transcription in Neurons
Conference: SRC 2019

Nicole Martindale, Computer Science
Mentor: Robin Knight, PhD
Project: Simulating and Classifying DNA sequences with ML

AURE Students (cont.)

Huilai Miao, Data Science/Economics
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Charlene Miciano, Biology
(Bioinformatics)
Mentor: Shi Huang
Project: ANEMONE: A Powerful Web Tool for Exploring Gene Regulatory Information
Conference: OURS 2020 ([View Presentation Here](#))

Priyanka Mishra, Mathematics
(Computer Science)
Mentors: Shi Huang; Daniel McDonald, PhD (Knight Lab)
Project: Microbiome-based prediction of dietary intakes using machine learning techniques

Morgan Montoya, Cogn and Behavioral Neuroscience
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Marisa Moran Cepeda, NanoEngineering
Mentor: Darren Lipomi, PhD

Xelestíal Moreno-Luz, Visual Arts (Media)

[Read Student Spotlight Here](#)

Mentor: Rubén Ortiz-Torres, MFA
Project: LGBTQIA+ Latin American Communities
Conference: CRASSH Fall 2019

Felipe Morfin Martinez, Communication
Cultural Incubator Program
Mentor: Briana Weisinger, MA
Project: Refugee's Co-working Space
Conference: SRC 2019

Oscar Munoz, Physiology and Neuroscience
National Institute of Health Initiative for Maximizing Student Development
Mentor: Mark Lawson, PhD
Project: Translational Control of RNA Binding Proteins and its Effects on LH Synthesis, mRNA Stability, Translation, and Reproductive Function in Gonadotropes
Conference: SRC 2019

Mohamed Musa, Structural Engineering
Mentor: Nicolas Boechler, PhD
Project: Mechanochem/Instability Track

AURE Students (cont.)

Eric Ngo, Mathematics (Computer Science)

McKittrick Group

Mentor: Isaac Cabrera

Project: Project Lim(b)itless

Conference: SRC 2019

Titan Ngo, Computer Science

Mentor: Niema Moshiri, PhD

Project: Sepia (Simulation-Based Evaluation of Prioritization Algorithms)

Conference: HIV Dynamics & Evolution Conference ([View Poster Here](#))

Andrew Nguyen

Mentor: José Suárez, MD, PhD

Project: Associations of Acetylcholinesterase Inhibition Between Pesticide Spray Seasons with Depression and Anxiety Symptoms in Adolescents, and the Role of Sex and Adrenal Hormones on Gender Moderation

Publication: Suarez-Lopez, J.R., Nguyen, A., Klas, J. *et al. Exposure and Health* (2020). DOI: 10.1007/s12403-020-00361-w ([View Abstract/Request Article Here](#))

Anphong Nguyen, Cogn and Behavioral Neuroscience

Mentor: Jyoti Mishra, PhD

Project: Brain Body Basis of Mental Health

Christopher Nguyen

Mentor: Mary Corr, MD

Project: Cell specific type I interferon receptor signaling is critical for arthritis in mice

Conference: OURS 2020 ([View Presentation Here](#))

Katelyn Nguyen, Microbiology

Mentor: Matthew Daugherty, PhD

Project: Inflammatory Activity of NLRP Proteins in Response to Viral Infection

Kevin Nguyen

Mentor: Veronica Eliasson, PhD

Project: Shock Wave Propagation
Conference: SRC 2019

AURE Students (cont.)

Rebecca Nguyen, Int'l Studies
(Political Science)
Mentor: Munseob Lee, PhD
Project: Medical Tourism in South Korea
Conference: OURS 2020 ([View Presentation Here](#))

Sophie Nguyen, Biochemistry/
Chemistry
Mentor: Ruben Abagyan, PhD

Thi Nguyen
Mentor: Kevin Lewis, PhD
Project: Come Together, Right Now
(Over Tinder): How Online Mediums
Change the Dating Process
Conference: OURS 2020 ([View Presentation Here](#))

Camille Nieves, Cognitive Science
(Neuroscience)
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Shruti Nishith, Cogn and Behavioral
Neuroscience
Mentor: Adena Schachner, PhD
Project: Digital Media Parent
Questionnaire
Conference: OURS 2020

