California State University
SAN MARCOS

COLLEGE OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

EVERYBODY HAS A SUPER POWER. WHAT'S YOURS?

CELEBRATION OF ACHIEVEMENT

Honoring the outstanding students, faculty and staff who make the College of Science, Technology, Engineering, and Mathematics (CSTEM) successful.

Monday, May 8
USU BALLROOM
4:30–7:30 p.m.

SPECIAL EDITION

Master of Ceremonies:

Ed Price, Ph.D.
Professor, Physics

Introduction:

Ed Price, Ph.D.
Professor, Physics

Presentations:

Biological Sciences & Biotechnology
Matthew Escobar, Ph.D.
Department Chair

Chemistry and Biochemistry
Sajith Jayasinghe, Ph.D.
Department Chair

Computer Science and Information Systems
Ali Ahmadinia, Ph.D.
Department Chair

Mathematics
Amber Puha, Ph.D.
Department Chair

Physics & Engineering
Gerardo Dominquez, Ph.D.
Department Chair

College of Science, Technology, Engineering, & Mathematics
Jackie Trischman, Ph.D.
Dean

Closing
Ed Price, Ph.D.
Professor, Physics

Introduction by Dean Jackie Trischman

What's Your Superpower?

We asked this as we started the year, recognizing that we all contribute to the Power of CSUSM in different ways. Students were struggling after the years of pandemic learning left gaps and lowered self-confidence. We adjusted our teaching strategies and used everything in our tool belts to meet our students where they were.

We mentored, advised, coached, cheered, shared, and listened as we delivered our instruction and helped students to find their way. Your care and concern for our students, hope for the future, and willingness to step in where needed was obvious throughout the year. As we shared our campus with industrial representatives and school counselors, many mentioned how The College reaches students and fulfills pillar words within our new mission, vision, and values statements: words like INSPIRE, MENTOR, and EMPOWER.

We were challenged by change across the year in ways that we could not have imagined only a few short years ago. But just like in the comic books, each of you have risen to the occasion time and time again. The College brought in record grant funding, welcomed our second largest class of first-year students ever, and developed new classes, majors, and minors to meet the needs of our region. You have shown creativity and resilience in adapting to new processes and technologies. And you have supported each other through the many ups and downs that came with these changes and with returning to our new normal of blended in-person and remote operations.

We added new energetic faculty and staff who brought an enthusiasm that helped us all to start to dream big again, and I am eager to see where CSTEM will go next. As we look ahead to celebrating Commencement 2023 in a few short weeks, let us remember the lessons we have learned this year about the power of collaboration, innovation, and perseverance. Let us take pride in all that we accomplished together!

Outstanding Faculty-Student Collaboration

Awarded to Dr. Jane Kim and Zaid Salah

Kim and Salah have been working together since January 2022, including a full-time Summer Scholars research fellowship. Salah has presented his results at CSUSM student symposia, the Southern California Conference for Undergraduate Research (SCCUR) in November 2022, and the Southern California Genome Stability Symposium in December 2022. Salah and Kim are preparing data for a publication with Salah as first author, tentatively titled *"Myotonic Dystrophy Type 2 causing CCTG/CAGG DNA repeats cause DNA fragility in vivo"*.

Salah investigates DNA double strand breaks caused by CCTG DNA repeat sequences. This is relevant to human genetic disease since individuals with Myotonic Dystrophy Type 2 have excessively long (75-11,000) CCTG repeats in the ZNF9 gene. These repeat sequences are introduced into budding yeast, a simple model organism, to analyze the effect that repeat length and orientation have on DNA breaks.

Salah made a yeast strain with (CCTG)138, the longest CSTEM has ever been able to clone in the lab. Working with repetitive DNA is experimentally very challenging, so this accomplishment is a testament to Salah's resilience and drive, as the CCTG repeats of increasing length do indeed increase the rate of DNA breakage compared to a non-repetitive control strain.

Salah graduated in December 2022 and is volunteering in Kim's lab while he works as an Instructional Support Technician for the department. Salah has also made extraordinary strides in research over the past year and is on a trajectory of being a skilled experimentalist, introspective problem solver, and overall resilient student continuing to grow when he begins a Ph.D. program at Tufts University this fall.

Faculty Retiree | Dr. Brian Norris | Biological Sciences, 1995-2023

Outstanding Faculty-Student Collaboration

Awarded to Dr. Carlos Luna Lopez & Gilda Castellanos

Luna Lopez and Castellanos worked on a research project involving breast cancer and tumor invasion; Triple Negative Breast Cancer (TNBC), a very aggressive form of cancer due to its metastatic nature (ability to migrate and form secondary tumors). In the Luna Lopez Lab, they created 3D models of TNBC tumors and introduced them in the vascular network of chick embryos. By adding a complex network of blood vessels, they create a more physiologically relevant model of the tumor microenvironment. This technique allows them to study breast cancer invasion, as they measure the rate and number of cancer cells moving through vascular networks using fluorescence microscopy.

Early in her academic career, Castellanos obtained a CSUPERB President's Commission Scholar Award, allowing her to start her research work with financial support and research funds. Over the years, she's grown into a critical thinking, independent, and motivated student with a clear set of goals, and the discipline to achieve them. Castellanos will graduate May 2023 and plans to attend graduate school for a Ph.D. in bioengineering. Her future goal is to integrate into a pharmaceutical company to solve biomedical challenges and create viable solutions for patients. Later, she also hopes to also obtain a MBA degree.

