Fall 2020

engineering

at San José State

Hands on at Home

College of Engineering Mails Hundreds of Kits for Instruction

Research Breakthrough

Assessing drugs in models that simulate breast cancer

Finishing First

SJSU Team Takes First Place in FormulaSAE 2020 Competition

Calling Alumni Mentors

Celebrating the College's 75th Anniversary

I'M PLEASED TO PRESENT A FALL ISSUE filled with good news, despite the very difficult times we find ourselves in. As I write this, our students are planning their next annual Conference on Engineering Diversity (CED). A collaboration between SJSU collegiate chapters of the National Society of Black Engineers, Society of Asian Scientists and Engineers, The Society of Hispanic Professional Engineers and Latinos in Science and Engineering, and Society of Women in Engineering, CED brings together undergraduate students and industry professionals for a day of tech talks, diversity discussions, professional development and networking.

> ***"We find a remarkable resilience among our students."***

Like all the CEDs before, it will be held on a Saturday; unlike the others, it will be entirely online. Nobody asked for this state of affairs in which California State University classes are mostly online, but students, faculty and staff have adapted with gusto. And what we are finding is a remarkable resilience among our students. They are attending virtual club fairs, listening to visiting speakers on Zoom calls, and studying for their classes with Canvas. I'm proud and gratified by their success so far.

In these pages you'll learn about EXCEED, a summer bridge program that helped our newest students to quickly become part of the Spartan Engineering community. You'll read about the kits we are sending home so students can keep the hands-on learning component we have promised them. And you'll find how our faculty and student research is aiding the planning for students to return to campus.

Now, more than ever, we need your engagement and your assistance to support our students. Enjoy the stories, and see if there are any fields or opportunities where you might be able to connect with us. We will be delighted to see you again.

Sincerely,

Dean Sheryl Ehrman
Don Beall Dean of Engineering,
Charles W. Davidson College of Engineering
at San José State University

In This Issue

On the cover

Charlie Lynam demonstrates programming from home.

NEW ASSOCIATE DEANS

Dr. Xiao Su, former Chair of the Computer Engineering department, was recently appointed Davidson College of Engineering Associate Dean for Graduate Studies and Research. She succeeds Dr. Essam Marouf, who held the Associate Dean role since 2014. Career highlights for Dr. Su include a National Science Foundation CAREER Award in 2006, a College of Engineering Faculty Award for Excellence in Scholarship 2010, College of Engineering Applied Materials Faculty Award for Excellence in Teaching 2012, and a College of Engineering Newnan Brothers Faculty Award for Faculty Excellence 2018. Dr. Su received her undergraduate degree in Computer Science and Engineering from Zhejiang University, and her MS and PhD in Computer Science from the University of Illinois, Urbana-Champaign.

Dr. Raymond Yee was recently appointed as Davidson College of Engineering Associate Dean for Extended Studies. He succeeds Dr. Jacob Tsao. Dr. Yee joined the COE's Mechanical Engineering faculty as an Associate Professor in 2000 after ten years of industry experience as a researcher and consulting engineer in Bell Labs and Aptech Engineering. Promoted to full professor in 2006, Dr. Yee has served as the Associate Chair in the ME Department since 2017. His leadership was acknowledged with the Provost's Assessment Awards for three consecutive years.

NEW MASTERS PROGRAM IN AI

The Davidson College of Engineering is launching a new **Masters of Science program in Artificial Intelligence (AI)** in fall 2020. The first cohort of the MSAI program will be offered through Engineering Extended Studies with Lockheed-Martin, one of the College of Engineering's off-campus corporate partners. 254 students have graduated from Extended Studies programs since the start of the department in 2017, and the student enrollment numbers have increased by 75% over the past three years.

"For civil engineering, San José State and California Polytechnic State in San Luis Obispo, Calif., ranked among the ***top 10 for graduate earnings****, on a par with University of California, Berkeley and Cornell University in Ithaca, N.Y."*

—Wall Street Journal, May 2020

CHEMICAL ENGINEERING STUDENT AWARDED NATIONAL SCIENCE FOUNDATION GRADUATE RESEARCH FELLOWSHIP

Jocelyn Valenzuela (Chemical Engineering '20) was among the 2,076 fellowship winners across the nation who will be pursuing academic science research at the highest levels.

"The NSF fellowship will give me more options for selecting projects and mentors that will help me pursue my research passions," said Valenzuela. "I couldn't have done this by myself without the help from my professors and other students here."

