

UC SAN DIEGO

COSMOS

A journey

SPRING 2019 NEWSLETTER



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NEW UC SAN DIEGO COSMOS

INSTRUCTOR

CLUSTER 3

LIVING OCEANS &
GLOBAL CLIMATE CHANGE

George C. Anderson
Staff Research Associate

George C. Anderson: B.A. Chemistry, Williams College, M.S. Chemistry, Johns Hopkins University, M.A.T., Johns Hopkins University. Mr. Anderson's career at UCSD has included sea going analytical work aboard the research vessels of the Scripps Institution of Oceanography (SIO), doing analytical work for an SIO geochemist, and serving as a TA in two of the chemistry department's analytical chemistry classes: 100 A and 100 B. Co-taught an SIO course with Professor Michael Mullin (now deceased) entitled, "Physical, Chemical, and Biological techniques in Oceanography."

NEW UC SAN DIEGO COSMOS

INSTRUCTOR



CLUSTER 5

PHOTONICS: LIGHT-BASED
TECHNOLOGIES IN EVERYDAY LIFE

Saharnaz Baghdadchi

Assistant Teaching Professor, Electrical & Computer Engineering

Baghdadchi's research focus is on encoding light fields with phase and polarization modulations for tissue imaging and optical manipulation of nanoparticles. She is interested in scholarly teaching and uses active learning techniques to help students achieve an expert-like level of thinking. She guides students in bridging the gap between facts and usable knowledge to solve complex engineering problems. As part of her educational research in engineering, in the Summer of 2016 she designed and implemented a Teaching-as-Research project to study the effect of guided pre-reading and post-lecture assignments along with peer instruction on students' learning of core signal processing concepts. According to the results of her research, the active learning techniques she implemented in her course helped her students do substantially better than their peers attending the standard lecture based classes for the same course. She designs discovery-based labs for ECE undergraduate courses to stimulate students' conceptual understanding of the material. She will also be involved in developing hands-on educational programs to enhance the learning and teaching of science and engineering by K-12 students and teachers.

NEW UC SAN DIEGO COSMOS

INSTRUCTOR



Colin Zyskowski
Embedded Designer

Colin Zyskowski is an embedded designer focusing on audio and control systems. He has a PhD in computer music from UCSD, where he worked on developing networked robotic systems for use in audio applications. Colin's work now focuses on expanding the capabilities of common micro-controllers by designing circuit boards for mixed-signal applications. He has worked extensively with the Coordinated Robotic Lab at UCSD, designing circuits for motor control and sensor input systems. Colin also holds a master's degree in media arts from The University of Michigan, where he studied interactive hardware and software design. Colin has taught numerous classes in various subjects including music technology, audio engineering, 3D design, and mechanical prototyping.

CLUSTER 11

INTRODUCTION TO
AUTONOMOUS VEHICLES



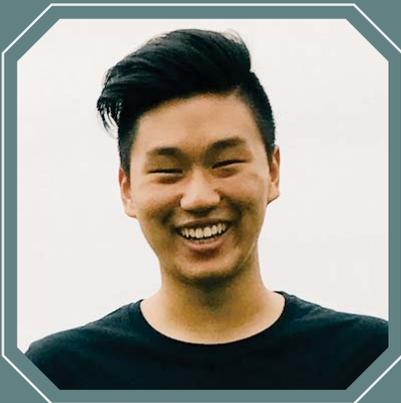
New!

RESIDENTIAL LIFE STAFF



Dr. Sonia Rosado, Residential Dean

Dr. Sonia Rosado, Assistant Director of Residence Life at University of California-San Diego, is the coordinator and advisor of the LGBTQIA+ of the Living Learning Community at John Muir College. She is part of the First Gen experience and has collaborated on #NotAtMuir inclusive language campaign to assist the community in fostering a sense of belonging. Originally from the Los Angeles area, Rosado received her Doctorate (Joint Ed.D.) in Educational Leadership from the University of California-San Diego and California State University-San Marcos. Her hobbies include bullet journaling, reading non-fiction books, playing Settlers of Catan, visiting coffee shops, and traveling to tropical places.



Jason Kim, Senior Resident Assistant (SRA)

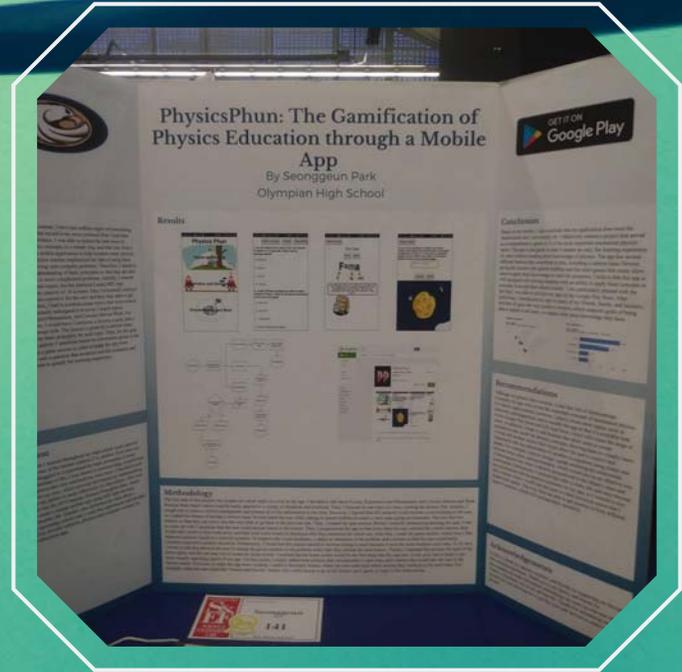
Jason is currently a 3rd year undergraduate student working towards his B.S. in General Biology with a minor in Psychology at UC San Diego. Jason was a Resident Assistant for Warren College during his 2nd year where he worked with incoming freshman students and will continue his work as an RA next year for Revelle College. During his free time, he loves to play basketball, go on outdoor adventures, eat good food, and spend time with his family. Jason was also a Resident Assistant for the COSMOS program last year and is also a COSMOS alumni from the UC Irvine COSMOS program during the summer of 2015.