CSUPERB President's Commission Scholar

The California State University program for Education and Research in Biotechnology (CSUPERB) recognizes that research experience is critical to engaging and graduating students interested in biotechnology careers. The focus of this program is to increase the number of undergraduate students who have access to an early, full-time research experience.

Awarded to Gilda Castellanos

Project Title: Metastasis of Breast Cancer Cells Through the Chorioallantoic Membrane Vascular Network of the Chick Embryo

Castellanos wrote a proposal to study cancer metastasis using the chorioallantoic membrane (CAM) of the chick embryo with Luna Lopez. Since receiving the honor, Castellanos has worked in the Luna Lopez lab to fabricate microfluidic devices, allowing study of the formation of 3D cellular spheroids. This work will help CSTEM understand cancer cells better. Castellanos' positive attitude, strong work ethic, and dedication are contagious and serve as an example of what undergraduate students can achieve.

COAST Undergraduate Research Awards

The CSU Council on Ocean Affairs, Science, & Technology (COAST) is the CSU system wide affinity group for marine and coastal related activities. COAST promotes interdisciplinary, multi-campus collaborations to advance the knowledge of California's natural coastal and marine resources, and the processes that affect them. The projects are selected though a competitive process. Awarded to:

Fares Alhabardi mentored by Dr. Hamed Nademi
Rapid Prototype Development of the Ocean Wave Energy Converter for Offshore Desalination Plants

Jonathan Garcia mentored by Dr. Hamed Nademi
Prototype Testing for Offshore Wind Farms

Jennifer Sanchez mentored by Dr. Elinne Becket
Metagenome Chromatin Confirmation Capture (MetaHiC) Sequencing on Coastal Microbiomes to Map Mobile Genetic Elements

Luis Gutierrez mentored by Dr. Darcy Taniguchi
Investigating biodiversity of unicellular phytoplankton off the California coast through taxonomic identification and carbon biomass

Outstanding Faculty-Student Collaboration

Awarded to:
Dr. Robert Iafe & Gabrielle Martinez

Iafe and Martinez have worked closely on substrate scope assessment for the preparation of substituted tetrahydrofurans using gold catalysts. Martinez has been able to accomplish a significant amount of research and present her findings. Based on her progress, the work may be submitted for publication in Summer 2023.

Martinez has been essential in the advancement and assessment of a novel gold catalysis method developed in the Iafe lab. Gold salts have previously been found to catalyze the reaction of benzylic alcohols to various nucleophiles, particularly primary alcohols. Expanding on this work, a method has been developed to catalyze the intramolecular reaction of two alcohols on the same molecule, where one of the alcohols is at the benzylic position. The reaction scope was assessed with 5- and 6-membered oxygen-containing rings with various functional groups. Martinez will graduate May 2023 with a chemistry degree. She aims to obtain a Ph.D. in organic chemistry and pursue a research career that focuses on the chemistry occurring in the microbiome.

Faculty Retirees:
Dr. Ann Dickinson | Chemistry & Biochemistry, 1998-2023
Dr. Paul Jasien | Chemistry & Biochemistry, 1991-2023

Outstanding Faculty-Student Collaboration

Awarded to Dr. Muhammad Lutfor Rahman & Daniel Timko

Timko is an exemplary student in the CSIS graduate program and has contributed to four scientific papers, with several more in the pipeline. He has been working with Rahman on evaluation and enhancement of an anti-smishing tool called *Smishtank: Community-based phishing submission and verification system.*

Timko has developed a community-based SMS phishing submission and verification website. The fully functional website comes with multiple features and establishes an intriguing research direction for SMS phishing, as well as a standardized starting point for future research in the mobile SMS phishing domain. This website has the potential to make a significant contribution to the domain of cybersecurity, particularly mobile phishing.

Timko is the lead author of a paper which got accepted at the 16th ACM Conference on Security and Privacy in Wireless and Mobile Networks, a prestigious conference held in the UK. This co-authored paper got accepted into the 13th ACM Conference on Data and Application Security and Privacy. He also contributed two other research papers, which are under resubmission.

In addition to his graduate studies and research with Rahman, Timko has worked as an Instructional Student Assistant for three semesters, where he has exhibited extraordinary dedication, high standards, and exceptional competence in promoting student learning. After graduation, he's planning to start a business in mobile security aligned with his thesis *"Comparative Analysis of Anti-Smishing Tools."* He also hopes to build mobile applications that can provide security and privacy for millions of users.

Outstanding Faculty-Student Collaboration

Awarded to Dr. Mike Picollelli & Sean Kim

Kim possesses a rare combination of considerable mathematical aptitude, unfaltering diligence in his studies, and an approachable, kind disposition. Kim entered CSUSM as a master's student in Fall 2021, having completed his Bachelor's in Mathematics at the University of San Diego.