MECHANICAL ENGINEERING ASSISTANT PROFESSOR, ALI TOHIDI, MEMBER OF NEW WILDFIRE CENTER

A newly created Wildfire Interdisciplinary Research Center at San José State aims to develop advanced tools to forecast wildfire behavior and help California firefighters and forest management officials better respond to blazes throughout the state. The center will also increase the monitoring of fire weather conditions, and research the impacts of fires in a "social science perspective" on the community, said Dr. Craig Clements, professor of meteorology and director of the center.

This is the largest interdisciplinary wildfire research center of its kind in the United States. Each professor joining the center is teaching two classes in their respective fields and simultaneously preparing proposals for future classes in various fire specialties. **Ali Tohidi**, assistant professor of fire and fluid dynamics in the Department of Mechanical Engineering, is an expert in wildfire spread and spot fire ignition. Tohidi developed a spotting prediction system called the ember transport model, which helps in predicting the way embers are blown in the wind, and how they ignite other fuels, Clements said. The team hopes to integrate Tohidi's model into Kochanski's model, so that they can provide tools that can be operational and helpful for wildfire managers responding to fires and complexes in the state.

TECHNOLOGY PROFESSOR PAT BACKER RECEIVES 2020 CSU FACULTY INNOVATION AND LEADERSHIP AWARD

In her 30 years in the technology field, **Professor Patricia Backer** has been leading and innovating by enabling San José State to do difficult things in a smarter way.

For her achievements, the California State University Chancellor's Office awarded Backer the 2020 Faculty Innovation and Leadership Award. The award recognizes Backer's most recent work on a campus-wide initiative called Project Succeed, funded by a five-year, multimillion-dollar grant from the U.S. Department of Education. Backer's innovative vision—and her talent for interdisciplinary cross-campus teamwork—has improved SJSU's five-year graduation and retention rates and closed the achievement gap for underrepresented students across all majors.

> *"SJSU ranked **#1 Most Transformative College** in the nation."*
>
> —*Money Magazine*, August 2020

> *"In granting a master's in engineering, SJSU ranked **#5 in diversity** among all institutions, any size, public or private. Rounding out the top five were Georgia Tech, UC Berkeley, USC, and Stanford."*
>
> —*Diverse Issues in Higher Education*, July 2020

Photos on Page 5 credited to Robert Bain

Research Breakthrough in Breast Cancer Drug Delivery Testing

SJSU team assesses drugs in models that simulate breast cancer in its native environment

OCTOBER IS BREAST CANCER Awareness Month. The second-most commonly diagnosed after skin cancer, it affects 1 in 8 American women.

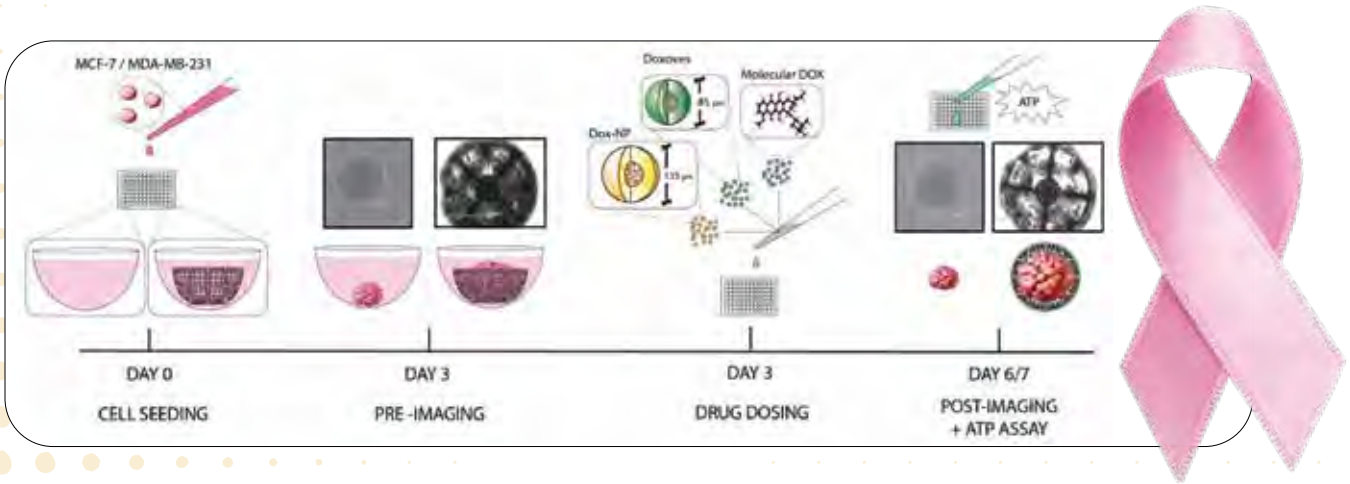
Biomedical Engineering Associate Professor Folarin Erogbogbo, has contributed to more than 30 articles in his area of study which includes the intersection of biomedical applications of nanotechnology. One of his recent corresponding-authored papers, "Assessing Advantages and Drawbacks of Rapidly Generated Ultra-Large 3D Breast Cancer Spheroids: Studies with Chemotherapeutics and Nanoparticles," was co-authored by SJSU students Austin Holub, Andy Huo, Kavil Patel, Vishal Thakore, and Pranav Chhibber (all 2020 grads). The paper was published in *The International Journal of Molecular Sciences* as part of a special issue on cancer development and anti-tumor drug selection. "We publish in open-access journals because we believe science should be accessible," said Erogbogbo.