Ella Olgin, Cogn and Behavioral
Neuroscience
Mentor: Javier Cepeda, PhD
Project: Preferences and Acceptability
of Law Enforcement Initiated
Referrals for People who Inject Drugs:
A Mixed Methods Analysis

Lalin Ozyazgan, Ethnic Studies/
Psychology (Clinical)
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental
Health
Conference: Lewis L. Judd Young
Investigators Symposium 2020

Shibangi Pal, Biochemistry and Cell
Biology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental
Health

Yunchun Pan, Mathematics (Applied)
*California Current Ecosystem Long
Term Ecological Research, Research
Experience for Undergraduates
(CCE LTER REU)*
Mentors: Art Miller, PhD; Nathali
Cordero Quiros, MS
Project: ENSO Physical-Biological
Composites in ROMS-NEMURO
Simulations of the California Current

AURE Students (cont.)

Prasad Pankhuri, Economics/ Int'l Studies (Political Science)
Culture Incubator Program
Mentor: Briana Weisinger, MA
Project: Culture Incubator - Project Future Force
Conference: SRC 2019

Maria Paula Parga Nina, Computer Science
Mentor: Russell Impagliazzo, PhD
Project: The Fine-Grained Complexity of Multi-Dimensional Ordering Properties

Allison Park, Linguistics
Mentor: Will Styler, PhD
Project: The Linguistic Nature of Keysmashes
Conference: OURS 2020 ([View Presentation Here](#))

Janki Patel, Human Biology
Biological Sciences Honors Program
Mentor: Matthew Banghart, PhD
Project: Molecular identification of neurons in the descending pain modulatory pathway that may contribute to opioid analgesia

Krusha Patel, Human Biology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Swapnil Patil, Computer Science
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Kathryn Pérez, General Biology
Mentor: Gail Heyman, PhD
Project: Do Adolescents Misperceive Effort as Poor Learning?
Conference: OURS 2020 ([View Presentation Here](#))

Patricio Perez-Dickson, Chemistry
Mentor: Willis Li, PhD
Project: MicroRNAs as Cancer Biomarker

Minh Pham, Electrical Engineering
Mentor: Nikolay Atanasov, PhD
Project: Autonomous Quadrotor Robots
Conference: SRC 2020

AURE Students (cont.)

Sheila Pham

Mentor: Jack Silberman, PhD

Project: The Affordable
SmartWheelchair

Conference: SRC 2019

Flavia Ponce, Psychology (Clinical)

Mentor: Jyoti Mishra, PhD

Project: Brain Body Basis of Mental
Health

Kaitlyn Quach, Human Biology

Mentor: Mahadevan Rajasekaran, PhD

Project: The Human Microbiome and
the Urinary Tract

Conference: OURS 2020 ([View
Presentation Here](#))

Yvonne Rangel, Biochemistry and Cell Biology

Project: Analyzing heavy metal
content of plant tissues

Vesal Razavimaleki, Engineering Physics

*IRIS-HEP Fellows Program (Jul-Sept
2020)* ([View IRIS-HEP Bio and
Proposal Here](#))

Mentor: Javier Duarte, PhD

Project: Adapting GNN Particle
Tracking for FPGAs with hls4ml

Linda Reyna, Cogn and Behavioral Neuroscience

Mentor: Hassiba Beldjoud, PhD
(George Lab)

Project: The effect of the beta-
adrenergic antagonist propranolol on
saccharin self-administration and
motivation

Conference: SRC 2019

Nathanael Rizo, Psychology (Clinical)

Mentor: Olivier George, PhD

Project: Genome-Wide Association
Study of Cocaine Addiction: Analysis
of Cohort Effect

Conference: SRC 2019

Ivette Roca Mercado, General Biology

Mentor: JoAnn Trejo, PhD

Project: The regulatory role of
ARRDC3 in LPA-mediated activation of
the Hippo Pathway in Breast Cancer
Metastasis

Conference: SRC 2019

AURE Students (cont.)

