Welcome to the second NSM newsletter of this academic year! You are almost to a break! It is only a few weeks until fall break and then a few more weeks until finals and winter break. This time of year, I start to feel a lot like I imagine Frodo and Sam did as they walked through Mordor and ran out of elvish bread. Maybe it’s just that winter is coming. But, you are all NSM Titans! That means you’ve got no problems taking care of Thanos’ mischief or acing the next mid-term exams you’ll take from Professors Kylo Ren and Diana Prince. So while I don’t want to further belabor my strange obsession with mixing Lord of the Rings, Marvel, DC, Game of Thrones, and Star Wars into one universe, this paragraph wouldn’t be complete until I mentioned that you will ace Professor Sprout’s herbology plant identification quiz.

So many in our NSM community are constantly learning new things, making a difference, solving difficult problems, and working hard and sometimes struggling to meet their goals. Our community of scientists and mathematicians inspires me to come to CSUF every day. We are lucky to hear about new discoveries, an ah moment in a class, or getting the opportunity to help others. Dr. E.O. Wilson, University Research professor Emeritus at Harvard said “You are capable of more than you know. Choose a goal that seems right for you and strive to be the best, however hard the path. Aim high. Behave honorably. Prepare to be alone at times, and to endure failure. Persist! The world needs all you can give.” We need you to be the future NSM!

Dr. Walker, NSM Associate Dean
NSM Fall Festivities Recap:

The NSM-ICC Council hosted this year's Star Wars themed Fall Festivities and let's just say it was out of this world!
DEPARTMENT HIGHLIGHTS

Biological Science:

- Mason Emery, graduate student in the Zacherl lab, was recommended for funding for the prestigious California Sea Grant 2020 Graduate Research Fellowship in support of his research entitled, "NOT SO SHELLFISH AFTER ALL: HOW NATIVE OYSTERS (OSTREA LURIDA) MAY AID EELGRASS (ZOSTERA MARINA) RESTORATION BY NITROGENFILTRATION."


International collaboration between the lab of Jochen Schenk and Steven Jansen at Ulm University in Germany has resulted in four recent publications:


**Geological Sciences:**

- Dr. Jeff Knott was named a Fellow of the Geological Society of America at its annual meeting last month. (Picture taken at Glacier National Park)

- Dr. Vali Memeti’s lab attended the Geological Society of America annual meeting in Phoenix, AZ on September 22-25, 2019. The following talks were given:
  **graduate student author, *undergraduate student author**

**PUBLICATIONS:**


• Geological Sciences Chair, Dr. Woods, led a field trip along with his graduate student, Ross Kovtun, from October 26-27 to the Owens Valley for the Pacific Section of SEPM (Society for Sedimentary Geology). The field guide published for the trip is entitled: "Anatomy of an anachronistic carbonate platform: Environmental conditions and biotic recovery in the aftermath of the Permian – Triassic mass extinction".

Mathematics:

• Undergraduate mathematics major, Priscilla Martinez, will be presenting her research project titled "A Comparison of the Human and STEM Career Presence in a Common Core- Aligned vs. a Traditional Precalculus Textbook" at the 2019 Southern California Conferences for Undergraduate Research at California State University San Marcos (mentor: Dr. Alison Marzocchi).

• Mathematics credential candidate, Bryant Vo, had an article entitled "Geometry Sketch Game" published in the California Mathematics Council Communicator magazine (mentor: Ms. Barbara Post).

• Masters in Mathematics Teaching student Carmen Villalobos recently had an article entitled "A Comic Strip Project" published in the California Mathematics Council Communicator magazine (mentor: Dr. Alison Marzocchi).
CSUF SACNAS: FALL POSTER SYMPOSIUM:

- The CSUF SACNAS Chapter held their Fall Poster Symposium on Friday October 25. Student researchers from across the campus registered to give poster presentations and receive feedback as they prepared for Fall professional conferences. NSM had a strong showing with presenters from Geology, Biology, Chemistry/Biochemistry, and Project RAISE. The campus SACNAS Chapter thanks everyone who presented and everyone who attended for making this event a success! For more information on the SACNAS Chapter: @SACNASCSUF
STUDENT SPOTLIGHT

Joseph Hawkins

Major: M.S. Geology
Expected Graduation Date: Summer 2020

Please describe your specific area of research:
I work with Dr. Sinan Akciz working to better constrain the timing of large earthquakes/fault ruptures on a section of the San Andreas Fault in the Carrizo Plain.