Picollelli and Kim worked together on a project to establish lower bounds on the number of cycles of certain lengths in graphs. A graph (or network) consists of a set of vertices along with a set of edges which connect pairs of vertices. The chromatic number of a graph is the least number of colors that can be used to "paint" the vertices so that every edge connects vertices of different colors. A 2016 conjecture of Brewster, McGuinness, Moore, and Noel asserts that if a graph's chromatic number is at least k+1, then it has at least (k+1)(k-1)!/2 cycles whose lengths are divisible by k, whenever k is at least 3. Building on recent innovations, Kim and Picollelli have made the first substantial progress on this problem by showing that it holds when k=3 for a wide class of graphs, and they have also improved some related estimates.

Kim expects to graduate in Spring 2023. After graduating, he intends to apply to Ph.D. programs, with a long-term plan of remaining in academia, teaching mathematics at the university level.

The Wolfram Award

The Wolfram Award is given to an undergraduate student for achievements in computational science. Students incorporating computation into their undergraduate research projects or as part of advanced coursework are eligible for nomination.

Awarded to Ashtin Larrabee

Larrabee has written numerous programs in number theory for both her undergraduate and graduate-level coursework. Her code is exceptionally well-documented, making clear the connection between theoretical mathematics and computation. This perhaps should be expected since Larrabee plans on being a high school mathematics teacher. Larrabee will be enrolling in the School of Education credential program in the fall.

K. Brooks and Marion Reid Student Achievement Awards

Thanks to a generous donation by Founding Librarian Dean and Librarian Emerita Marion Reid and Founding Faculty Member and Professor Emeritus K. Brooks Reid, the Department of Mathematics annually recognizes three students that have shown outstanding academic performance in Mathematics. Awarded to:

Tyler Weaver
Weaver is recognized with the K. Brooks and Marion Reid Student Achievement Award in Discrete Mathematics.

Cameron Ginn
Ginn is recognized with the K. Brooks and Marion Reid Student Achievement Award in Algebra/Analysis.

Haoyang (Chris) Lu
Lu is recognized with the K. Brooks and Marion Reid Graduate Student Achievement Award.

Faculty Retiree | Dr. Linda Holt | Mathematics, 1991-2023

Outstanding Faculty–Student Collaboration

Awarded to Dr. Justin Perron & Ashley Corey

During Corey's time at CSUSM, she has distinguished herself both inside and outside the classroom. Inside class, she has shown remarkable growth as a physicist striving to understand the physics curriculum at a deeper level. Outside class, Corey has spent considerable time working in the Perron Lab, testing silicon quantum dot qubit devices. These devices isolate individual electrons in semiconductors and have applications in quantum information science. Corey's experimental work focused on characterizing these devices and highlighting irregularities in their performance. Specifically, she discovered that the devices she was measuring were unintentionally confining three regions of electrons as opposed to the intended two regions. Identifying this issue and the probable causes, should help researchers design more uniform and better functioning devices.

Her work ethic and commitment to the research has been consistent since she first began working with Perron in 2022 as a Summer Scholar.

In Fall 2023, Corey will pursue her Ph.D. in materials science at UC San Diego. After obtaining a Ph.D. related to quantum science, her long-term goal is to remain in academia, continue her research, and teach the next generation of scientists. Corey was also the president of the Society of Physics Students and Women in Physics from 2021-2022.

American Physics Society – Best Research by an Undergraduate Student Award

Awarded to Ashley Corey

Corey took the initiative to present her research at the American Physical Society Far West Division meeting in Fall 2022. Her research presentation *"Characterizing Gate Defined Quantum Dots in a Mesa-Etched Silicon Nanowire"* was so impressive that she was awarded the Stephen Chu Award for Best Undergraduate Research.

Faculty Retiree:
Dr. Clarisa Bercovich Guelman | Applied Physics, 2007-2023

Outstanding Faculty-Student Collaboration

Awarded to Dr. Hamed Nademi & Sean Resor

Over the last year, Resor has spent significant time collaborating with Nademi on his Wave Energy Converter prototype project which addresses the design and implementation of electronic systems for addressing contemporary challenges in marine energy development. Resor has actively attended the monthly meetings with Department of Energy (DOE) on behalf of the Marine Energy Collegiate Competition (MECC) team. He also co-authored a paper with Nademi which was published at the Ninth IEEE Conference on Technologies for Sustainability (IEEE SusTech 2022).

Resor also found his own industry mentor/sponsor for his capstone project and began working on it several months before his peers. His project combines applied electrical engineering (EE) and the biomedical area. Resor has distinguished himself among EE students inside and outside the classroom. He was among top 5% in the class on four major EE courses. Resor has also had leadership roles in several activities on campus, including Out in Science, Technology, Engineering, and Mathematics (oSTEM), National Society of Black Engineers (NSBE), Society of Women Engineers (SWE), Society of Hispanic Professional Engineers (SHPE), IEEE, and is part of the CSTEM Student Organization Council.

Resor has already received several job offers from pioneering industries in San Diego County and his goal is to one day establish his own start-up company.

