

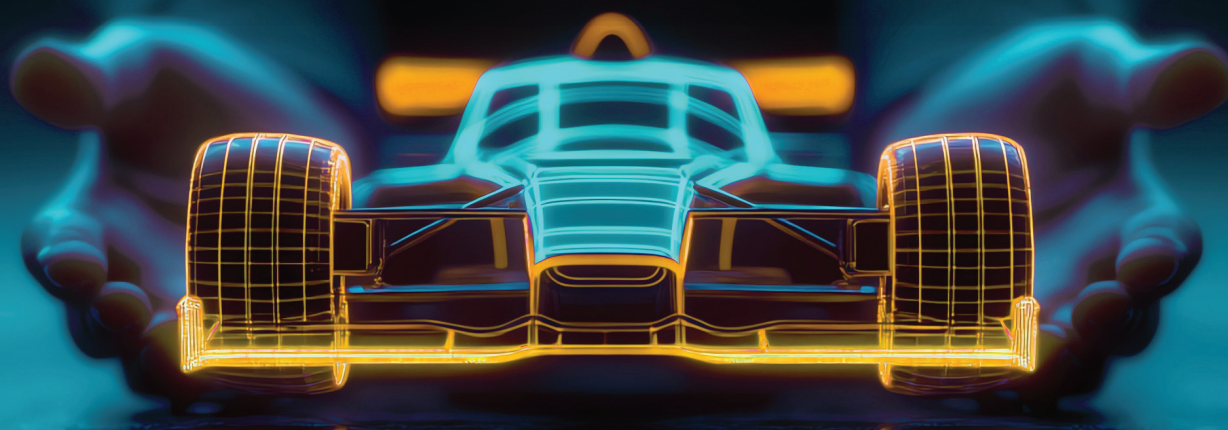
Winter 2024–25

engineering

at San José State

HANDS-ON LEARNING

The Key to Engaging Future Engineers



**Aviation: From
the Simulator
to the Cockpit**

**MPEL Summer
Program for
Community
College Students**

**Human Factors
and Ergonomics**

DEAN'S MESSAGE

The Fall semester got off to a fast and furious start, kicking things off with the Student Club Fair. The Dean's Career Conversations, Silicon Valley Leadership Symposium and recent Conference on Engineering Diversity underpin our commitment to engagement with students. As a university sitting in the heart of Silicon Valley, San José State University plays an important part in making this high-tech region one of the most innovative areas in the world. With our comprehensive curriculum, extensive range of engineering disciplines, and emphasis on hands-on learning and applied research, SJSU prepares students to thrive in the tech-driven marketplace.

“When students choose an education at the college of engineering they experience hands-on skills that can be applied globally”

In teaching we pride ourselves on using practical tasks and projects to help students apply theoretical knowledge to real-world scenarios. With this methodology of learning, students understand the engineering considerations and challenges posed by the natural world. This method of relaying information can help students develop critical thinking and problem-solving skills, and understand that failure is a learning process. It also brings a hands-on approach to leadership that encourages innovation, team alignment, and a commitment to continuous improvement.

The university's strategic location provides access to internships and networking opportunities with leading tech companies and research centers such as NASA. We are constantly demonstrating that the College of Engineering is not only an educational institutional destination, but also a hub for research and innovation. Each year SJSU sends over 1,800 engineers into the workforce, providing more engineers to Silicon Valley than any other university.

With technology making leaps and bounds each day we are constantly evolving to prepare students to meet the challenges in the workforce. Now more than ever the world needs engineers who are not only well grounded in theory, but also engineers who can put their ideas into action. I hope you enjoy the articles in our magazine and look for opportunities to connect with us.