Three-dimensional cell culture models provide better physiological relevance for studying cancer behaviors, cellular activity and pharmaceutical interactions. Erogbogbo's team assessed the use of *ultra-large* spheroid models (around 2000 microns) to explore chemotherapeutic responses with molecular doxorubicin and two analogues of Doxil® on two different breast cancer cell lines.

"This work," said Erogbogbo, "provides cancer researchers with the benefits and drawbacks from testing drugs in different advanced tumor models." Using models that better predict drug response can save countless hours and millions of dollars during the preclinical phase of drug development.

Erogbogbo studied nanotechnology as an undergraduate. As a post-doc, his focus shifted to pancreatic cancer. "At SJSU, I picked the field of breast cancer because Triple Negative Breast Cancer (TNBC) incidences are higher in African American women than any other ethnic or racial group of any age," said Erogbogbo. "These women are our mothers, sisters, daughters, friends and family."

Erogbogbo's students studied at sites from SJSU to Stanford, UCSF, and Prellis Biologics. He hopes the study will result in two lasting benefits: helping the community to create accurate drug tests for TNBC, and developing reproducible nanoparticle drugs that better target some forms of TNBC. Find out more about his work and the SJSU lab at www.erogbogbo.com.



EXCEED Program Succeeds in Student Prep

Revitalized summer bridge clears pathway to university engineering

Nearly 60 incoming freshman and transfer students joined an online program this summer to brush up on math for engineering. Freshmen took a calculus prep series and were tasked with completing a virtual robot project. Transfer students attended an advanced math series and worked on an electronics project. In addition, they listened as eight professors (including Dean Ehrman) taught how important advanced mathematics is in fields such as heat transfer, epidemiology, circuits, flight dynamics, and even profit maximization.

The **Exc**ellence in your **E**ngineering **Ed**ucation, or EXCEED Program, led by Associate Dean Jinny Rhee, gives incoming undergraduates the knowledge and skills they need in order to be successful in engineering programs. "We revived EXCEED after a five-year hiatus to provide an additional engagement opportunity for our incoming students in today's unexpected virtual learning environment, driven by COVID-19," Rhee said. The overall goal of the program is to retain and graduate a greater and more diverse engineering workforce.

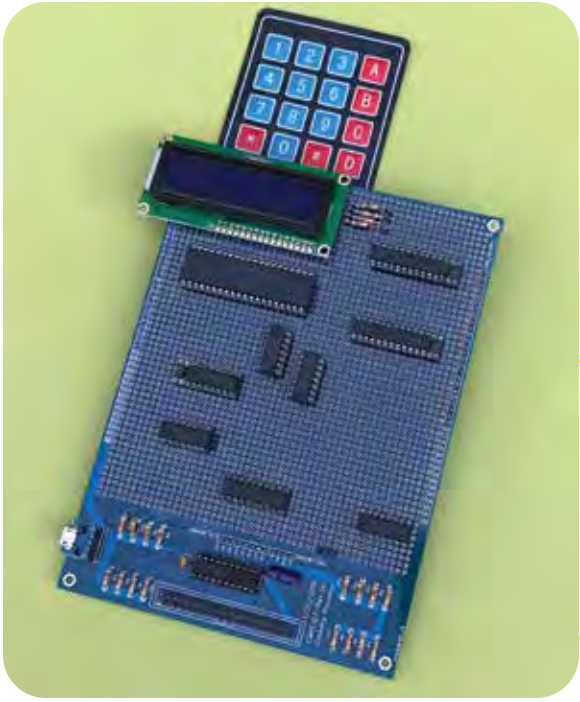
The roughly 40 students who completed the program earned virtual badges and were showcased in the College's weekly student newsletter. "When the program is in person, we have a captive audience and they have no choice but to finish it," said Rhee. "However, the virtual format does allow for more flexibility, and some students were also working and tending to other obligations at the same time. We had a tech subsidy for those who did not have the equipment to participate, and we waived the program fee for those who could not afford it." The 2020 EXCEED program was funded by the Charles W. Davidson Endowment.