San Diego Engineering Council President's Recognition Award

Awarded to Sean Resor

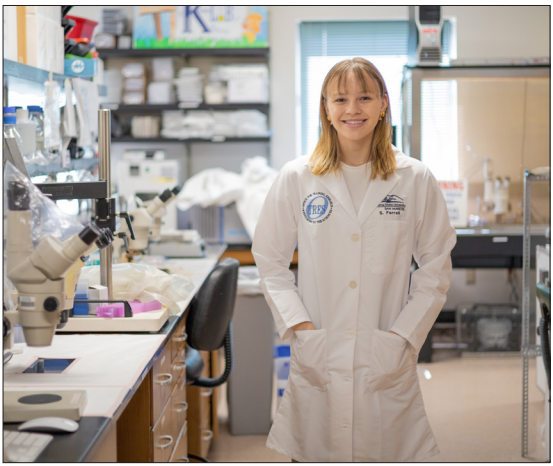
The San Diego County Engineering Council (SDCEC) occasionally recognizes student leaders who have gone above and beyond to contribute to the engineering community in San Diego. Resor earned this award for his advocacy and leadership in advancing CSUSM student organizations, including oSTEM, NSBE, SWE, and SHPE. He also was recognized for his hard work both within the industry and on-campus.

San Diego Engineering Council's Outstanding Leadership in Engineering Award

Awarded to:
Dr. Reza Kamali

Kamali earned this recognition for his influential and invaluable work, in addition to being the founding faculty of the CSUSM electrical engineering program. A steadfast advocate for his students, Kamali is energized by student success. His work throughout the past few years has included mentoring students, building a robust curriculum, installing cutting-edge technologies, being a founding advisor of multiple student organizations, and much more. Kamali's work will have a lasting and positive impact on the electrical engineering industry at large and the North County industries. He focuses on the future workforce needs and how the skill sets of our graduates can address current societal issues.

CSTEM Dean's Outstanding Graduate Award



Awarded to:

Serena Farrell

Farrell's excellence, resilience, and persistence has been on full display as she worked to earn money to support her education, ran long distance on both the cross country, and track teams, and engaged in research that earned recognition both at CSUSM and nationally. She also served in countless leadership roles, including the Associated Students Inc. (ASI) representative for CSTEM and a member of the Student-Athlete Advisory Committee. Her mentors describe her as a motivated and intentional leader.

Farrell is leading the writing of a manuscript describing commercially important work on aquatic larvae of Aedes aegypti, the Yellow Fever mosquito, to be submitted in a matter of weeks. That rarely happens at the undergraduate level as it takes not only the diligence in the lab, but also a deep understanding of the literature and confidence.

She has been the voice of students on committees, where she advocates for diverse representation on campus and within STEM fields. Her leadership in this regard compelled her to help organize *Embrace Equity in STEM* on International Women's Day.

Farrell has also served as a teaching assistant, founding lead researcher in the Kolosov Lab, and a scholar through the Center for Training, Research, and Educational Excellence (CTREE) and Summer Scholars.

CSTEM Dean's Undergraduate Research Award

Awarded to:
Berenice Almaguer

Almaguer's academic record, research work at Johns Hopkins and CSUSM, presentation experiences, independence and leadership in the lab, resilience during the pandemic, and academic successes speak to her abilities as a scientist. Her intellect and analytical skills and passion toward a research-based career will ultimately help our broader community. "A go-getter who is not afraid of challenges" and "makes the best of challenging situations" are the phrases from her nominators that stood out.

While in the Jameson Lab, Almaguer examined her independent hypothesis that epidermal gamma delta T cells interact with peripheral neurons and possibly other immune cells through neuropeptide Y forms.

As a first-generation college student, she looked to the university community for support and guidance, and she took advantage of all that the Bridges, Beckman, and McNair Scholars Programs had to offer; then worked to give back as well. Almaguer led an activity at SuperSTEM Saturday and participated in the Unidos Leadership Program through the LatinX Center. Her engagement as a student leader and a mentor was appreciated by people not only in the Jameson Lab, but throughout the campus community.

CSTEM Community Engaged Scholar

Awarded to: Gabrielle Martinez

Martinez´s academic performance, undergraduate research work, and leadership within CSTEM are truly exemplary.

Martinez has an extraordinary dedication to sharing her passion with the community and does so in her leadership role as the president of the American Chemical Society (ACS) student club. Through the organization, she has been able to advocate for green chemistry, the design or creation of chemical products and processes that reduce and eliminate the generation of waste and/or use of hazardous substances. Additionally, Martinez showed outstanding patience, intelligence, and skill when leading activities such as the "Better Than Magic Show" at SuperSTEM Saturday, where hundred of individuals engaged in the beauty of chemistry.

Throughout her education, she has looked for opportunities to focus and deepen her interests, such as by engaging in organic synthesis research on the CSUSM campus and at the Scripps Research Institute. Additionally, during her work as an Academic Peer Mentor, she frequently sought out ways to make the pathway more welcoming for students who come after her. Martinez believes it is immensely important to encourage younger students to see themselves in STEM. It is for this reason and many others that she will leave a legacy of compassionate leadership.

CSTEM Finalists at the Symposium on Student Research, Creativity, and Innovation

These students were selected at our campus symposium to represent California State University San Marcos at the Annual CSU Systemwide Student Research Competition. The competition is held to promote excellence in undergraduate and graduate scholarly research and creative activity by recognizing outstanding student accomplishments throughout the 23 campuses of the California State University.