Sincerely,

Dean Sheryl Ehrman

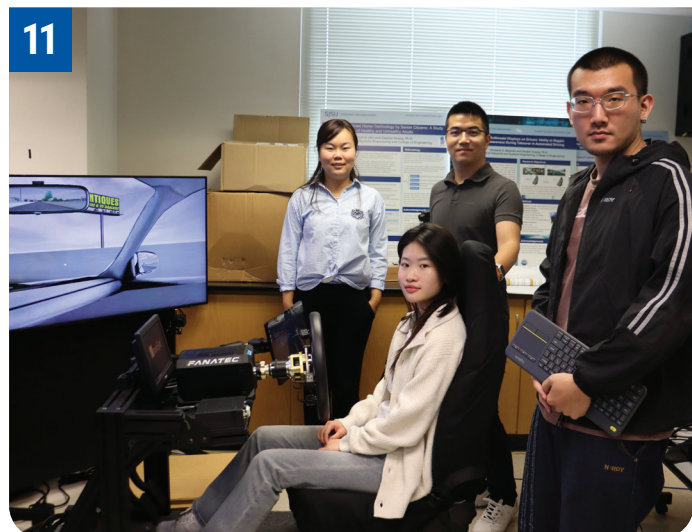
*Don Beall Dean of Engineering,
Charles W. Davidson College of Engineering*

#1 SAN JOSÉ STATE UNIVERSITY
MOST TRANSFORMATIVE UNIVERSITY —*Money magazine*



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Congratulations to **Dr. Magdalini Eirinaki, Dr. Wincen Wu** and **Dr. Yingjie Lui** for securing an NFC grant for their research. The team, along with Dr. Chris Kanich from the University of Illinois,



Dr. Magdalini and Robert

also got their proposal on Cloudsweeper: Leveraging Language Models to Personalize Sensitive Archive Search selected for funding from CAHS/Google. \$80k in funding was secured for their research with the potential of extending funding for another year.



Dr. Magdalini and Derek

A shout out to two of Dr. Eirinaki's thesis students: **Robert G. Campbell**, who is now a PhD student at UCSC, and **Derek Lilienthal**, a PhD student at Oregon State University, who both had their work published in the journal IEEE Access. Both were also Davidson College of Engineering scholarship recipients.

Bravo to **Dr. Lin Jiang** on her newly patented smart breast pump, which promises to be less stressful and more effective for nursing mothers. When her prototype is perfected, she will move on to the Federal Drug Administration approval process. Lin worked with a team of collaborators consisting of a graduate student and two undergraduates, as well as two co-principal investigators: clinical consultant Ish Gulati, a clinician in a neonatal care unit in the Bay Area, and Arlene Spilker, a pediatric nurse practitioner practicing in Los Gatos.



Congratulations to **Dr. Katy Kao** for being recognized as the Society of Women Engineers (SWE) Distinguished Engineering Educator in 2024. This award honors an individual who has made significant contributions for at least 20 years, with at least 10 years of instructional experience. Katy wants to send a big shout-out to Dean Ehrman for nominating her for the award and her letter writers for supporting her. Katy officially received her award at the WE24 conference in Chicago, IL on October 25, 2024.

Kudos to **Dr. Patrick Journey** for receiving the American Heart Association Fellow, 2024. Patrick was elected as a fellow of the Council on Arteriosclerosis, Thrombosis, and Vascular Biology (ATVB). To receive this recognition, Patrick had to demonstrate excellence in nine areas as an academic, including Dissemination of Science via publications, white papers, scientific statements, guidelines, or other manuscript/deliverables endorsed by a major society or group that one has participated in.



Patrick also had to identify mentorship contributions, grants he received to support his research, awards he received, contributions to the field, advanced knowledge and leadership, and contributions to the AHA mission.

San José State University became part of the Aqueous Battery Consortium which is supported by the Department of Energy (DOE), and led by Stanford University and SLAC National Accelerator Laboratory. The project aims to find a reliable, sustainable way to store electricity.

CoE associate professor of materials engineering **Dr. Dahyun Oh**, is part of the consortium, serving on two of the nine project teams. Dahyun's Energy Materials Laboratory will contribute to the understanding of the interface between aqueous electrolytes and electrodes. The project could potentially receive up to \$62.5 million over five years as part of the DOE's Energy Innovation Hubs program. Congratulations Dahyun!



Dr. Sheryl Ehrman's efforts in supporting our diverse students and growing our research enterprise garnered her the Silicon Valley Business Journal's Women of Influence award. Sheryl officially accepted the award at a banquet in Santa Clara. The banquet room was filled with highly accomplished women, both current awardees and past awardees, and was a very fun event. Congratulations Sheryl!