In a post-program survey, the participants agreed or strongly agreed that it increased their confidence in attending SJSU, and that they felt they belonged in the College of Engineering. "We also plan on tracking this cohort through their programs to see if they are retained in our programs at a higher rate," said Rhee.

EXCELLENCE IN YOUR **E**NGINEERING **ED**UCATION

In addition, students felt that the program increased their confidence in math and their teamwork skills. "I loved how smooth it went, all being online," remarked one of the students in the survey. "I really see myself coming to SJSU, growing and learning with well experienced faculty and helpful students." Another commented, "In spite of this whole pandemic, EXCEED helped students to connect with other students and faculty before the school year began."

Dr. Rhee hopes to scale up the EXCEED program to around 300 students next year, or about 25% of the College's incoming undergraduates. And she has a message for alumni: "If you would like to come and speak to our incoming undergrads, please let me know! The alumni who spoke to our incoming students inspired them, and this helps them start career exploration and development of their identity in the field." Interested alumni can contact her at Jinny.rhee@sjsu.edu.



Still Hands-On, But At Home

College of Engineering Mails Hundreds of Kits for Instruction

ONE OF THE SIX CORE VALUES IN THE College of Engineering's Strategic Plan is Hands-on Learning: providing practical, hands-on learning opportunities in conjunction with engaging curricula and teaching approaches. While take-home kits have occasionally been used in, for example, Mechanical Engineering labs, the pandemic created a new need and new opportunities to push the learning envelope.

"If you build it, they will come," is essentially a pre-COVID19 axiom. The College of Engineering's newest motto is, "If you mail the kit, they will build — and learn."

Mechanical Engineering and robots

"Our kit is called MinSeg Mega," said ME Assistant Professor Saied Bashash. "We have been using them in ME-190, Mechatronic Systems Engineering (one of our capstone courses). The kit is equipped with a 3-axis accelerometer, a 3-axis gyroscope, and a 3-axis magnetometer/compass. It is also equipped with a DC motor with a motor driver, and an encoder which allows for implementing feedback controllers."

The students use MATLAB and Simulink to collect and process real-time data from the sensors, implement a proportional–integral–derivative controller for DC motor positioning, and develop a linear-quadratic regulator controller to balance the robot in an upright position. "Through this process, they learn signal processing and feedback control techniques," said Bashash.

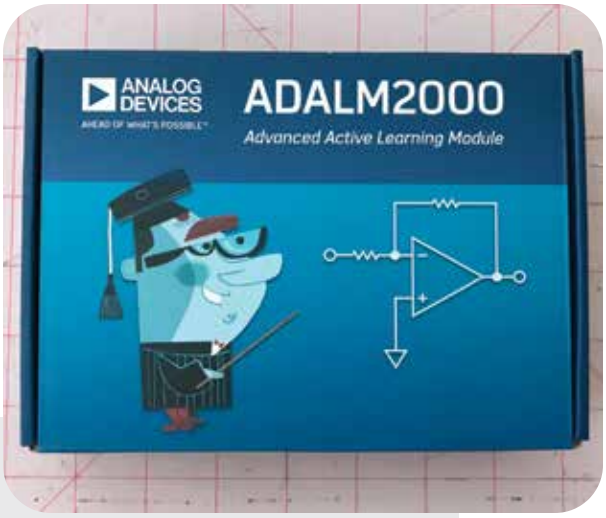
Electrical Engineering has sent out the most kits including the ADALM2000 kit pictured on the right. Industrial Technology students are also successfully using kits.

> ***"Many students take the finished computer board to their job interviews to show what they have built. This is the reason why physically building something is so important."***
>
> —Professor Ilkan Cokgor

Computer Engineering at the kitchen table

Professor Ilkan Cokgor has redesigned the Computer Engineering 127 lab to be done at the kitchen table. The blue prototype board (pictured at left) forming the physical platform for the computer was designed by SJSU Computer Engineering students under the supervision of Dr. Haluk Ozemek. In addition, the development platform used to program the computer was developed by an SJSU alumnus, Khalil Estell.