Mona Roshan, Biochemistry and Cell Biology

Mentor: Karl Wahlin, PhD

Project: The Directional Outgrowth of Retinal Ganglion Cells Using a 3D Printed Scaffold

Conference: OURS 2020 ([View Presentation Here](#))

Siddhi Salunke, Global Health

Mentor: Saiba Varma, PhD

Project: The Illusion of Medical Neutrality in State Versus Civilian Conflicts

Conference: OURS 2020 ([View Presentation Here](#))

Alexa Samaniego, Business Psych.
Leadership and Organization Change for Implementation (LOCI) Study

Mentor: Gregory A. Aarons, PhD

Project: The Impact of Team Consensus of Transformational Leadership on Psychological Safety Climate

Conference: SRC 2019

Maryana Saoor, Human Biology

Mentor: Gretchen Bandoli, PhD

Publication: Bandoli, G., Bertrand, K., Saoor, M., & Chambers, C. D. (2020).

The design and mechanics of an accessible human milk research biorepository. *Breastfeeding Medicine* 15(3), 155-162. DOI: 10.1089/bfm.2019.0277 ([View Abstract/Request Article Here](#))

Caleb Schimke, Biology

Mentor: Stanley Lo, PhD

Project: Assessment of the Validity and Reliability of Data Gathered by Undergraduate Students in Course-Based Undergraduate Research Experiences (CUREs)

Conference: SRC 2020

David Sharp

Mentor: Veronica Eliasson, PhD

Project: High-Velocity Fracture Mechanics of PMMA

Conference: SRC 2019

Prem Shelat, Computer Engineering

Mentor: Jyoti Mishra, PhD

Project: Brain Body Basis of Mental Health

AURE Students (cont.)

Niyonika Sheth, Computer Science
Mentor: Joanna McKittrick, PhD
Project: Project Lim(b)itless
Conference: SRC 2019

Aman Shihora, Pharmacological Chemistry
Mentor: Lalit Deshmukh, PhD
Project: Assisting the study of the proline-rich domain of ALIX

Giuliana Sidhu, General Biology
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Meenakshi Singhal, Bioengineering: BioSystems
Mentor: Prashant Mali, PhD
Project: Development of a Vascularized Cardiac Patch to Identify Transcriptomic Differences Associated with the Maturation of Embryonic Stem Cell-Derived Cardiomyocytes
Conference: SRC 2019

Kyle Skelil, NanoEngineering
National Institute of Health Initiative for Maximizing Student Development
Mentor: Tod Pascal, PhD
Project: Molecular Dynamics Simulations of Binding Energy Between Single Strand DNA and Silver Nanoparticles
Conference: SRC 2020

Bryce Smith
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Joo-Ryun So, Psychology (Clinical)
Mentor: Leslie Carver, PhD
Project: Infant Perception Study

Tiffany Soebroto, NanoEngineering
Mentor: Darren Lipomi, PhD
Project: T-array Tattoo Sensor

Jining Song, Computer Science
Mentor: Amarnath Gupta, PhD
Project: Multi-model Indexing Data Structure and Query Design
Conference: OURS 2020 ([View Presentation Here](#))

AURE Students (cont.)

Miranda Song, Bioengineering
(Bioinformatics)
Mentor: Niema Moshiri, PhD
Project: SEPIA: Simulation-based
Evaluation of Prioritization
Algorithms
Conference: HIV Dynamics Conference
2020 ([View Poster Here](#))

Anvitha Soordelu, Cogn and
Behavioral Neuroscience
Mentor: Amy Lansing, PhD
Project: Examining the Adolescent
Physical Health Consequences of
Domestic Violence Exposure
Conference: OURS 2020 ([View
Presentation Here](#))

Anna Stuhlfire, Molecular Biology
Mentor: Matthew Hangauer, PhD
Project: Understanding Mutagenesis
in Human Cancer

Ipek Su Talu, Psychology
Mentor: Andrew Marin, MA (Carver
Lab)
Project: Infant Perception Study

Vani Taluja, Cogn and Behavioral
Neuroscience
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental
Health

Katherine Tang, Mechanical
Engineering (Mechanics of Materials)
Mentor: Joanna McKittrick, PhD
Project: 3D printed models of the
arrangement of components in two-
phase composites
Conference: SRC 2019