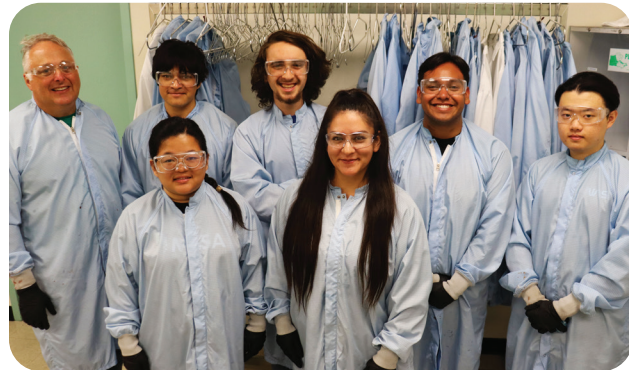


MPEL Summer Program for Community College Students

Extending Opportunities Beyond SJSU

DAVID PARENT HAS BEEN AN ELECTRICAL

Engineering (EE) professor at SJSU for 24 years, and is also the director of the Microscale Process Engineering Lab (MPEL) at the College of Engineering (CoE). As part of the Department of Education Hispanic Serving Institution grant, Professor Parent leads a summer internship program for community college students. Individuals who participate in the program can become technicians at semiconductor manufacturing companies while they pursue a 4 year degree to graduate as engineers.



“We are trying to increase the graduation rate for low-income and Hispanic students, and coming up with transfer pathways for our community college partners,” commented Professor Parent. “Since processes are not automated in the MPEL, hands-on learning is a must for students.”

“It makes a world of difference to have someone lead the program who is passionate about what they do.”

This hands-on approach solidifies the fact that SJSU CoE is the right place to transfer to for a 4 year engineering degree. The students also learn how to use the community

they grew up in as an asset in industry, to encourage different views and approaches to solving problems.

San Jose City (SJCC) chemical engineering (ChE) student Evelyn Saucedo was considering other 4 year colleges before her 2023 MPEL internship, but now plans to transfer to SJSU College of Engineering. The experience convinced her to change her major from ChE to EE, and also opened her eyes to the processes that are used to create wafers and semiconductors.

“Professor Parent really encourages hands-on learning,” said Evelyn. “It’s important that these internship opportunities exist for lower-income students, but it makes a world of difference to have someone lead the program who is passionate about what they do.”

Students learn about safety, what materials they are working with, and how some things are done in the semiconductor industry. One process can involve many steps and those steps branch off into additional ones, so hands-on learning is an evolving process for students.

Josiah Kligmann, a potential EE student from Gavilan City College, found out about the MPEL program through the STEM academy at GCC, and wanted to see how semiconductor chips are made. The experience will help him in finding a future research job, since he is gaining valuable lab experience.

“I really liked working with the nanospectrometer which helps you look inside a wafer and the wafer cleaning process, which doesn’t seem interesting, but I found it fascinating,” said Josiah.

SJCC student Cesar Cortinas found out about the MPEL internship through his school’s MESA program. “I’m a hands-on learner so I do well at seeing and doing things. It makes it easier to talk about the information if asked,” said Cesar.

Mechanical Engineering Hands-on Learning

A student and faculty perspective



THE SJSU MECHANICAL ENGINEERING

department is home to a number of student clubs. These organizations provide excellent opportunities for students to network with industry, work on projects, develop leadership skills, and in some cases compete on a national scale with other universities. Two of these clubs are the Spartan Racing team and American Society of Mechanical Engineering (ASME), which both have professor Vimal Viswanathan as their advisor.

These student driven clubs are able to build projects from the ground up, such as an electrical racing car and human powered vehicles. These projects are unique because they involve a group of students instead of just one individual, and extend far beyond a senior project.

“By getting hands-on experience via these projects, students think about different processes other than just designing on paper or computer screen,” said Professor Viswanathan. “This encourages students to understand different approaches, which gets them ready to eventually work in a team environment in the workplace.”

The Spartan Racing team was initially formed in 1989 with the introduction of Formula SR-0, which was a senior

project developed by the students. After this initial build, the organization remained inactive until 2008, when a group of motivated students decided to breathe new life into the club. Since then Spartan Racing annually designs, manufactures, and competes in Formula Society of Automotive Engineers (FSAE) competitions.

New members of the Spartan Racing team start out as an apprentice, so not only do they experience hands-on learning, but also obtain insight into what an internship would be like in industry. As always, safety is pivotal for senior students and club officers to relay to new members, as well as familiarizing them with operational procedures.