"All students start out with the same laboratory manual," said Cokgor. "However, certain aspects of the design are left to the students. For example, the students have the freedom in design of their Computer Memory and Input/Output interface circuits, so each student may have a different address map for their memory and I/O locations."



There's no question that teaching via home kits can pose a lot of challenges.

"Many students do not have hands-on experience with building a computer," explained Cokgor. The biggest challenge has been troubleshooting when students have issues with their circuit. "Making wrong connections while building the circuit is one of the most common issues. Since I will not be able to physically trace the connections, finding faults in the circuitry remotely can be very difficult. Another challenge is how to identify remotely if a component is not working."

Cokgor addressed these challenges by revising the lab manual so that it includes detailed pictures and step-by-step guides on how to build the circuitry. He's also developing 'self-diagnosis' software snippets. Students run these pieces of software on their boards, and the outcome will give clues as to what might be wrong and where.

The cost of the kit (to the College) is $180, and there may be up to 73 students this term. The dean has teamed with faculty to create mailing packages so that at the end of term, if the students mail the kits back to school by deadline, there will never be a cost to the students or their families.

"This is a very challenging lab, and it is hugely rewarding for the students at the same time," said Cokgor. He shared a spring 2020 student's email:

'At the beginning of the semester, I wondered if I could make enough points to pass the class because I heard everyone say the lab and the class is extremely challenging. But I feel a bit more confident in myself that I can actually become an engineer. I am really grateful for your instruction, time and dedication, especially in the lab.'

Cokgor concluded, "Many students take the finished computer board to their job interviews to show what they have built. This is the reason why physically building something is so important."

Back to Campus—Safely, With Plenty of Signage

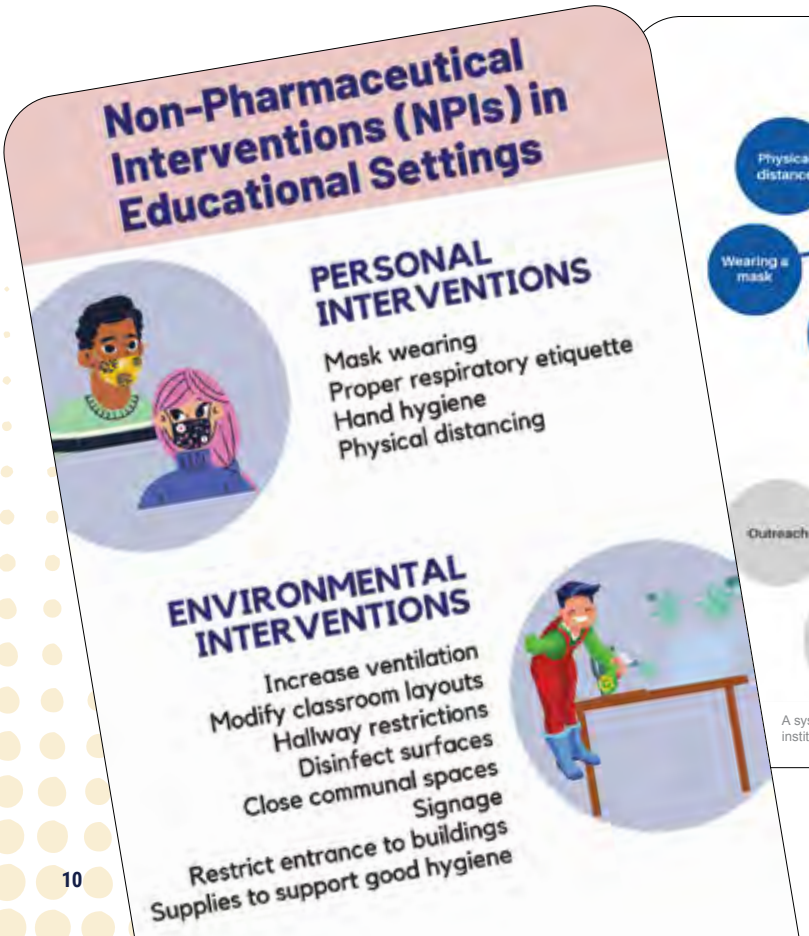
Motion Study Aids in Back-to-Campus Strategizing

MANY HANDS ACROSS THE UNIVERSITY CAME together to craft a comprehensive plan that would maximize safety as people return to campus in greater numbers. After reviewing over 250 research studies, standards, guidelines, expert opinions, and news articles (over 900 sources), Associate Professor Dan Nathan-Roberts and his Industrial & Systems Engineering students wrapped up their literature review of ways to minimize the risk of the COVID-19 virus to SJSU.