Jocelyne Dates | *Biological Sciences | Voltage-gated Ion Channels Regulate Ion and Fluid Transport in the Malpighian Tubules of the Common Cabbage Looper larvae Trichoplusia ni*

Michelle Kang | *Mathematics | The Saturation Spectrum of Odd Cycles*

Mason Laurin | *Biological Sciences | Malleable mouths: upper and lower beak kinematics of the Loggerhead Shrike in relation to bite force and velocity*

Christina Velasquez | *Biological Sciences | Identification of BST2 as a Biomarker for Alopecia Areata in Both Mice and Humans*

Jaeden Flury | *Biological Sciences | Investigating wound microbiome composition in Type 2 Diabetic mice.* **Flury was awarded first place in the Biological and Agricultural Sciences undergraduate division at CSU statewide competition on April 29, 2023, at SDSU.** Her project involved a transdisciplinary collaboration that was supported by a CSTEM IINA award and involved an exceptional amount of independent literature review and assay development. Based on her initial findings, Flury has presented her work broadly and is now passing the work on to a new group of students.

CSTEM Outstanding Student Leader

Awarded to:
Haley Lorenz

Lorenz is dedicated to sharing her passions with the community as chair of the CSTEM Student Organization Council, president of the Association for Women in Mathematics, and vice president of oSTEM. Notably, her leadership helped CSTEM launch the newly formed CSTEM Student Organization Council, which brings together leaders from diverse organizations to collaborate to increase student culture and success.

Lorenz has shown outstanding patience, persistence, intelligence, and decision-making skills when organizing Embracing Equity in STEM, working with the community at SuperSTEM Saturday, and actively planning the STEM IDEA Academy. At each, she constantly advocates for inclusion, equity, and diversity within STEM. Her eagerness to contribute and spearhead these events has had a significant impact on this institution and a vast amount of students. Lorenz consistently faces new challenges head-on and with enthusiasm and poise.

Within the Department of Mathematics, she has proven to be an intelligent and charismatic resource, as she advocates for students within the major, providing selfless guidance, a listening ear, and uplifting motivation. Despite the many demands on her time as an undergraduate student in a very challenging field, she gives her time to mentor and support her peers. Her ability to keep moving forward while constantly giving back to the community is remarkable.

CSTEM Inclusive Excellence & Diversity Award

Awarded to Sean Resor

Resor's academic record, work as a peer mentor, and leadership have immensely impacted the College. Throughout his semesters at CSUSM, Resor has shown a commitment to building a community of support for all students, especially those within STEM.

Resor has been heavily involved in all areas of development of the new electrical engineering program. He's also showed outstanding leadership skills by championing the importance of clubs and a supportive community within in CSTEM. On numerous occasions, he has been a powerful advocate for students and an ambassador for the institution. With his work as a peer mentor, club founder, club officer, leader, and ally, Resor was able to establish four thriving student communities that bridge the gap between culture, curriculum, and careers.

After taking advantage of summer bridge and research opportunities as a transfer student, he had an awareness of the program and the college experience that few students bring with them.

Resor's attitude and his willingness to devote his time and talent to helping first-generation and underrepresented peers succeed in a very difficult major align well with the university's goals. The Office of the Dean is confident that his legacy will last well beyond graduation.

CSTEM Minerva Award for Outstanding Graduate Teaching

The College of Science, Technology, Engineering, and Mathematics Minerva Award recognizes outstanding graduate student teaching. This award celebrates effective teaching practices.

Awarded to Brad Hunter

Hunter's academic record, student teaching experience, leadership achievements, and well-developed teaching philosophy are indeed a testament to his commitment to the STEM community. He has taken an interesting path to get to where he is now and his enthusiasm for instruction, supporting his peers, and recognizing the need to address equity concerns will all have a lasting impact.

His work to design Course Embedded Learning Support (CELS) activities, outstanding research efforts, and his leadership roles both as an undergraduate and as a graduate student all contributed to Hunter's impressive record honored with this award.

Many are impressed with his discussion of growth mindset: "At the core of my teaching philosophy is the belief that every student has the potential to succeed, regardless of their background or prior experiences," said Hunter. "I firmly believe in the power of a growth mindset, which holds that intelligence and ability can be developed through hard work, dedication, and persistence. In my experience, students who embrace this mindset tend to be more motivated and resilient, and they are better equipped to overcome challenges and reach their full potential."

His ability to reach students, to engage them with active learning strategies, and to motivate them is remarkable. He is always eager to put in the extra effort to genuinely connect with students and to help them build the confidence they need to succeed.

CSTEM Staff

Amy Armstrong
Lori Asaro
Sara Belontz
Victor Bolanos
James Bowen
Caroline Caplin
Breanna Caso
Dana Edstrom
Jeani Cressy
Tonya Devitt
Courtney Dow
Farideh Farheidar
Jessica Faulkner
Anissa Garcia
Elizabeth Gonzalez
Albert Halili
Dakota Heisel
Rosalina Hristova
Jennifer Johnson
George Lane
Calvin Le
Rebecca Luu
Diane Mitchell
Jeffrey Morales
Valerie Moreno
Luis Munoz
Courtney Nance-Sotelo
Elizabeth Nercessian
Jonathan Pont
Angelica Ramos
Everardo Robles
Laurie Schmelzer
Emma Smith
Janine Smock
Mikaela Speets-Drake
Bradi Zapata

CSTEM Outstanding Staff Award

Awarded to James Bowen

Bowen plays a pivotal role in the functioning of the Instructional Support Technician (IST) teams in both Science Hall I and II. Bowen has been directly responsible for initiating a number of new procedures that enhance efficiency in both the instructional and research laboratories. His knowledge of the various areas of chemistry, i.e., organic, inorganic and analytical, is unparalleled. He loves to share this vast knowledge and experience with any colleague who seeks his input.

