You as a Student Researcher: Workshop Series & Resources

JUNE 30th - AUGUST 6th
Tuesdays @ 2:10pm - 3:00pm
Thursdays @ 11:10am - 12:00pm
other times as announced

Learn more & see the calendar at tinyurl.com/YouAsAStudentResearcher

Current & Future Student Researchers and Research Mentors are invited to participate in any or all sessions.

RESEARCH SPOTLIGHT

LEARN ABOUT THE RESEARCH EXPERIENCES OF CAL POLY STUDENTS.
FEATURING SOME OF THE CAL POLY AWARD WINNERS OF THE 2021 CSU RESEARCH COMPETITION!
Parent-teacher conferences supplement the information conveyed by report cards by focusing on students’ specific strengths and weaknesses in individual subjects and generalizing the level of inter-curricular skills and competences.

A parent-teacher conference, parent-teacher interview or parents’ evening, is a short meeting or conference between the parents and teachers of students to discuss children’s progress at school and find solutions to academic or behavioral problems.

How does your research answer real-world questions and contribute to solutions?
My research focuses on the measurement of fluctuating static pressure in a boundary layer. In other words, I measure acoustics of a thin layer of air over an object that “sticks” to the object and moves slower compared to the surrounding air when an aircraft is in motion. This is important because this thin layer of air can quantify the drag of an aircraft, which can then help design more low drag airplanes. My research allows measuring fluctuating pressure to be significantly less expensive and less time consuming, which can help design more fuel-efficient airplanes, contributing to a greener future in the aviation industry.

What is your favorite thing about research?
My favorite thing about research is wind tunnel testing. It is always so fascinating to see how flow-conditioned air behaves when sensors are added into the wind tunnel to measure various quantities.

What advice would you give to other students interested in doing research?
To not be intimidated by the amount of material needed for research. When I first started, I didn’t even know what a boundary layer was, yet I was going to do research on boundary layers! Eventually, I learned everything slowly but steadily as research progressed, so the perceived lack of knowledge on a specific subject shouldn’t dissuade anyone from research.

Tell us about your Learn By Doing Research.
Our research was on developing an interdisciplinary method based on remote sensing and machine learning to effectively trade commodity futures contracts. It was a very collaborative effort involving a lot of trial and error, with our final methodology differing greatly from our initial ideas.

How does your research answer real-world questions and contribute to solutions?
Our research introduced a general framework for applying machine learning to trade a range of commodity futures and provided an example for corn futures. We intended to showcase a novel way to approach the problem of modeling commodity prices through the use of interdisciplinary methods.

How did you find out about the research position?
The research we conducted was based on an interest I had in seeing if you could use satellite imagery to model changes in crop commodity prices. I proposed this idea to my advisor as a senior project and it continued naturally from there.

What is a question we should have asked you and what is the answer?
Q: What is your favorite place to eat in SLO?
A: Petra
How does your research answer real-world questions and contribute to solutions?

The research motivation was driven by the fact that many real-world cryptographic systems will soon require changing. Our project will hopefully offer new cryptographic solutions that can be used in place of the old systems.

How has your research influenced your aspirations and future goals?

I had to work with a lot of digital logic design, I think that I might end up pursuing that field or a related field in my career. Research in general I think is something that I might find more enjoyable than working a typical job so working as a research scientist is definitely something that I might pursue.

What is your favorite thing about research?

During the research project, a lot of the topics that I had to research and understand were not covered in class. At first, almost everything about the project seemed daunting and ‘too hard to finish’. A time passed by however, things started to slowly click together and I found that to be pretty satisfying.

What is a question we should have asked you and what is the answer?

Q: What is your favorite animal(s).
A: Baby elephant or Baby cow or Baby goat, any baby animal really.

Tell us about your Learn By Doing Research.

My research experience was coming to Cal Poly to get my Masters in Biological Sciences, focusing in phytoplankton physiology in Dr. Alexis Pasulka’s Microbial Oceanography Lab. My research was centered around culturing phytoplankton in the lab and since I had never done that before, it required great deal of troubleshooting and methods development. For me, the chance to immerse myself in a new field and new techniques was incredibly exciting. I was also incredibly lucky to have a supportive, smart, and creative advisor along the journey with me.

What advice would you give to other students interested in doing research?

Don’t be afraid to reach out to grad students or faculty to inquire about research opportunities. Whether you know what you want to study or you’re just interested in trying something out, there is a ton of amazing research happening on campus and some wonderful people that can help guide you in your learning and interests. And don’t give up! If someone doesn’t have room for you this quarter, try a different lab or come back to that person in the future and ask again. If you’re excited about getting involved in research, you’ll find a great opportunity. From my personal experience, I would prioritize building strong relationships and taking opportunities that excite you!
LSAMP Summer Scholars Research Program
~ LSAMP is an NSF-funded program designed to support undergraduate students who face or have faced social, educational, and/or economic barriers to careers in STEM fields.
~ Apply to CSU-LSAMP Program at Cal Poly & receive weekly newsletter focused on research & graduate school opportunities: https://lsamp.calpoly.edu/apply-lsamp
~ LSAMP students are also eligible to apply for the Summer LSAMP Research Scholars Program to receive a $3,500 stipend to conduct research with a Cal Poly faculty member. Additional financial support is also available.

BEACoN Mentors Research Program
~ The BEACoN Mentors Research Program is a funded research opportunity and mentoring relationship with a Cal Poly faculty member! Check out 2020-2021 Faculty Research Projects: https://beaconmentors.calpoly.edu/faculty-research-projects
~ Each year, BEACoN funds faculty and students to work together on research projects in Winter & Spring quarters. Students who are selected will receive $1,500 per quarter to enable students to participate in approximately 100 hours of research each quarter.
~ Applications for faculty and students open each Fall quarter. All majors and disciplines.
~ Students & Mentors interested in joining the BEACoN Network can do so at: https://beaconmentors.calpoly.edu/network

Cal Poly Office of Student Research
~ You have the opportunity to Learn by Doing Research at Cal Poly in each department and college.
~ You can earn research and internship credit that counts towards your major!
~ As a student researcher you will:
  1. work side-by-side with Cal Poly faculty
  2. get hands-on experience
  3. create new knowledge to help us see the world in new ways
  4. answer real-world questions and contribute to solutions to problems that face the Central Coast, California, the U.S. and the world
  5. make a difference!
~ Research, Presentation & Publication Opportunities updated at: https://studentresearch.calpoly.edu/opportunities

The Office of Student Research
~ For more updated information check our website: https://studentresearch.calpoly.edu