One of the findings from the report, which was supported by Provost Vincent Del Casino, was that the scientific community strongly believes that airborne infection far beyond six feet is possible and likely. It appears that the virus is extremely more likely to be transmitted indoors, the virus can survive suspended in air for up to 30 hours and on surfaces for up to 9 days (including pets and lab animals), and there is also strong evidence that a new mutation of the virus makes it easier to spread. Their brief goes hand in hand with the recently released State of California COVID-19 Guidance for Institutions of Higher Education, providing best practices for almost every requirement in the guidance. Follow-on experiments could further refine interventions throughout the fall.

"It's great to see our campus come together not only to ensure that our return to campus is safe and well thought out, but also to engage and support faculty research and creative activities," said Hilary Nixon, Deputy Executive Director of the Mineta Transportation Institute. "A win-win for certain."

Department Chair of Urban and Regional Planning, Laxmi Ramasubramanian, and her team are also making significant progress on mobility modeling.



A systems model of Non-Pharmaceutical Interventions to reduce the impact of the Coronavirus Disease in educational institutions developed through a systematic literature review based on over 500 published articles.

Spartan Racing Pivots During Pandemic

Team takes First Place in FormulaSAE 2020 competition

By Rebecca Lee (English '22)

MELISSA PARDO (Mechanical Engineering '20), is currently an associate Dynamics and Controls engineer at Maxar Technologies. She also served as the 2019-2020 president of Spartan Racing, an SJSU student organization that designs, builds, and tests a Formula-style race car every year to compete in the national competition. This exercise immerses students of all backgrounds in an environment that parallels a competitive workplace and professional race team.

The COVID-19 shelter-in-place orders and SJSU's sudden shift to online engagement were challenging because Formula is such a hands-on team. With the fate of the competition up in the air, the team had to stop manufacturing. Instead, Spartan Racing pivoted to host team activities, work on applications for car funding, and finalize the presentation and documentation of their work. Pardo created a Member Appreciation program on social media and ensured that each team had its own section on the club website, with photos and member biographies to draw the clubs closer together.

During the spring, Spartan Racing won first place in the category of Business Presentation at FormulaSAE 2020. This year's business presentation assignment was to figure out an effective response if their company was weathering a sharp market downturn in the middle of development. "This scenario ended up being more true to life than expected," said Pardo. SpartanRacing's business team used COVID-19 as their example in an effective and creative strategy.

"We're in the middle of a pandemic with no conventional options for outreach. We can take the money and put it into R&D so we lose less development. The SJSU business team keeps 23 out of 30 engineers and makes no changes to the design." Melissa worked with the business team to prepare for the presentation and presented with head engineer Arash Mehdipour (BS Aerospace '20). It was the first time that SJSU has won a business presentation at the SAE competition!

Reflecting on her experience of leading the team, Pardo said, "I learned that Formula and Electric and Baja are so much more than dudes working on a car. Every person that joins Formula, every single engineer at Formula, is one of the most intelligent and capable engineers. They are brilliant and always willing to work hard and go the extra mile." Pardo advised students who want to succeed, "Make a good pace for yourself to grow and enable others, like me, to join and keep moving forward. No quitting, try new things, don't ever hesitate to ask questions. Even if you think it's a stupid question, it isn't."

Pardo also had tips for other student organization leaders: "Instead of telling new members, 'Just show up and you learn on the way,' give clear guidance to new members. A lot of people, especially engineers, are introverts. They aren't likely to reach out and speak out, so provide better guidance from the beginning and make the environment more inviting to new members."

Alumni Notes

BHAWNA SINGH

MS Software Engineering 2005

Bhawna Singh has been promoted to senior vice president of engineering and chief technology officer for Mill Valley-based Glassdoor. Before joining Glassdoor in 2016, Singh was senior director of engineering at Ask.com, where she was a leader of the search intelligence organization that focused on search, machine learning, data science and platform services. Singh also holds a masters in computer applications from Gujarat University.

REINE DOMINIQUE NTONE SIKE

MS Aerospace Engineering 2018

Reine Sike won the 2019 NASA Ames Research Centre Honor Award after successfully launching a $50,000 TechED cube satellite. She helped equip the satellite with an exobrake so that it can return to the Earth's atmosphere. "I was the last person to touch the exobrake, to put it in the CubeSat and to fold it," she said in a recent interview. In addition to this award, she was also honored for her outstanding research in astronautics in May 2019. Originally from Cameroon, Reine spends her free time on the tennis court, winning singles competitions.