Automotive racing has been predominantly a male-driven activity, however the number of females in the sport has increased and Spartan Racing has followed suit. “We recognize women's presence in the sport and refuse to side-line these valuable team members,” commented Robine van Veen, Spartan Racing president and business lead. “We have created an environment where our female members can take leadership positions, thrive and learn equally. The club's future goal is to connect with and recruit more female candidates.”



The ASME club at SJSU was started in 1983 and is probably one of the most multi-disciplinary organizations on campus. Members have tackled concepts in automotive, thermal systems, machining processes, robotics, naval aerodynamics, and of course human powered vehicle solutions. The club competes annually in a Human Powered Vehicle Competition (e-HPVC) with other universities. The competition was inspired by the need for transportation solutions in developing countries where having a combustion or motorized vehicle may not be an option.

The e-HPVC contest encourages a team of students to design and build their own vehicle, as well as create a technical report that documents the design process, and includes analytical data regarding material strength and the aerodynamics of the vehicle. The competition motivates the club to instill teamwork, think critically and use sound engineering practices to create a competition-ready vehicle that is safe to operate, efficient and relatively inexpensive.

“We also participate in month to month competitions such as combat robotics, and recently created an intercollegiate competition where other schools participated and club officers got some event planning experience,” said Aitrius Wright, the current ASME club president.

“On a personal note, the club has taught me to be very proactive and do work that I’m passionate about, which will serve me and other club members well in the professional world.”

Looking ahead, the Spartan racing team hopes to get more electrical engineering majors involved which will serve the organization well, especially with the recent transition from a combustion to an electrical vehicle. The club also hopes to win more competitions! For ASME the hope is to see continued interest in a club where members are always pushing the boundaries of innovation and creativity.

Both clubs will have their projects on display on April 21, 2025 at the College of Engineering’s annual Showcase and Celebration event, which will be held in the SJSU student union from 4pm to 6pm.

We directly collaborate with our sponsors to get a better grasp on their industry and find solutions to common problems. We make sure students have ample opportunities to diversify their portfolio throughout the year while maintaining high academic status.

“By getting hands-on experience via these projects, students think about different processes other than just designing on paper or computer screen.”

— Professor Viswanathan



From the Simulator to the Cockpit

*Hands on Aviation
Learning at the College
of Engineering*



ACCORDING TO AVIATION LECTURER AND PILOT,

Edgar Mora, the flight simulator lab at San José State's College of Engineering is probably the most hands-on lab you will find on campus. Once theory and concepts are learned in the classroom, students can quickly go to the flight simulators to apply what they have learned. In the flight simulators, students can see the instruments they have just learned about and put this knowledge into practice. The simulators allow students to make mistakes and learn from them, so that when they go into an actual airplane they have worked out most of the issues and experience less errors.

SJSU is one of the only universities that have flight simulators in the classroom. Typically, if a student wants to use a simulator elsewhere, they would have to pay a fee of \$100 to \$150 per hour. "As you know, practice makes perfect, so students can use the simulators and repeat the exercise as much as they want, to get as close to not making any mistakes as possible," said Edgar Mora.

Students also have the ability to record themselves in the flight simulator so they can see how they react to the instruments and how they make adjustments. This helps them streamline their interaction with the simulator so it becomes almost second nature to them.

The Gemini method of hands-on learning is used in the simulator, so students not only experience flying an airplane, but also get a sense of what it is to be a part of a flight crew.

At the Reid Hillview Airport in San José, students take the lessons from the classroom and actually apply them to flying a real aircraft. "Our simulators have the controls and instruments that are found in a trainer airplane like a Cessna, so when students get to the actual cockpit, they know where everything



is located, which makes the transition really easy,” added Edgar.

Simulators are always advancing, from mimicking single engine airplanes to having the ability to integrate panels to simulate a multi-engine aircraft. Many of today’s aircrafts have digital panels instead of analog, which means that simulators need updating to meet modern pilot training needs. Edgar’s wish is to have these advanced instruments at SJSU, so that learning and training can advance to the future and get our aviation students prepared to fly modern aircrafts.

Most individuals who are looking at becoming a pilot as a career path already have the passion to do so. Pilots can make as much money as a lawyer or a doctor, and work less hours due to FAA regulations, making aviation an appealing major option.