In the past few years, CSTEM has experienced several major challenges in the delivery of our laboratory curriculum -- many, but not all, caused by the COVID pandemic. Bowen had thought of procedures which provided alternate solutions and was able to mitigate the burden that these caused. During the pandemic, the Department of Chemistry & Biochemistry was the only one able to deliver in-person lab instruction to students. Bowen played a major role in facilitating this delivery. He has also been incredibly generous with his time by volunteering to be on campus anytime his assistance is needed. He has an excellent relationship with the commercial vendors who provide the necessary equipment and supplies needed by the department.

Despite the overwhelming amount of work that everyone is tasked with, Bowen consistently finds ways to help his co-workers. His willingness and commitment to assist and educate others is unequaled. He's quick to respond to requests for additional information from other team members and is thorough in ensuring all loose ends are completed for any task that he is assigned.

Bowen contributes to his job, colleagues, students, and external contacts in a way that is unmatched.

CSTEM Outstanding Lecturer Award

Awarded to Jason Swalwell

Swalwell has been at CSUSM since 2013, first as an open university student, then a master's student, and as of Fall 2017, a lecturer.

He has an amazing breadth as a lecturer and has taught classes where our the least prepared students learned to add, subtract, and multiply fractions (Early Start Math 10/20/30). He was also able to teach the most sophisticated mathematical class, the Discrete Mathematics course Math 270, which serves computer science students. Swalwell has also taught almost everything in between these courses, including remedial, general education, college algebra, pre-calculus, and various calculus courses.

In his evaluations, students consistently praise his caring and engaging nature and well thought out pedagogy. He is often also described as approachable, known for having a good rapport with students, fully able to grasp the subject material and able to deliver high-quality classes.

Swalwell started out at CSUSM as a good student, and he has turned into an even better colleague -- someone who leaders within the Department of Mathematics entrust with some of the most critical classes. This is largely due to his intelligence, dedication, and caring personality.

CSTEM Faculty Outreach Award

Awarded to Ed Price

Price has had a longstanding commitment to outreach at CSUSM. As co-director of CRESE, the Center for Research and Engagement in STEM Education, he demonstrated outstanding leadership in obtaining funding that directly and indirectly highlights CSUSM as a destination for quality education in STEM.

Fall 2022, he established the NSF (AISL) Collaborative Research: The Expansion of a Mobile Making Project That Engages Underserved Youth Across California in STEM which runs weekly at 11 middle schools, two libraries and one Boys & Girls Club in San Marcos, Oceanside, Vista, and Escondido. He also established the NASA MUREP Aerospace Academy, which allows students to build their own lunar rovers and engage with lunar science and engineering challenges at four local high schools.

Under his leadership, CRESE has fostered several notable partnerships including San Diego County Office of Education Migrant Education Program in the summer of 2022 with virtual instruction and an in-person day hosted at CSUSM and the Rancho Minerva Middle School summer camp at Vista Unified last summer. Price's efforts impact hundreds of students every year. His leadership has provided significant opportunities for students and faculty members to engage in outreach activities.

CSTEM Community Partner Award

Each year, CSTEM honors a community partner who has demonstrated a commitment toward helping CSUSM and CSUSM, especially, to fulfill their mission of student success.

Awarded to Dr. Samantha Beasley, Encodia. Inc.

As an alumna and recent Ph.D. recipient, Beasley knows the transformational power of a CSUSM education. She understood our challenges and opportunities well and proposed a partnership between Encodia and CSTEM to help both connect to the community. Through Encodia's SuperSTEM Saturday engagement and sponsorship, Beasley inspired thousands of K-12 participants and their families. Her vision of building a diverse workforce in STEM is forward thinking.

CSTEM is also deeply appreciative of her support in the annual and successful Summer Scholars program and the new STEM IDEA Academy. Both of these programs impact students and encourage them to continue pursuing STEM careers and engage in research and life-long learning.

CSTEM is grateful for the partnership with Encodia and looks forward to continue working together to encourage talented students in the region to see themselves in STEM.

Encodia

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CSTEM Campus Hero Award

The College of Science, Technology, Engineering, & Mathematics annually recognizes campus heroes who have helped us achieve our goals through their outstanding service and support.