How would you describe your undergraduate experience in the College of Natural Sciences and Mathematics?:
My experience as an undergraduate at CSUF was a rather unique and very positive experience for me. With a cast of fantastic professors and some very well timed opportunities (research projects that carried me to far off places like Alaska and Thailand) I learned, not only the tools to help me succeed in my career after graduation, but also about the world around me that went beyond just my training as a geologist.

When & how did you first get involved in research?:
I first got involved in research during my undergraduate studies at CSU Fullerton (also in the geology department) working with Dr. Phil Armstrong on helping to constrain the rate and timing of uplift of the Chugach and Kenai Mountains in Alaska.

If you could thank anyone on campus, who would it be and why?:
Pretty much the entire staff of the Geologic Sciences department would have to fit on this list for being so encouraging, knowledgeable and friendly throughout both my undergraduate, and now graduate studies there. They are all the reason I found my way back to CSUF for my graduate studies. Specifically I would like to thank Dr. Sinan Akciz for taking me on as his graduate student, despite the troubles a student working full time, and often out of town can present when scheduling... well pretty much everything!

Dr. Akciz: "Joey was extremely helpful as a teaching assistant for the two weeks portion of geology summer field camp class. He went beyond his duties in being available while in the field and at camp. He was an excellent team player who was instrumental in providing a successful, memorable field camp experience to our graduating geology student."
Please describe your specific area of research: I am currently performing my research in the Functional Anatomy, Biomechanics and Biomaterials (FABB) Lab under the advisement of Dr. Misty Paig-Tran. My research is focusing on the assimilation of microplastics in commercial food fishes, specifically Sardinops sagax (Pacific Sardine). Once I heard about the giant trash “island,” which isn’t an actual island FYI, I became intrigued with how it would affect marine life. The thought of fish mistakenly eating microplastics while eating its natural food source made me wonder what the affects will be. Are they able to pass the plastics through their digestive system, are plastics being transferred to other tissues via the bloodstream, and if so, how are they getting there? How is this transferring up trophic levels to other marine organisms? The list goes on. Although I am in the mere beginning of my graduate program, the ultimate goal of my research is to use this information to aid future students to take interest in the growing problem of microplastics, not only in fish or marine animals, but to help determine correct protocols for finding microplastics in fish tissues. I can’t wait to see where my research takes me, and what the overall outcome will be, so stay tuned.

How would you describe your undergraduate experience in the College of Natural Sciences and Mathematics? Lifechanging is my overall description to my undergraduate experience in the College of Natural Sciences and Mathematics at CSUF. Everyone that I have met and worked with on this campus has had a major positive impact on me, which is why I chose to come back to this campus for my graduate program.
When & how did you first get involved in research?
I first started out in Dr. Zacherl’s Marine Ecology Lab as an undergrad, here at CSUF, working on multiple projects viewing the settlement and recruitment patterns of native and non-native oysters. As a junior, I didn’t have any experience in the marine biology world, which is what I was majoring in. Thankfully after meeting new students, which have become great friends, in my upper division courses, I was introduced to what research really was. Research is everything I was hoping it would be and more. Dr. Zacherl pushed me to become a scientist and helped me decide to come back and pursue a higher education with my own interest of a research topic.

If you could thank anyone on campus, who would it be and why?
There are two inspiring strong women of science I would love to address here, as they are equally incredible in my opinion. First, I would like to thank Dr. Danielle Zacherl. She helped me hone my craft when it comes to attention to detail and organization when performing all avenues of scientific research. She has been a great mentor, colleague and friend over the years, and even helped me get my first job as a marine biologist at the Southern California Coastal Water Research Program in Costa Mesa. Next, I want to thank Dr. Misty Paig-Tran for advocating for me to come back and get my M.S. in Biology. She kept in touch with me after I had taken her ichthyology class and made me realize I am much smarter than I thought. She pushed me to become a better student, writer and scientist in the process. When talking with her about my future goals after I graduated, she informed me that she was on a microplastics committee and how I would be a perfect candidate for a graduate student in her program to focus on that subject. If it weren’t for Misty, I would probably be working full time as a bartender somewhere and wasting my intelligence, as she would put it. Both of these women continue to shape and mold me into the future marine biologist I aim to be.