“Our simulators have the controls and instruments that are found in a trainer airplane like a Cessna, so when students get to the actual cockpit, they know where everything is located, which makes the transition really easy.”

– Edgar Mora

CLUB FAIR FALL 2024

The Fall 2024 SJSU Engineering Club Fair held on September 10 was a vibrant event showcasing various engineering clubs at San Jose State University. Students had the opportunity to explore a wide range of engineering disciplines, from aviation to environmental engineering. Club members presented their projects, shared their passion for engineering, and recruited new members. It was an excellent networking and community involvement opportunity for students interested in engineering, and provided a glimpse into the diverse and innovative engineering community at SJSU.



CONFERENCE ON ENGINEERING DIVERSITY

On Saturday, October 19, 2024, students, staff, faculty, and guests gathered to discuss how the professional engineering community could create a more diverse environment. Dean Sheryl Ehrman kicked off the event with a welcome, followed by a keynote address from Babatunde Onadele, Core Builders project executive. The keynote was followed by breakout sessions presented by representatives from Adobe, Autodesk, Computer Structures Inc., Core Builders, Granite, Lockheed Martin, NXP, Preston Companies,



Inyong Kim, Autodesk vice president of people, addressed the audience during lunch. This was followed by diversity discussions with Atlassian, Preston Companies, J&J, Teradyne, BRAVEN, Playstation, PG&E, SJSU Student Organization Panel. The day concluded with a networking reception and a SpartUp hackathon for attending students and companies. Thanks to the sponsors, speakers, and organizers for making this event a great success! See you at the 2025 CED event!

LITEPOINT RIBBON CUTTING

In October, a ribbon cutting and plaque reveal event was held at the College of Engineering. LitePoint, a player in the semiconductor testing industry, had their company's name attached to two labs: IS lab E117 and the Dan Cheadle lab in E238.

LitePoint specializes in manufacturing equipment to help its customers develop and deliver new products quickly, efficiently, and cost-effectively. The company generously donated 5G test equipment to the College of Engineering. This will enable students to further their knowledge with the latest testing technology.

Thanks to LitePoint for the donation and for helping the CoE continue the tradition of hands-on learning for students.

SCHOLAR AND DONOR CELEBRATIONS

Once every academic year, scholarship recipients have an opportunity to meet the individual and corporate donors that make student financial support possible. On Tuesday, November 12 at a lunch event, students were able to meet those responsible for their scholarships face to face. Many of the donors are College of Engineering (CoE) alumni who have reached a certain level of success. Others, including generous corporate donors, want to see students reach their full potential.

After a meet and greet, the event was kicked off by Associate Dean, Nicole Okamoto, who outlined what attendees could expect during the lunch. Dean Sheryl Ehrman followed this by thanking the individual and corporate donors. There were a total of 100 scholarship recipients this semester. Dean Ehrman went into detail about the activities that happen year-round in the College of Engineering, including speaking engagements, events, and various clubs that students can participate in.



A short video was played for the attendees that focused on the meaningful impact of scholarships and what they enable students to do. The video also included recipients thanking the donors for their generosity and how the scholarships remove the financial burden from them so they can focus on their studies.

CoE students **Charlie Warner**, mechanical engineering, and **Ferch Sánchez López**, software engineering, both gave compelling speeches that included what they were able to accomplish because of scholarships. They also encouraged students to seek out scholarships that will help them obtain their degrees and make them successful in industry.

Associate Dean Okamoto closed the speaking portion of the event. Lunch followed, where students who were seated with their donors could have a more in-depth conversation. For those looking for future scholarship opportunities, remember that the answer is always no until you ask.

Human Factors and Ergonomics

A College of Engineering Collaboration

FROM BETTER CELL PHONES TO SAFER CARS,

we see the results of the work human factors professionals do every day. Applying human factors principles to new designs and technologies creates systems and devices that are safer, more intuitive, and more effective for accomplishing their given tasks by the people who are meant to use them.

San José State University's College of Engineering (CoE) offers a master's degree program in Human Factors and Ergonomics (HFE) which prepares students for practice that emphasizes theory, practical applications, and research.