James Taniguchi, Cogn and
Behavioral Neuroscience
Cognitive Science Honors Program
Mentor: Douglas Nitz, PhD
Project: Reconstruction of the
Cognitive Map in Spatial, Temporal,
and Geometrical Frameworks
Conference: SRC 2020
Other Presentation: Cognitive Science
Honors Program Presentation

Alexandria Tran, Bioengineering
(Bioinformatics)
Mentor: Julian Schroeder, PhD
Project: Bioinformatic analyses of
whole genome sequences

AURE Students (cont.)

Richelle Tran, Psychology
Psychology Honors Program
Mentor: Pamela K. Smith, PhD
Project: Examining the Effects of
Language on Perceived Power and
Competence
Other Presentations 2020 Senior
Honors Presentation

Aaron Trando, Molecular Biology
Mentor: Jamie LaBuzetta, MD
Project: Proposing a Framework to
Assess Outcomes of Neurological ICU
Survivors
Conference: OURS 2020 ([View
Presentation Here](#))

Rebecca Tsai
Mentor: Sandra Sanchez-Roige, PhD
Project: Cadm2

Michelle Tu, Human Biology
Mentor: Shigeki Miyamoto, PhD
Project: RhoA induces mitophagy
through PINK1 stabilization to confer
cardioprotection
Conference: Experimental Biology
Conference 2020

Ashley Ugarteche, Cogn and
Behavioral Neuroscience
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental
Health

Armando Urbina, Chemical
Engineering
*San Diego Nanotechnology
Infrastructure*
Mentor: Darren Lipomi, PhD
Project: A study of metal-graphene
and metal-hBN composite
piezoresistance and morphology
Conference: SRC 2019

Swan Van, Biochemistry/Chemistry
Mentors: Elizabeth Komives, PhD
Alexis Komor, PhD
Project: Atomistic insights into the
nucleic acid binding activity of the
Trm10 enzyme
Conference: SRC 2020

Preethi Veeragandham, Human
Biology
Mentor: Chao-Wei Hung Hung, PhD
(Saltiel Lab)

AURE Students (cont.)

Barbara Ruth Velazquez, Public Health
Mentor: José Suárez, MD
Project: Dietary intervention to enhance the excretion of persistent organic pollutants using nuts and olestra
Conference: SRC 2019

Mai Vu
Mentor: Derek Welsbie, MD, PhD
Project: Evaluation of MAP Kinases Scaffold Protein in Ganglion Cell Death
Conference: OURS 2020 ([View Presentation Here](#))

Jaxon Wagner, Microbiology
Mentor: Matthew Daugherty, PhD
Project: Evolution and antiviral specificity of IFIT genes

Avleen Walia, Psychology (Clinical)
Mentor: Ariel Lang, PhD
Project: The Relation Between Mood Symptoms and Cognition in Parkinson's Disease: A Review of Literature
Conference: OURS 2020 ([View Presentation Here](#))

Raechel Walker, Data Science
Mentors: Robin Knight, PhD; Daniel McDonald, PhD
Project: Characterizing Microbiota Using Neural Networks
Conference: OURS 2020 ([View Presentation Here](#))

Howard Wang, Computer Science
Mentor: Won Bae, PhD
Project: Accelerating T2-mapping for Quantitative MRI using Machine Learning and Multi-threading
Conference: OURS 2020 ([View Presentation Here](#))

Phoebe Wang, Biochemistry/Chemistry
Mentor: Richard Childers, MD
Project: No Urine, No Problem: How Urinalysis Impacts Antibiotic Prescription Rate in the Emergency Department
Conference: OURS 2020 ([View Presentation Here](#))

AURE Students (cont.)