What are your future career plans?
I would love to be able to use what I learn from my research and collaborate with fisheries when it comes to quality control for human consumption. There are many opportunities out there that I am still investigating. Teaching is something I haven’t experienced yet and will definitely try it out next year to see if I could enjoy a career in academia. If so, then I may go onto a Ph.D. program.

What advice would you give current students?
Don’t give up. Life has definitely thrown some curve balls my way, but I kept going. Any degree in the NSM world doesn’t happen overnight, and it definitely doesn’t happen in four years for most students. So, it’s ok to fail at first, as long as you learn from your mistakes, take a step back, and really take in the constructive criticism that your professors will give you.
Greeting from the Career Center! Below are the different resources NSM students can use from the Career Center.

1. To view jobs and internships, create an account on Titan Connection at https://apps.fullerton.edu/career

2. Students have a variety of ways to get career advising:
   - Schedule an appointment with Chanda Ishisaka, NSM Career Specialist online at https://apps.fullerton.edu/career or Career Center website.
   - Type of appointments for students:
     - Career options and Career Assessments
     - Help with finding Job or Internships
     - Interview Prep and Mock Interviews
     - LinkedIn Profile and Use
     - Graduate School Preparation; Statement of Purpose Reviews
   - For Resume and Cover Letter review:
     - Career Center Drive Thru hours. No appointment needed. Location: LH-210
     - Mondays and Thursdays: 10am-2:45pm
     - Tuesdays and Wednesday: 10am-6:45pm
     - Friday: 10am-12:45pm

3. Attend Career Center Workshops and Events
   - Sample of workshops geared for NSM Students:
     - Wed., Oct. 9, 10am-11am: Internships for Science and Math Majors
     - Wed., Oct. 23, 11am-1pm: STEM Resume Rush
     - Kelly Services will be having a Science Recruiter come to campus and review resumes of our students
       - Tues, Nov. 5, 11am-noon: For Pre-Health Students: Health Scholars Program
       - Wed, Nov. 6, 5:30pm-7pm: Pathway to Teaching at the Community College

4. Save the Date for Career and Graduate Schools Expos (All Fairs located at TSU Pavilions)
   - Internship and Career Expo: Thurs., Oct. 17, 3pm-6pm
   - STEM Career Expo: Thurs., Oct. 24, 3pm-6pm
   - CSUF Grad Programs Fair: Thurs., Oct. 31, 11am-1:30pm
   - Graduate School Expo: Thurs., Nov. 7, 1-3pm

*For more information: www.fullerton.edu/career/students/career-fairs-expos.php

5. Faculty, Staff and Student Organizations can request a Career Workshop from the Career Center.
   To request a workshop: Complete the Workshop Request form or contact Chanda Ishisaka, cishisaka@fullerton.edu

From your NSM Career Specialist: Chanda Ishisaka, cishisaka@fullerton.edu
Office: LH-208
LSAMP is a statewide program with the goal of increasing the number of graduates with Science, Technology, Engineering & Math (STEM) degrees, especially for individuals who have faced or face social, educational, or economic barriers to careers in STEM.

**Participant Benefits**
- Receive up to $300 scholarship to present at a conference
- Receive up to $200 scholarship towards purchasing a required STEM textbook.
- Waived graduate school application fee for most graduate programs.
- Eligible to apply and receive up to $3,500 scholarship to participate in a fully funded, summer international REU.
- Eligible to apply for the BD Masters and BD Ph.D. programs that award students an annual scholarship and additional academic support throughout their graduate school education.
- Exposure to additional research opportunities within LSAMP and beyond.
- Ability to attend LSAMP workshops both here and throughout California.
- Guidance and mentorship through program director, Dr. Ibragimov.

**Eligibility Information**
- Must be a US citizen or Permanent Resident.
- Must be working on **FIRST** baccalaureate degree.
- Must be enrolled at California State University, Fullerton, or be transferring to CSUF from a community college.
- Must have a **DECLARED SCIENCE** (biochemistry, biology, chemistry, geology, microbiology, natural science, or physics), **ENGINEERING** (civil, computer science, electrical, mechanical, or other) or **MATHEMATICS MAJOR**.
- Must be an individual who has faced or faces social, educational, or economic barriers to careers in STEM.

**How to Apply**
- Obtain an application online: [http://fullerton.edu/lsamp](http://fullerton.edu/lsamp)
- Completed applications should be submitted in person to our mailbox in MH-166.