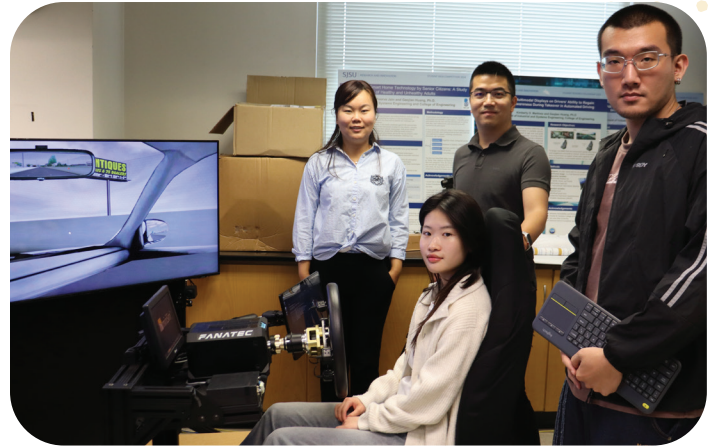
Professors Lin Jiang and Gaojian Huang discovered that their research was going down a mutual path. Both wanted to bridge the gap between humans and smart systems, which would be good for autonomous vehicles, robots and intelligent processes.

"My focus has been on wearable solutions which required a lot of experimenting and hands-on interaction with these products, so the collaboration just made sense," said Lin Jiang, CoE mechanical engineering (ME) assistant professor specializing in robotics and human machine interaction, and mechatronics (a multidisciplinary field that combines mechanical, electrical, and computer engineering to design and create smart systems).

Along with system and software integration there is also a lot of debugging. The research that the professors are doing requires students from multiple disciplines like computer engineering, ME and industrial systems engineering (ISE) to work on the sensors and fabricate the systems.

"This is how we engage students and encourage hands-on learning," commented Gaojian Huang, ISE Assistant Professor, human-automation/AI interaction and automated vehicles focus. "Hands-on learning starts in the classroom, not just the lab."

Students are assigned projects from research to design, because these hands-on experiences will be invaluable in industry. There is also a level of constant improvement as students strive to enhance systems.



"Whether you are pursuing a PhD or going into industry, you need hands-on experience in the lab, and that's the exposure we are getting at the College of Engineering. This is especially important when you look at internship opportunities," said Aries Chu, second year ISE M.S. student majoring in HFE.

Technology companies will often ask internship candidates if they have any hands-on experience. HFE students can easily translate CoE exposure into relevant experience making it easier for them to qualify for opportunities.

Beyond classroom theory and concepts it is even more important for students to know how something like human feedback will perform in the real world. Students apply their designs to actual working models so that they can get concrete reactions from human testers.

"In any human factors research, observing human behavior often reveals gaps between the needs and desires of users and advanced technologies. By engaging in targeted research and prototyping, we can gain a deeper understanding of the factors contributing to these gaps and investigate potential solutions," said Wei-Hsiang Lo, ISE M.S. HFE student.

In the lab, students can utilize designs that provide feedback to see how drivers, for example, will respond to different road conditions. For students like Wei-Hsiang Lo and Aries Chu, it is important to have the opportunities to experiment in a real lab environment to apply theory to reality.

A Record-Number Spartans Named Mountain West (MW) Scholar-Athletes

FOR THE THIRD CONSECUTIVE YEAR, a school-record number of San José State University (SJSU) student-athletes received a 2023-24 Mountain West Scholar-Athlete Award, as 128 Spartans are honored for their performances in the classroom during their athletic career.

The MW Scholar-Athlete Award is one of the highest academic honors bestowed by the conference. To be eligible for the award this year, student-athletes must have completed at least two semesters at the institution and have a 3.5 or better cumulative grade point average while being a member of an intercollegiate team.

The Spartan student-athletes represent 18 sports, including five teams with double-digit honorees, led by women's soccer with 19. Women's gymnastics, in their first year as a member of the conference, was second with 15, followed by swimming and diving and football with 14 each, and women's track and field with 11.

Among those 128 student-athletes, 8 of them are not only training for long hours but also taking on the demanding engineering courses here at SJSU College of Engineering. We not only want to congratulate them on their accomplishments but also highlight their extraordinary efforts in both fields.