Shanqing Wang, Computer Science
(Bioinformatics)
Mentor: Lukas Chavez Kuss, PhD
(Mesirov and Chavez Labs)
Project: Detection of ecDNA in Cloud
Genomics Databases

Vania Wang, Biochemistry and Cell
Biology
Mentor: William Kim, PhD
Project: Utilizing the CRISPR/CasRx
system to study EMT pathway of triple
negative breast cancer cell lines

Madeline Weerts, Psychology
Mentor: Caren Walker, PhD
Project: Gestures and Analogical
transfer: Investigating whether
children who use gestures during
explanation are more likely to be
successful in solving analogous
problems
Conference: OURS 2020
([View Presentation Here](#))

Krystopher Weeton, Computer
Science
Mentor: Miles Jones, PhD
Project: Tetris, an Algorithmic
Benchmark
Conference: OURS 2020 ([View
Presentation Here](#))

Kylie Wells, Pharmacological
Chemistry
Mentor: Michael Gilson, MD, PhD
Project: Microtubule Stabilizing
Ligand Replacement
Conference: OURS 2020
([View Presentation Here](#))

Alexander Westra, Structural
Engineering
Mentor: Veronica Eliasson, PhD
Project: Blast wave interaction with
structures: an application of exploding
wire experiments
Publication: Dela Cueva, J.C.A., Zheng,
L., Lawlor, B., *et al.* (2020). Blast wave
interaction with structures: an
application of exploding wire
experiments. *Multiscale and
Multidisciplinary Modeling.
Experiments and Design*. DOI:
10.1007/s41939-020-00076-0 ([View
Article Here](#))

AURE Students (cont.)

Jack Whiteley, Physiology and Neuroscience
Mentor: Carol Marchetto, PhD
Project: Potassium Chloride-Dependent Activation of Immediate Early Genes in an Induced Neuron model
Conference: OURS 2020 ([View Presentation Here](#))
Award: Undergraduate Research Library Prize, 2nd Place

Andrea Widanta, Human Biology
Mentor: Edward Castillo, PhD
Project: Impact of Geriatric Emergency Medicine Interventions on Throughput and Readmissions of Senior Patients
Conference: OURS 2020 ([View Presentation Here](#))

Katherine Wong, Human Biology
Mentor: Chengbiao Wu, PhD

Weiguang Wu, Oceanic and Atmospheric Sciences
Woods Hole Oceanographic Institution Summer Student Fellowship, 2019
Mentors: Sarah Gille, PhD; Bia Villas Bôas, PhD
Projects: (UC San Diego) Sea Surface Temperature Response to Alongshore Winds Off the California Coast, (WHOI) Directional Wavenumber Spectrum of Ocean Internal Waves

Qinghui Xia, Computer Engineering
Mentor: Won Bae, PhD
Project: Accelerating T2-mapping for Quantitative MRI using Machine Learning and Multi-threading.
Conference: OURS 2020 ([View Presentation Here](#))

Jiangnan Xu, Computer Science (Bioinformatics)
Mentor: Anjan Debnath, PhD
Project: Drug discovery for parasitic diseases

Mingzhi Xu, Biochemistry/Chemistry
Mentor: Joseph Simpson, PhD
Project: Enhancing the low expression of proline rich proteins
Conference: SRC 2019

AURE Students (cont.)

Zoey Jialu Xu, Mathematics and Econ/ Political Science (Int'l Relations)
Mentor: Michael Davidson, PhD
Project: Political determinants of electricity market efficiency

Vivian Yan, Psychology (Cognitive)
Mentor: Angela Lowe
Project: Facial Feedback Hypothesis and Its Effect on Emotional Response
Conference: OURS 2020 ([View Presentation Here](#))

Xueying Yang, Sum Ses International Student
Leichtag Biomedical Research Neuroscience Department
Mentor: Xu Chen, PhD
Project: Modulating PNKP activity as a therapeutic strategy in SCA3 and Alzheimer's disease models
Conference: SRC 2019

Goutham Yegappan, Mathematics (Computer Science)
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Colin Young, Computer Science
Mentor: Niema Moshiri, PhD
Project: An end-to-end profiling of standard viral phylogenetics workflows

Justin Yu, Biochemistry and Cell Biology/Business Psychology
Biological Sciences Honors Program
Mentor: Shigeki Miyamoto, PhD
Project: The role of NEK7 in regulation of autophagy in cardiomyocytes
Publication: Abstract in 2019-2020 Saltman Quarterly, Vol 17, Page 49 ([View Abstract Here](#))

Mariam Zafar-Khan, Global Health/ Psychology (Health)
Mentor: Jyoti Mishra, PhD
Project: Brain Body Basis of Mental Health

Lingzhi Zheng, Mechanical Engineering
Mentor: Veronica Eliasson, PhD
Project: Shock Wave Focusing Phenomenon
Conferences: SRC 2019, American Physical Society annual Division of Fluid Dynamics meeting 2019

AURE Students (cont.)