**Research Scholar Benefits**
In addition to the benefits listed for participants, research scholars receive the following benefits:
- $2,000 scholarship per Academic Year for research
- Priority Registration
- Eligible to apply for free or reduced cost GRE prep course

**Research scholar:** submit a letter of support from a faculty member or research mentor at CSUF in a sealed envelope. Alternatively, faculty mentors may email the letter directly to LSAMP@fullerton.edu. The letter of support is only required for Research Scholar applicants.

We accept Participant applications year-round. 
Application submission window for Research Scholars is between August 20 and September 16.

Visit our website for the most current information about the program.  
[www.fullerton.edu/LSAMP](http://www.fullerton.edu/LSAMP)

Have questions or concerns?
E-mail: LSAMP@exchange.fullerton.edu
Follow SACNAS CSUF on Instagram!

The CSUF representatives for the CSU Council on Ocean Affairs, Science & Technology (COAST) announce the COAST Undergraduate Student Research Support Program for AY 2019-20

Applications Due: Nov. 21, 2019 at 5:00 pm

This program is open to all undergraduate students conducting research with CSUF faculty that relates to ocean, coastal, and coastal watershed issues.

Anticipated award amounts: $500 - $1,000

For more information contact:
Dr. Ryan Walter (rwalter@fullerton.edu) or
Dr. Joe Carlin (jcarlin@fullerton.edu)
The RAISE Transfer Program (RTP) celebrated National Transfer Student Week on October 21-24th. The celebration began with our STEM Social in collaboration with NSM-ICC and ECS-ICC. Students networked with STEM campus clubs and enjoyed bowling and other activities. Additionally, during the week, Project RAISE tabled at the NSM-ICC fall festivities and facilitated a STEM Summer Research Student Panel, and attended the STEM Internship and Career Expo. To check out more events with Project RAISE, please follow us @csufprojectraise (Instagram and Facebook).

STEM Social
Project RAISE is hiring Student Staff for Spring 2020!

Project RAISE focuses on increasing the number of Hispanic and low-income transfer students who complete bachelor’s degrees and enter careers in science, technology, engineering, and mathematics (STEM). Project RAISE partners Cal State Fullerton with Citrus, Cypress, Fullerton, Golden West, Mt. San Antonio, Orange Coast, Santa Ana, and Santiago Canyon Colleges.

All students are encouraged to apply! The flyer below has additional information. We are hiring Peer Advisors, Student Assistants, and Human Services Interns:

- **Peer Advisors (PA)** - mentor new transfer students at CSUF as part of the RAISE Transfer Program and visit partner community colleges to connect with students before they transfer. PAs work during academic semesters with optional summer work with the Undergraduate Research Experience. PAs must be transfer students or enrolled in NSM/ECS.
- **Student Assistants (SA)** – staff the Transfer Resource Center, a space for all CSUF students to study and engage with Project RAISE staff.
- **Human Services Interns (HS)** – serve in similar roles as PAs and assist with RAISE Transfer Program (RTP) activities. HS interns must be HUSR transfer students.

To apply, please visit: www.fullerton.edu/projectraise. The application requires your contact and academic information, a 1 page PDF resume, and contact information for one professional reference.

If you have any questions about these positions, please feel free to reach out to any Project RAISE staff in the Transfer Resource Center, MH-175, or MH-527. Applications will be considered until all positions are filled.

Please contact Angela Sardan-Long at asardan@fullerton.edu if you have any questions.
Project RAISE is looking for Student Staff

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Student Assistants — staff the Transfer Resource Center, a space for all CSUF students to study and engage with Project RAISE staff.

Human Services Interns — serve in similar roles as PAs and assist with RAISE Transfer Program (RTP) activities. HUSR interns must be HUSR transfer students.

POSITION REQUIREMENTS
• All majors encouraged to apply.
• Registered in at least 6 units
• Good academic standing and minimum 2.75 GPA
• Available 8-12 hours per week

To apply, please visit: www.fullerton.edu/projectraise.

The application requires your contact and academic information, a 1 page PDF resume, and contact information for one professional reference.

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NSM Clubs and Organizations

Contact any of the organizations below to find out their meeting and activity information.