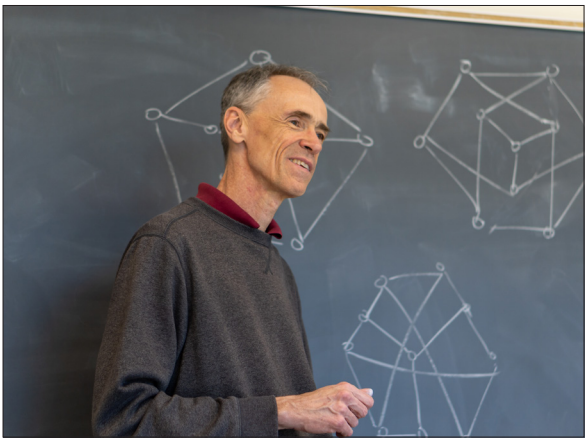
Awarded to Erin Fullerton & Audrey Hotaling, Integrated Risk Management

CSTEM is excited to recognize our Integrated Risk Management partners for their commitment to delivering a safe experience for all participants in the STEM IDEA Academy, a free, week-long overnight camp for high school girls interested in purusing careers in STEM. The Academy is the first ever state-funded overnight camp at CSUSM. Fullerton and Hotaling have worked tirelessly, consulting with the STEM IDEA Academy team to create and fully draft an entire Youth Protection Resource Guide, which includes policies, procedures, forms, staff training programs, camper guidelines, and parent handbooks. This herculean effort is very much appreciated.

STEM+ IDEA ACADEMY

INCLUSIVITY • DIVERSITY • EQUITY • ACCESSIBILITY

Harry E. Brakebill Distinguished Professor Award



Awarded to:
Dr. André Kündgen

Established in 1998, the Harry E. Brakebill Distinguished Professor award is the highest honor presented to one CSUSM faculty annually.

Kündgen, a professor in the Department of Mathematics, was chosen for his exceptional accomplishments in teaching, research, and service. Over the years, he has taught 22 different courses at the undergraduate and graduate level. His students and colleagues describe him as an inspirational mentor who impacts student lives through teaching, mentorship, and the demonstration of true care for his students' academic, career, and personal success.

An internationally recognized scholar, Kündgen's fields of interest are graph theory and combinatorics along with the subfields of extremal combinatorics and graph coloring. During his career, he has co-authored 37 papers (some of them published with his students) and presented at more than 80 venues nationally and internationally. Kündgen has also demonstrated exemplary service and a strong commitment to shared governance.

CSTEM leadership is fortunate to have a colleague and friend in Kündgen – He is a passionate student advocate and mentor. He represents the best qualities of our university as both a talented and caring scholar and as an educator. Kündgen was recognized for this award in a campus-wide ceremony earlier in the year.

CSUSM President's Outstanding Faculty Award for Teaching Innovation & Excellence

Awarded to:
Dr. Nahid Majd

Majd, an associate professor in the Department of Computer Science & Information Systems, received this award based on her initiatives to offer diversity and equity coursework within the computer science major. She often examines equity problems associated with artificial intelligence-based algorithms.

In addition, Majd proposed and offered a new data science course. She is currently working to bring this popular field to CSUSM through a proposed data science minor. She constantly advocates that students should be able to pursue their passion and brings this goal into each of her classes. She has the expectation that students enter class at the beginning of the semester feeling welcomed and they exit class at the end of the semester feeling supported, motivated and valued through her love of cutting-edge technologies and innovative pedagogical methods of teaching.

"Each time I teach a topic, I understand it better, and each time my students ask a question, I get an opportunity to discover a new aspect of the topic," Majd said. "To me, the opportunity to learn is the great joy of teaching."

Majd was recognized for this award in a campus-wide ceremony earlier in the year.

Andreoli Award

Awarded to Dr. Bianca Mothé

The Andreoli Award honors The California State University faculty who have demonstrated the highest level of service to the system's biotechnology community.

Mothé has a long history of service to the California State University Program for Education and Research in Biotechnology (CSUPERB), a consortium that supports diversity and research mentorship within the CSU in the field of biotechnology. This award highlighted her exceptional leadership during the pandemic while serving as interim executive director of CSUPERB. Mothé is also an expert in immunology and vaccine design. She's currently serving as a visiting scientist in the La Jolla Institute for Immunology (LJI) lab of Professor Sujan Shresta Ph.D.

"As a scientist and educator, I want to create opportunities for underrepresented students to engage in cutting-edge science," said Mothé. "As a scientist, this involves staying connected and fostering collaborations with other scientists. As an educator, this involves exposing students and allowing them to immerse themselves in science."

Mothé was recognized for this award at a CSUPERB Symposium ceremony earlier in the year.

Awarded to Dr. Brian Norris

Norris has a long and distinguished career as a teacher and scholar at CSUSM. He joined the university as an assistant professor in 1995 and was subsequently promoted to associate professor in 2001, then a full professor in 2007. During his 28 years at CSUSM, Norris has played key roles in the development of the Department of Biological Sciences and has consistently supported its faculty and students.

He was chair of the department from 2002 to 2004 and served as the chair of the departmental graduate committee from 1998–2002. Norris essentially created the physiology concentration, as he personally developed and taught the animal physiology core course as well as eight physiology elective courses (human physiology, neurobiology, endocrinology, medical physiology, comparative animal behavior, a lab in experimental neurobiology, and seminar in physiology and developmental biology). He also served on the departmental faculty search committees that led to the hiring of most of the current physiology faculty, including Dr. Deborah Kristan, Dr. Casey Mueller, Dr. Dennis Kolosov, and Dr. George Brusch.