Sherry Zheng, Molecular Biology/
Music

Mentor: Andrew Chisholm, PhD

Project: Why should we care about a
worm and its skin?

Conference: OURS 2020 ([View
Presentation Here](#))

Award: 2020 NSF Graduate Research
Fellowship Winner

Jenny Zhu, Physiology and
Neuroscience/Economics

Mentor: Caren Walker, PhD

Project: Counterfactual Reasoning
and Belief Revision

Conference: OURS 2020 ([View
Presentation Here](#))

Undergraduate Research Mentors

Undergraduate Research Mentors



Nicolette Olivia Le, Dr. Georgia Robins Sadler
Dr. France Nguyen-Grozavu
2019 International Cancer Education Conference

*To the 489 mentors
below ... THANK YOU!*

*Undergraduate research is
thriving at UC San Diego
because of your dedication and
mentorship to the students.*

Anthropology

Thomas Csordas, PhD
Jade d'Alpoim Guedes, PhD
Joseph Hankins, PhD
Bonnie Kaiser, PhD
Dredge Byung'chu Kang, PhD
Ellen Kozelka
Thomas Levy, PhD
Carol Marchetto, PhD
Amy Non, PhD
Nancy Grey Postero, PhD
Paula Saravia, PhD
Saiba Varma, PhD
Rihan Yeh, PhD

Biological Sciences

Eric Allen, PhD
Matthew Banghart, PhD
Carlisle Bascom, PhD
Eric Bennett, PhD

Lakshmi Chilikuri, PhD
Andrew Chisholm, PhD
Matthew Daugherty, PhD
Rachel Dutton, PhD
Mark Estelle, PhD
Jacob Garrigues
Timothy Gentner, PhD
Shelley Halpain, PhD
Randolph Hampton, PhD
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Jeff Hasty, PhD
Yishi Jin, PhD
Susan Kaech, PhD
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Sonya Neal, PhD
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Yasin Torres-Tiji
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Center for Energy Research

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Stephen Macneil, PhD
Douglas Nitz, PhD
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Zhuowen Tu, PhD
Bradley Voytek, PhD
Drew Walker, PhD
Haijun Xia, PhD
Angela Yu, PhD

Communication

Zachary Osborn

Critical Gender Studies

Karen Shelby, PhD

Economics

Titan Alon, PhD
Prashant Bharadwaj, PhD
Richard Carson, PhD
Julie Cullen, PhD
Marc Muendler, PhD

Education Studies

Luz Chung, PhD
Sherice Clarke, PhD
Shana Cohen, PhD
Frances Contreras, PhD
Makeba Jones, PhD
Christoforos Mamas, PhD
Alison Wishard Guerra, PhD

Eleanor Roosevelt College: General Education Word History

Matthew Herbst, PhD

Ethnic Studies

Kirstie Dorr, PhD
Yến Lê Espiritu, PhD
José Fusté, PhD
Shaista Patel, PhD
K. Wayne Yang, PhD

Extension

Nicholas Abi Samra

Halicioğlu Data Science Institute

Robert Twomey, PhD

History

Claire Edington, PhD

Institute for Neural Computation

Leanne Chukoskie, PhD

**Jacobs School of Engineering:
Bioengineering**

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Adam Engler, PhD
Stephanie Fraley, PhD
Ester Kwon, PhD
Ratnesh Lal, PhD
Prashant Mali, PhD
Christian Metallo, PhD
Bernhard Palsson, PhD
Robert Sah, MD, ScD
Nicole Steinmetz, PhD
Daniela Valdez-Jasso, PhD

**Jacobs School of Engineering:
Computer Science and Engineering**

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Yoav Freund, PhD
Sicun Gao, PhD
William Griswold, PhD
Russell Impagliazzo, PhD