For the full list, visit: sjsuspartans.com/news/2024/07/24/school-record-128-spartans-honored-as-mw-scholar-athletes

Nathan Lau
Electrical Engineering
Cross Country Track & Field

Keely Brown
Mechanical Engineering
Soccer

Karissa Ruble
Industrial System Engineering
Soccer

Alexander Walker
Chemical Engineering
Cross Country Track & Field

Hope Northrup
Civil Engineering
Soccer

Ela Freiman
Biomedical Engineering
Swimming & Diving

John Norwood
Aviation
Football

Camryn Clark
Chemical Engineering
Track & Field

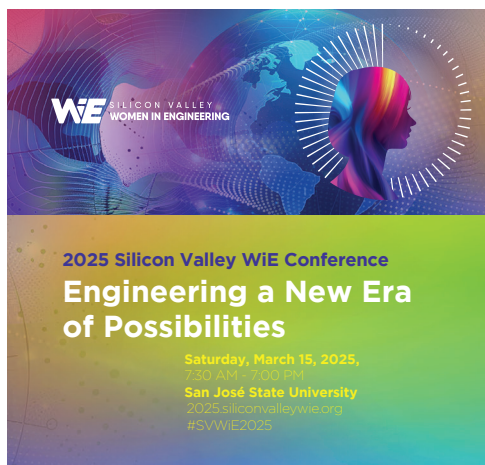




Silicon Valley Leaders Symposium

Thursdays at noon | ENG 285

Industry and technology leaders talk about business and technology trends. It also features prominent leaders who discuss broader societal and political issues.



Women in Engineering Conference

March 15, 2025 | Diaz Compean Student Union Ballroom

The mission of the Women in Engineering conference is to educate, inspire, and foster a community of aspiring women engineers, professors, and leaders in addressing current challenges. This conference is an excellent opportunity for you to gain insights from women engineers in industry, network with your peers, and learn about the latest developments in the field.



Engineering Showcase & Celebration

Monday, April 21, 2025 | Diaz Compean Student Union Ballroom

The Engineering Showcase and Celebration is our annual event where alumni and industry friends engage with the next generation of engineering talent, innovation, research, and design.

SJSU Author and Artist Celebration

with Special Recognition for Inventors

April 23, 2025 | MLK Library, room 225 | 3pm-5pm

This celebration honors SJSU faculty and staff who have recently authored or published a book or exhibited a significant work of art. New inventions are also recognized. We look forward to celebrating all of our SJSU community's accomplishments.



Black Engineer Week Conference

June 20-27, 2025 | Various locations

This week-long conference focuses on elevating diverse voices and empowering creative solutions for a better future. The long term goal of the conference is to increase the number of successful African American engineering professionals in Silicon Valley. The conference includes golf, hiking, lunch and learning sessions, interactive tech mixers and more! For more information contact engineering-comm@sjsu.edu.

Alumni Notes

Captains Dick and Rick Lane Memorial Scholarship

Supporting College of Engineering Aviation Students for 50 Years

The Captains Rick and Dick Lane Memorial Scholarship was established in 1975 and continues to support SJSU Aviation students. Richard Wood Lane (father) and his wife had three children – two boys and a girl. Richard had a successful career as a pilot and taught his two sons to fly. The family moved around the country and spent significant time in Connecticut and New Mexico before returning to San Jose.

Dick's son Rick Lane joined the United States Air Force as a pilot. In October 1973, Rick unfortunately died during a training exercise in Little Rock, AR. After this tragedy, Dick established the Rick Lane Memorial Scholarship to support pilots in training at SJSU. His decision to establish the scholarship at SJSU was linked to the proximity and his close relationship with Thomas Leonard, Chair of Aviation. In 1974, only five months after Rick's death, Dick Lane died in a plane crash near Carson City, NV.

After Dick's death, his daughter Berget Jelane and his wife Berget Lane updated the scholarship name to Captains Rick and Dick Lane Memorial Scholarship. Scholarships have been awarded regularly since 1975. Berget has attended Aviation award banquets annually and has always enjoyed meeting the scholars. She is thrilled to see women receiving the award, and never expected that the scholarship would have such an important and long lasting legacy.

"The generous gift of the Lane family provides scholarships to deserving Aviation students so they can focus on their studies without the financial burden," said Freidoon Barez, Department Chair, Aviation and Technology, SJSU College of Engineering. "The scholarships enable recipients to complete their degree in a timely manner so they can enter the workforce and contribute to their chosen field of study. The Aviation program faculty and students appreciate the Lane Family's gift."