KAREL BACHAND

BS Mechanical Engineering 2017

Featured in an earlier issue of this magazine, Karel has been working with 3D printing to create amazing and complex watches. He reports that he just launched his new business developing and manufacturing high end mechanical watches using the latest in additive manufacturing. Find out more about what he's doing at www.barrelhand.com.

CAROLYN BLOEDE

MS Engineering 1996 (focus on Environmental Engineering)

Carolyn Bloede was confirmed by the San Mateo County Board of Supervisors as the new director of the Office of Sustainability. Before this appointment, she served for 17 years in a similar role in Alameda County. Starting this summer, she will lead a department with a $35M budget in finding solutions to some of the biggest challenges faced by the Bay Area and worldwide, including climate adaptation, sea level rise, waste reduction, recycling and energy efficiency.

RANDALL GERMAN

BS Chemical Engineering 1968

Dr. German is the 2020 recipient of the Powder Metallurgy Lifetime Achievement Award presented by the Metal Powder Industries Federation (Princeton, NJ). This Kempton Roll Award is given every four years and is named after the founder of the industry organization. German is currently a Research Professor at San Diego State University and remains active with microgravity experiments aboard the International Space Station.

SANTHANA PARTHASARATHY

MS Software Engineering

MS Software Engineering and Master of Business Administration (MBA) alumnus Santhana Parthasarathy has taken on the role of Senior Vice President with global legal services platform Rocket Lawyer. Parthasarathy most recently served as VP of Engineering at HelloSign, where he oversaw the company's entire portfolio of consumer, SMB, and enterprise products and contributed directly to its acquisition by Dropbox in 2019. In his previous leadership role at Salesforce, Parthasarathy was responsible for creating and monetizing platform security solutions using big data and machine learning.

75th Anniversary: Barbara and Frederick Brown

Toward the end of World War II, Ensign Frederick J. Brown was asked by his mother, Naomi Brown, to deliver a package the post office had incorrectly delivered to another Naomi Brown, who happened to be Barbara's ballet instructor. The dance instructor Mrs. Brown later introduced him to her favorite student, Barbara Badertscher. During their courtship, Frederick completed his naval flight training in the Bay Area, while Barbara performed in the San Francisco Ballet. After their marriage, Frederick deployed to the Pacific theater and Barbara was employed by Universal Pictures in Hollywood, and performed during the golden age of movie musicals.

Frederick remained in naval aviation for a career that spanned from biplanes to jets. He worked for Lockheed in Sunnyvale as an engineer and scientist, and then taught engineering at San José State University. Barbara also went back to university life as a student, and earned a BA in French literature with highest honors. The couple summed up their long marriage as "Married in war — still in love during the COVID-19 war."

In Memoriam

DAVID AND SHEILA BROWN (1945-2020)

David Alan Brown (BS Mechanical Engineering, 1968) was born in Oakland to a hard-working immigrant family. He and his sister were the first Brown children to graduate from college. In 1968, David met the love of his life, Sheila Payne (BA Theater Arts 1968). They married only four months after they met.

In 1980, David co-founded Quantum Corporation, one of the original Silicon Valley disk-drive manufacturing companies that joined Fortune 500. Sheila divided her time between family and volunteering at many local organizations and projects that foster diversity, inclusion, respect, and acceptance such as Green Circle, Camp Anytown, the Foundation for Ethnic Understanding, and YMCA's Project Cornerstone.

David committed himself to nonprofit work after his retirement. A Distinguished Alumnus of the College of Engineering, he was passionate about providing equality and access to STEM education to underserved communities. The David Brown Fellowship in Mechatronics was established in 1996 to promote the professional development of the recipient in the area of Mechatronics, and to advance the development of the Mechatronics program at San José State University. The recipient of the $2000 award is expected to contribute to mechatronics laboratory development and laboratory instruction during the fellowship year.

JOHN LEITH (1944-2020)

John Leith received his degree in engineering from San José State University in 1965, and worked as a chemical engineer in the semiconductor industry--first at Fairchild in Silicon Valley then at AMI (now On) in Pocatello--for over 30 years. He was also the co-founder of New Start Discipleship, a Christian rehabilitation program for prison inmates, and was in the Southeast Idaho Chaplain Corps for over 25 years. John was well known for his kindness and compassion for all, and was just as willing to listen and learn as he was eager to roll up his sleeves and help. As an engineer, John wasn't afraid to think big and chase wild ideas. He was a true tinkerer who filled his workshop (and his home) with quirky prototypes and imaginative tests. At the time of his passing, he left many inventive ideas still in progress.