Ryan Kastner, PhD
Sorin Lerner, PhD
Julian McAuley, PhD
Niema Moshiri, PhD
Jianmo Ni, PhD
Ramaohan Paturi, PhD
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Debashis Sahoo, PhD
Jurgen Schulze, PhD
Jingbo Shang, PhD
Alex Snoeren, PhD

**Jacobs School of Engineering:
Electrical and Computer Engineering**

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Saharnaz Baghdadchi, PhD
Sabur Hassan Baidya, PhD
Kshitiz Bansal
Dinesh Bharadia, PhD
Pamela Cosman, PhD
Abdelkrim El Amili, PhD
Gholamreza Esmaili, PhD
Massimo Franceschetti, PhD
Vikash Gilja, PhD
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Prasad Gudem, PhD
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Todd Hylton, PhD
Tara Javidi, PhD
Miles Jones, PhD
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Hanh-Phuc Le, PhD
Zhichao Li
Chris Mi, PhD
Siavash Mir Arabbaygi, PhD
Tse Nga (Tina) Ng, PhD
Truong Nguyen, PhD

Piya Pal, PhD
Dimitri Schreiber
Curt Schurgers, PhD
Peter Shin, MS
Paul Siegel, PhD
Raghav Subbaraman
Behrouz Touri, PhD
Nuno Vasconcelos, PhD
Pengtao Xie, PhD
Michael Yip, PhD
Xinyu Zhang, PhD
Ira Zukanović

**Jacobs School of Engineering:
Mechanical and Aerospace
Engineering**

Alexey Arefiev, PhD
Nicolas Boechler, PhD
Isaac Cabrera
Shengqiang Cai, PhD
Renkun Chen, PhD
Nicholas Gravish, PhD
Sonia Martinez Diaz, PhD
Joanna McKittrick, PhD
Tod Pascal, PhD
Jack Silberman, PhD
Frank Talke, PhD
Michael Tolley, PhD

**Jacobs School of Engineering:
NanoEngineering**

Jinhye Bae, PhD
Shaochen Chen, PhD
David Fenning, PhD
Mickey Finn
Jesse Jokerst, PhD
Darren Lipomi, PhD
Ping Liu, PhD
Marc Meyers, PhD
Nisarg Shah, PhD

Kenneth Vecchio, PhD
Liangfang Zhang, PhD

**Jacobs School of Engineering:
Structural Engineering**

Rodrigo Carreño Vallejos, PhD
Veronica Eliasson, PhD
Falko Kuester, PhD
Kenneth Loh, PhD
Shabnam Semnani, PhD

Knight Lab

Shi Huang

Linguistics

Andrew Kehler, PhD
Will Styler, PhD

Literature

Carol Arcos-Herrera, PhD
Gloria Chacon, PhD
Dennis Childs, PhD
Amelia Glaser, PhD
Stephanie Jed, PhD
Seth Lerer, PhD
Margaret Loose, PhD
Luis Martin-Cabrera, PhD
Jacobo Myerston, PhD
Max Parra, PhD
Rosaura Sánchez, PhD
Megan Wesling, PhD
Marco Wilkinson, MFA

Mathematics

Alina Bucur, PhD
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Daniel Kane, PhD
Jonathan Novak, PhD
Cristian Popescu, PhD
David Quarfoot, PhD