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Donald Owen Reeves

'71 BS Aeronautics

Born in Oakland, California, Don's life was filled with love, family, and service. He graduated from San José State University with a degree in Aeronautics and went on to become a draftsman showcasing his precision until he developed a brain tumor. He transitioned into a commercial real estate appraiser and eventually established his own appraisal firm, Southfork Appraisal. Married to Faye Packer Reeves for 57 years, they raised four children—Rebecca, Rachel, Matthew, and Zebulon—along with 12 grandchildren and 2 great-grandchildren. A man of faith and adventure, Don swam competitively during high school, loved the outdoors, and served multiple missions for the Church of Jesus Christ of Latter-day Saints. His legacy of love, courage, and service lives on through his family and friends.

John Andrew Hudick

BS Electrical Engineering

John Andrew Hudick was born on October 5, 1938, in Swoyersville, Pennsylvania. He was a proud US Army veteran and graduated from San José State University with a BS in Electrical Engineering. His career spanned from working at Stanford Research Institute to Loral Space and Communications, where he contributed to the initial ground station for Sirius Satellite Radio. John's life was marked by his love for the outdoors, including hunting, fishing, and hiking, as well as his passion for historical reenactments, specifically for the 1830 to 1840 era. Known for his strong opinions, his advice and stories were treasured by all who knew him.

Lt. Colonel Roy A. Hodges

'64 Aviation

Roy A. Hodges was born in Cotton Valley, Louisiana. He was a proud San José State University graduate with a degree in Aeronautical Engineering and a retired Lt. Colonel from the US Air Force and Air National Guard. His diverse career at FMC Corporation saw him excel as a pilot, designer, and rail salesman. Roy was known for his love of woodworking and Morgan cars. He was a devoted husband to his late wife, Anne, for 51 years and lives on through his children Howard and Beckie, as well as his grandsons and great-granddaughters. Roy's life was marked by dedication, craftsmanship, and love for family.

Mike Ghandehari

'74 BS Electrical Engineering

Mike (Massud) Ghandehari was originally from Mashhad, Iran. After completing his mandatory military service, he attended Napa Valley Community College in California. Later, he transferred to San José State University, graduated with a degree in Electrical Engineering, and became a proud U.S. citizen. Mike has been married to Susan Towle for 53 years after meeting her on a blind date. After he had a successful career as a radiofrequency (RF) microwave engineer, he co-founded Advanced Microwave Incorporated with his wife in 1997. Mike's passions also included building furniture and designing off-grid living systems. Mike will be remembered for his humor, love of storytelling, making silly faces, and lifelong passion for creating.

Eugene "Gene" Martin Moriarty

Electrical Engineering Faculty 1974–2017

Born in Vancouver, Washington, to Michael Patrick Moriarty and Eleanor Macikas, Gene earned his undergraduate and Ph.D. degrees in Electrical Engineering from the University of Illinois, Urbana-Champaign, and Illinois Institute of Technology. His first job was developing control systems for the moon landing at McDonnell Douglas. He published a book on the philosophy of engineering and taught courses in engineering ethics. Gene was known for his warmth, humor, and compassion, traits that endeared him to students and colleagues alike. He enjoyed hosting gatherings that embraced diversity and celebrated life's complexities for all walks of life. He was a lover of music, art, and poetry, and an avid sports fan, specifically the Chicago Bears and San Francisco Warriors. Gene will be remembered as the guy who loved Pink Floyd, who gifted friends and family books based on their interests, and the beautiful colors of every sunset he admired.

Earl "Jim" Raby

'63 Electrical Engineering

Earl "Jim" Raby was a proud San José State alumnus who played college football before serving in the Navy, where he fought in Vietnam and learned to fly. After his military service, Jim enjoyed a 30-year career as a pilot for United Airlines. He was known for his integrity, deep love for his family, and zest for life, whether on the golf course or sharing moments with his grandchildren. Jim's legacy lives on through his wife of 49 years, Dixie, their four children, and ten grandchildren.

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—Wall Street Journal/College Pulse



HAPPENING THIS SUMMER...

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Flight competition

Precision Flight Team will compete in the SAFECON National competition
May 12–17, 2025 in Oshkosh, WI



Spartan racing

Electric Vehicle Competition
Summer 2025
Brooklyn, MI