American Association of Petroleum Geologists (AAPG) is an organization focused on educating and connecting students of any major to the oil industry through the use of key speakers and student expositions. AAPG@fullerton.edu

American Medical Student Association (AMSA): Committed to improving health care and healthcare delivery to all people. Promotes active improvement in medical education. Involves its members in the social, moral and ethical obligations of the profession of medicine. Assists in the improvement and understanding of world health problems. Contributes to the welfare of all pre-health professional students. AMSA@fullerton.edu

Beta Psi Omega Professional Biology Fraternity is a student organization with the primary purpose of helping students help themselves. Our overarching mission is to provide a supportive brotherhood for students pursuing the biological sciences professionally and academically and to further the advancement of biology as a science and as a profession. It is committed to serving the needs of students and thereby the community. Beta Psi Omega aims to provide passionate students with opportunities, insights, and guidance to success. beta@bpsiomega.org

Biology Graduate Club (BGSC): Offers opportunities for association and interaction between CSUF students, faculty, and administration. bgsc.csuf@gmail.com

Chemistry and Biochemistry Club (CBC): Provides information pertaining to opportunities and careers with the fields of Chemistry and Biochemistry. Familiarizes students with department opportunities. Conducts community outreach. csuf.cbc@gmail.com

CSUF Pre-Dental Society - Through general club meetings, guest speakers, dental school visits, and much more, our pre-dental members can gain the knowledge they need as well the necessary tools to be a competitive dental applicant and apply to dental school. csuf.predentalsociety@gmail.com

CSUF Pre-Optometry Club - Aimed to accommodate students interested in the field of Optometry in order to educate themselves more about the healthcare profession and network with other students and professionals with similar interests. csufpreoptometryclub@gmail.com

Flying Samaritans - Our purpose is to provide health care to people living in the rural areas outside of Tecate, Mexico. Volunteers have the opportunity to assist in administrating, translating, taking vital signs, shadowing health care providers, and working in the pharmacy. Also, our members get the opportunity to experience medicine and another culture first hand. flyingsamselhongo@gmail.com

Geology Club: Unites geology majors and others by providing related information and volunteer activities on and off campus. geologyclub@fullerton.edu
Latino Medical Student Association Pre-Medical Latino - Undergraduate Society (LMSAPLUS):
Anyone interested in medical school can join LMSA, you do not need to be of Latino/Latina heritage!
lmsa.plus@exchange.fullerton.edu

Math Club Promotes involvement for students and faculty in the mathematical community. The club encourages students to start joint research projects with faculty and attend conferences nationwide for observation and/or presentation. Its activities bring together all levels of math majors in one setting, such that new students can be involved. Most Math Club members continue their education as a graduate student.
csfmathclub@gmail.com

NSM Inter-club Council (NSM-ICC): NSM clubs and students collaborate with each other and Associated Students (ASI) to provide events and travel funding to all NSM and CSUF students. The NSM – ICC organizes the NSM Symposium, Meet and Eat with the Deans and Chairs. nsmicc.csuf@gmail.com

Physics Club: Organizes lecturers from guest speakers as well as several events a year. All CSUF students are welcome. Physicsclub.csuf@gmail.com

Pre-Veterinary Club - The Cal State Fullerton Pre-Veterinary Club is an organization on campus that is open to all students who have interest in pursuing veterinary medicine. The club provides exposure to various aspects of veterinary medicine including hands-on experience, veterinarian speakers, social events, and community service opportunities throughout the semester. prevet.csuf@gmail.com

SMART Girls Support Group (Sisters in Mathematics and Academic Relations in Teaching): Holds monthly meet-ings, study sessions, and provides access to advisors. Learn how to be successful in math courses, relate undergrad-uate courses to high school teaching connect to school tutoring in schools and networking. Males may join as associ-ate members. csufsmartgirls@gmail.com

STEM Outreach Club: Builds a community with your peers. Forms study-groups. Gets involved in the community. Helps promote science. And much more! ALL MAJORS WELCOME! csufmentor1@gmail.com

Student Health Professions Association (SHPA) - Informs students about the opportunities available in the various health professions. Furthermore, the club provides volunteer opportunities for students to get involved in the community, campus life, American Red Cross blood drives, and work closely with the Health Professions Advising office which is dedicated to assisting students in getting admitted to health profession graduate schools. csufshpa@gmail.com

SUCCESS (Students United with Community Collaborators to Enhance Success in Science): Consists of students from all STEM disciplines who are interested in undergraduate research and collaborate together to hold workshops and events for CSUF students. SUCCESS@CSUF@gmail.com