Mentoring Platform: Call for Alumni Mentors!

Consider becoming a virtual career connection for an SJSU Student by joining Quick Connections on SJSU² Mentoring & Meetups.

SJSU² is an online platform and is student driven, so time commitment is variable, but also flexible based on your schedule. Most conversations are 15-30 minutes long and take place via the platform's built-in phone or video chat features. Join the conversation at https://sjsu2.peoplegrove.com/page/alumni-professionals.

If you have any questions about this program, please contact the SJSU² team at sjsu2mentoring@sjsu.edu.

Connect with us!

We want to hear your news!
We love promoting your stories. Keep the news coming! **http://bit.ly/alumnotes**

/ SJSUEngineering
/ SJSUEngineering
/ SJSUEngineering

Campus Reading Program: CALL FOR PANELISTS

What the Eyes Don't See: A Story of Crisis, Resistance, and Hope in an American City by Mona Hanna-Attisha, is SJSU's Campus Reading book for the fall 2020 incoming class of first-time freshmen. Paced like a scientific thriller, *What the Eyes Don't See* tells the inspiring story of how Dr. Hanna-Attisha, along with a team of researchers, parents, friends, and community leaders, discovered that the children of Flint, Michigan, were being exposed to lead in their tap water—and then battled their own government to expose that truth to the world.

We invite any engineering alumni who have had experiences with tech company-triggered groundwater pollution in Silicon Valley—either as victims, community advocates or activists—to step forward and speak on a panel in Spring 2021 for our students. Please contact engineering-comm@sjsu.edu.

Seeking: Photos for College's 75th Anniversary

We will be celebrating the college's 75th anniversary in 2021. No celebration would be complete without your stories and photos. Share your memories with us, especially any images. Please use our online form at http://bit.ly/75memorybook. Or, email your image and a 2-3 sentence caption (including your name, major, and graduation year) to engineering-comm@sjsu.edu.

Your photo might appear in the pages of this magazine, on our web page, or on social media. If you remember who took the photo, you and your photographer will be credited.

Do you have any swag or souvenirs from when you attended the college? Please send us a photo of the item!

Alumni Gift

San José State University received a $1.2 million gift commitment from SJSU alumni Michael C. and Kathryn (Katy) M. Grischy. The gift will support students who study abroad for a semester.

Michael graduated summa cum laude with a degree in electrical engineering in 1985. A consulting software/firmware engineer, Michael is the retired co-founder and president of Octave Software Group, a technology service consulting firm in San José. Katy Grischy studied English at SJSU from spring 1967 to spring 1968, completed her B.A. in English at Cal State Long Beach, and an M.S. in counseling psychology at Loyola Marymount University.

The Michael C. and Kathryn M. Grischy Study Abroad Fund in the College of Professional and Global Education will establish an endowed fund for scholarships that cover tuition and fees for one semester of study abroad. The Grischys both expressed a deep commitment to the value of a broad-based education that is more than just the sum total of classroom experience.

"A study abroad experience can change a student's worldview, a student's life," said Michael. "Our idea is to enable more SJSU students to be able to have those experiences."

Their gift commitment was established via the Grischys' living trust. To learn how you can make a gift to SJSU from your estate, please contact Randy Balogh, director of planned giving, at 408-924-1123, randy.balogh@sjsu.edu.

"A study abroad experience can change a student's worldview, a student's life. Our idea is to enable more SJSU students to be able to have those experiences."

—Michael C.

SJSU SAN JOSÉ STATE UNIVERSITY

CHARLES W. DAVIDSON
COLLEGE OF ENGINEERING
ONE WASHINGTON SQUARE
SAN JOSÉ, CA 95192-0080

RANKED **3RD** **IN THE NATION** BY **U.S. NEWS AND WORLD REPORT** **2021**

Among public engineering programs offering bachelor s and master s degrees, excluding service academies.

Your Legacy at SJSU

With the help of our generous supporters, students are able to "Spartan up" and become successful leaders. Your gift helps Spartans discover who they want to be—for themselves, for their families and for their communities.

Learn how at legacy.sjsu.edu.

"I identify with San José State students, and now I have the ability to give these Spartans an opportunity for a better future."

— Richard Sessions,
management information systems lecturer