Norris is a neurobiologist and his research focuses on the effect of neuromodulators on a central pattern generator in the medicinal leech. During his career at CSUSM he has published 16 peer-reviewed papers on neurophysiology, many in highly prestigious journals, such as *The Journal of Neuroscience*. Research mentorship has also been a core component of Brian's work. He has trained eight graduate students and dozens of undergraduate students in his research lab. His students have nominated him for the Brakebill Award four times. Norris' good humor, institutional knowledge, and deep subject matter expertise will be sorely missed by his colleagues as he transitions into retirement back in his home state of Minnesota.

CSTEM Special Recognition

Graduating Veterans

Victoria Buskirk
Luis Diaz
James Donaldson
Kevin Garcia*
Zakary Goddard
Elizabeth Goehe
Larry Haskell
Jomar Jean
Devon Laws
Zachary Leblond
Alberto Ley*
Kyle Monroe
Richard Oldham
Johnathan Rodney
Coy Shaffstall*
Ryan Siewersten*
Alexander Spathopoulos
Dakota Swank
Eric Tyler
Robinson Joel Vendiola
**graduate*

New Student Clubs and Organizations

3D Printing
President: Uma Nair
csusm3d@outlook.com

Association for Women in Mathematics (AWM)
President: Haley Lorenz
awmcsusm@gmail.com

Game Development Club
President: Ali Ahmed
csusmgamedev@gmail.com

CSTEM Students Graduating with Honors

Summa Cum Laude

Maryann Aldawaf
Madison Atchley
Hayla Atkins
Brennan Bloomfield
Lauryn De Los Reyes
Brianna Duarte
Kristina Friedley
Cheyenne Healy
David Ho
Blake Latzke
Nicholas Malamud
Nour Nuhaily
Lisa Nukuto
Alexander Spathopoulos
Robinson Joel Vendiola
Sasha Wellbrock

Magna Cum Laude

Ossama Abdullah
Jessi Angeles
Mariam Bastawrous
Sarah Bazua
Alexander Castaneda
Tanya Castellanos
Danny Chung
Emily Corona
Camillo Dello Iacono
Chad Etchebarren
Elizabeth Goehe
Liam Gomez
Victor Guerrero
James Guffey
Renee Ha
Mena Hatamy
Kyle Hawkins
Steven Hernandez
Bryan Huddleson
Jomar Jean
Skylar Journey
Melody Khorrami
Adrian Le
Morgan Marcue
Marin Mirasol
Elizabeth Murguia
Sophia Nguyen
Rebekah Nguyen
Daniel Raney
Sean Resor
Grace Richardson
Johnathan Rodney
Zaid Salah
Matthew Sierra
Joseph Stowers
Karl Taugher
Benjamin Theurich
Aveanna Anela Tomada
Marisa Treadway

Cum Laude

Zaina Aljayyousi
Adam Amer
Hazel Anagu
Gonzalo Arrazola
Lawrence John Balanza
Justin Butler
Natalie Campos
Andrea Cardoso
Annette Castellon
Kyle Cayne
Annika Clewis
Kara Crowley
Noah Defrench
Rusty Dillard
William Duncan
Garret Esparza
Michael Fang
Serena Farrell
Jaeden Flury
Alexander Garcia
Sydnee Gathings
Emon Gitesatani
Diego Gomez-Ceballos
Michael Horn
Loc Huynh
Hunter Johnson
Amy Johnson
Ashtin Larrabee
Jed Tristan Layson
David Lopez
Jeremy Magana
Gabrielle Martinez
Ricardo Maytorena
Steven Mcarthur
Jasmine Meyer
Miguel Molina
Manuel Montano
Anthony Munshower
Victor Nguyen
Nhu Nguyen
Madeline Nicklo
Kevin Orvis
Alyssa Pacheco
Christopher Paulus
Cassandra Pineda
Abraham Pulido
Banaz Qasab
Jonas Reimnitz
Nicholas Ridley
Christopher Rivera
Matthew Rodriguez
Loly Saenz
Cecilia Salazar Gonzalez
Matthew Salek
Tatianna Sanchez
Ji Seo
Rachael Sharif
Bryan Smith
Parker Smith
Nick Smithson
Michael Snodgrass
Leeluleilani Stockton
Corbin Thaete
Ngoc Tran
Nam Cuong Tran
Adam Turk
Alondra Valencia
Israel Webster
Amer Yono
Jose Zamora

CSTEM Mission, Vision, and Values

Mission – Why We Exist:

The College of Science, Technology, Engineering, and Mathematics (CSTEM) is a collaborative and inclusive community. We inspire, mentor, and empower our diverse students through transformative experiences in a welcoming and engaging learning environment to support their personal and professional success.

Vision – What We Want To Be:

The College of Science, Technology, Engineering, and Mathematics (CSTEM) is committed to becoming a regional and national center of STEM education, research, opportunity, and leadership, as well as an institution of choice for students of all backgrounds. We are scholars and innovators who embrace technological and pedagogical advancements to provide a responsive, inclusive, and engaging STEM education that advances our region and prepares our students to thrive in their future workplaces and communities.

CSTEM Values:

1. Lifelong success of our students, staff, and faculty
2. Excellence in teaching, research, and mentoring
3. High-impact practices in education emphasizing active and applied learning
4. Diversity, equity, inclusion, and respect
5. Welcoming and safe learning and working environments
6. Partnerships and interdisciplinary collaborations
7. Innovation and continuous improvement

SPECIAL EDITION

SUPER THANK YOU FOR COMING

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