Claus M. Sorensen, PhD

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Sarah Hankins, PhD

OASIS

Berenice Jau, MA

Office of Innovation and Commercialization

Briana Weisinger, MA

Philosophy

Saba Bazargan-Forward, PhD

Monte Johnson, PhD

Clinton Tolley, PhD

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Javier Duarte, PhD

Tongyan Lin, PhD

Karin Sandstrom, PhD

Political Science

Pamela Ban, PhD

LaGina Gause, PhD

Sean Ingham, PhD

Inbok Rhee, PhD

Sebastian Saiegh, PhD

Psychology

Leslie Carver, PhD

Judith Fan, PhD

Michael R. Gorman, PhD

Christina Gremel, PhD

Gail Heyman, PhD

Angela Lowe

Andrew Marin, MA

Michael McCullough, PhD

Celeste Pilegard, PhD

Vilayanur Ramachandran, PhD

Adena Schachner, PhD

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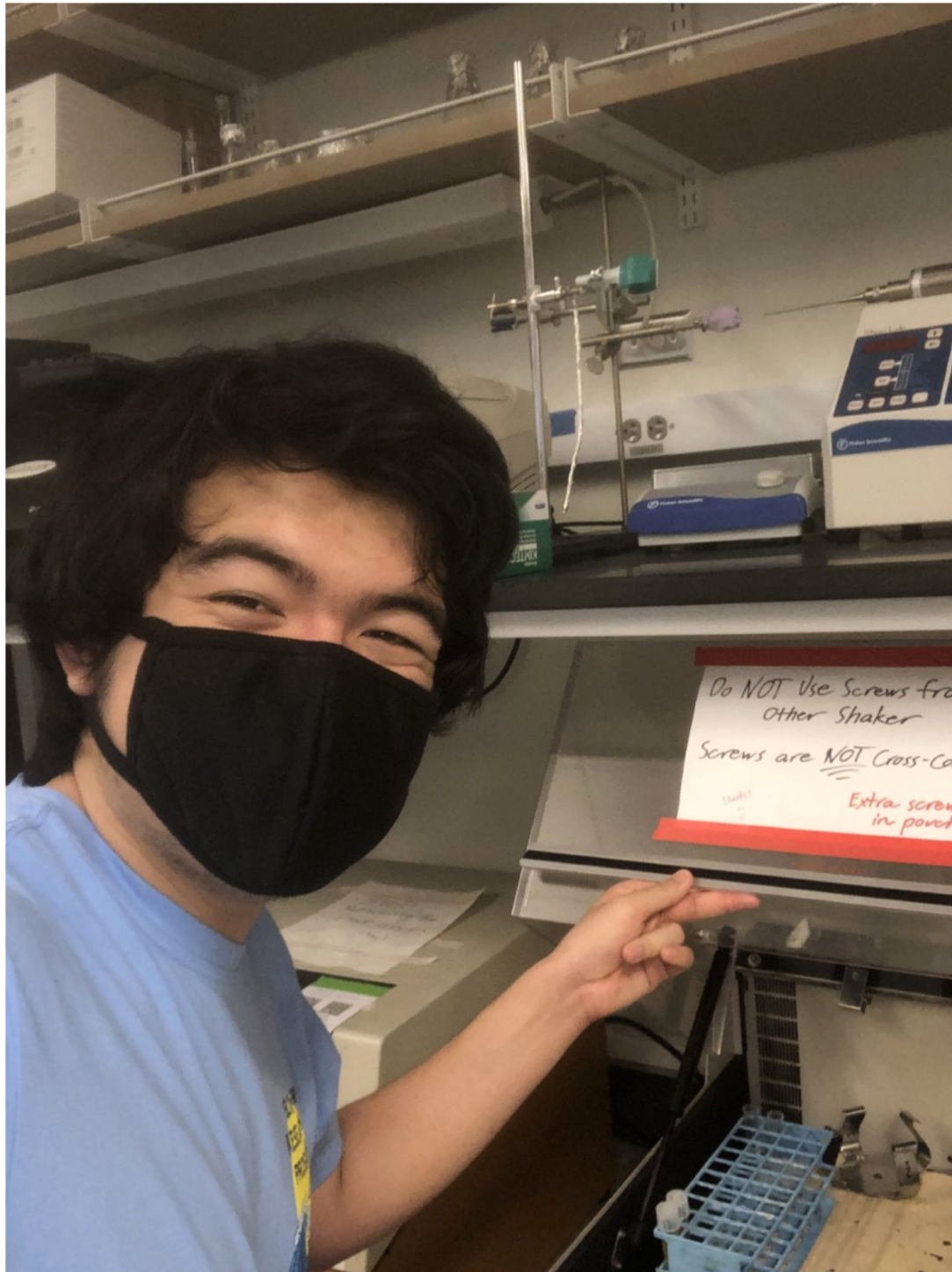
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