Nayeli P. Gonzalez, Senior Resident Assistant (SRA)

Nayeli is currently a third year at UC San Diego studying Political Science, emphasizing in American Politics, with a minor in Education Studies. In her three years of undergrad, she has been a Residential Assistant with the 2018 Academic Connections Summer Program as well as a House Advisor for John Muir College in the 2018-2019 academic year. Along with the Residential position, she is a UC San Diego College Ambassador and volunteers for the Mathematics, Engineering, Science, Achievement (MESA) Program at San Diego State University. In her free time, Nayeli enjoys going to the beach, visiting Old Town, volunteering at animal shelters, salsa dancing, grabbing Boba and trying new things. A fun fact about Nayeli is that she loves traveling and learning about new cultures. Over Spring Break, she went to Oahu, Hawaii and plans to go to Canada and Spain this year. She is also a founding mother of a Latinx organization called Destino at UC San Diego.

Alumni SPOTLIGHT



BRIAN PARK

2018 Alum Cluster 1
3rd place in the Greater San Diego
Science and Engineering Fair

"Thank you so much for pushing us to do greater things and for starting my passion for computer science." -Park

Brian Park won third place at the Greater San Diego Science and Engineering Fair! Park created a physics study guide using MIT App Inventor. He published his project on the Google Play Store and was able to get installs from the UK and Brazil! Park reached out to his Cluster 1 Teacher Fellow to thank them for encouraging them to enter science fairs and for inspiring them in the field of computer science.

Alumni SPOTLIGHT



RACHEL THAM

2015 Alum
Cluster 3
MarkerGirl Bay Area Academy

"My COSMOS friends are some of my closest friends, and we recently reunited!" -Tham

Rachel Tham has been leading the expansion of a non-profit start-up called MakerGirl, which is based at University of Illinois at Urbana-Champaign and encourages young girls to pursue STEM. Since founded in 2014, MakerGirl has outreached to more than 3,000 young girls. Since joining, Tham has co-founded new MakerGirl Academies at Northwestern and Harvard. One of her biggest dreams has been to establish a MakerGirl Bay Area Academy. Yesterday, this dream came true in collaboration with the University of California, San Francisco (UCSF) Makers Lab, they held the first MakerGirl pilot session at UCSF. It was so much fun and a wonderful success. Tham can't wait to organize more sessions in San Francisco! They hope that MakerGirl can continue to be a spark of inspiration for more girls to pursue STEM. In addition, Tham claims COSMOS was like MakerGirl for her; it helped Tham determine that she wants to pursue engineering, specifically towards environmental conservation.

SPOTLIGHT

A l u m n i

LEON ZHA

2018 Alum

Cluster 3

Trustee Scholarship Recipient

"My fondest memory of COSMOS was swimming in the ocean with the rest of my cluster! It was a nice break from the classroom, plus hands on activities are always, in my opinion, more interesting. Academically, I've gained a deeper understanding of marine biology (competition, different types of oceanic zones, etc.) and atmospheric science, especially concerning the potentially giant contribution aerosols have on greenhouse gases. Personally, I think the book, *The Merchants of Doubt*, that Professor Skip Pomeroy had us read/listen to before COSMOS was very eye opening. While I knew that there were active campaigns dedicated to disseminating misinformation, I had no idea it was such to an extent. At USC, I've been admitted as an Environmental Science and Health major (same track as premed, from what I understand), and am thinking of either minoring in CS or double majoring in Informatics."

"Don't be afraid to go out of your comfort zones with all the activities you do and really appreciate the opportunities that COSMOS provides"
-Zha

Alumni SPOTLIGHT



ARSH MEHTA

2017 Alum
Cluster 4

"COSMOS opened my eyes to the world of engineering." -Mehta

"Before coming to the program I did not know what to expect. I walked in not knowing if I would like the curriculum or the program in general. At the graduation ceremony, I was sad to leave because those four weeks at COSMOS was the best time of my life. I made lifelong friends (Who I still talk to) and I figured out my future. Four weeks was definitely not enough and I wish I could go back and relive those days. After attending COSMOS Cluster 4 at UCSD, I knew I wanted to become a civil engineer. Ever since that summer, my life changed. Yes, I know that sounds cliché, but it is true. That one summer program impacted my course load during my senior year of high school and even in college. As a freshman at UCSD, I have already become involved with multiple project teams that focus on structural engineering."

SURVEY

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