

Santa Clara University

Scholar Commons

Engineering News

SCU Publications

Fall 2023

Engineering News, Fall 2023

School of Engineering

Follow this and additional works at: https://scholarcommons.scu.edu/eng_news



Part of the [Engineering Commons](#)

SANTA CLARA UNIVERSITY

ENGINEERING NEWS

School of Engineering

DEAN'S MESSAGE

This Fall, we delightedly welcomed the class of 2027 and four new tenure track faculty members, along with our returning students, faculty, and staff. We also had the pleasure of hosting over 160 engineering alumni/ae and their guests at Grand Bash 2023: A Season of Gratitude. I am thankful for all who attended and made the night truly remarkable.

Over the summer, we continued to formulate the School's four goals and brought them together in "Engineering Forward." Encapsulating the School of Engineering's mission and vision, with a keen focus on our goals to Educate, Lead, Discover, and Cultivate, Engineering Forward serves as the cornerstone of our collective vision of an engineering community that inspires and develops engineering leaders of competence, conscience, and compassion—entrepreneurial thinkers who will build a more just, humane, and sustainable world.

I encourage you to read the stories in this edition of our Engineering News showcasing the essence of "Engineering Forward" in action: From Santa Clara's youngest graduate, who started his engineering career at the age of 14, to our newest faculty CAREER Award winner. Enjoy!

Elaine P. Scott, Ph.D. | Dean
School of Engineering



WELCOMING OUR NEW FACULTY

The School of Engineering is delighted to introduce four new tenure track faculty members joining our community of scholars this year. Their dedication to teaching and their extensive research expertise promise to inspire our students and enrich our programs.

Hamed Akbari, Assistant Professor **Bioengineering**

- » Doctor of Medicine, 2000
Tehran University of Medical Sciences
- » Doctor of Philosophy, 2008
Tokyo Institute of Technology, Tokyo, Japan

Dr. Akbari's research centers on advancing patient care through the synergy of medical expertise and technological innovation. His extensive research portfolio encompasses various domains, including AI in medicine, clinical data science, image processing, pattern recognition, and machine learning.



Younghyun Cho, Assistant Professor **Computer Science and Engineering**

- » Doctor of Philosophy, 2020
Seoul National University, Seoul, South Korea

Dr. Cho's research focuses on computer systems and tools for high-performance computing. He has been working on compiler/runtime-level performance optimizations for parallel applications and performance tools to help improve performance of parallel codes.



Fatemeh Davoudi Kakhki, Associate Professor **General Engineering**

- » Doctor of Philosophy, 2018
Iowa State University, Ames, Iowa

Dr. Davoudi's research interests lie in prognostics and health management of industrial systems for quality improvement, applied machine learning, and safety analytics for improving outcomes of occupational incidents, and occupational ergonomics.



Junho Park, Assistant Professor **General Engineering**

- » Doctor of Philosophy, 2023
Texas A&M University, College Station, Texas

Dr. Park's primary research interests are in computational and quantitative modeling using advanced mathematical and statistical approaches for human-AI system optimization.



Congratulations, SCU Engineering Summer Engineering Seminar for being awarded the INSIGHT Into Diversity Magazine's 2023 Inspiring Program in STEM Award!



[Learn More Here](#)

ENGINEERING WITH A MISSION

ENGINEERING AND THE GOOD LIFE

In the constantly shifting landscape of technology and innovation, engineers emerge as the visionary creators of the future. With that much responsibility, there is a need for engineers to not only possess the technical competence to create this evolving landscape but also the necessary resources to create it ethically. Championed by the School of Engineering's Director of Ethics Programs and Initiatives, Dr. Matthew Gaudet, the "Engineering and the Good Life" program addresses this need. This program is an embodiment of Santa Clara University's commitment to Jesuit values, which include academic excellence, education of the whole person, commitment to students, and service to others. It places a strong emphasis on the integration of ethics and societal responsibility into every facet of learning. Engineering and the Good Life is a transformative initiative designed to reshape engineering education by seamlessly integrating ethics throughout the curriculum. The program also helps students understand how their work affects society and encourages them to do good with their skills and knowledge.

Dr. Matthew Gaudet is a passionate advocate for a strong ethical foundation within the engineering field. He has many years of research in and experience teaching philosophy, ethics, and engineering, and for the past five years, he has been a Lecturer in SCU's Department of General Engineering, focusing on the intersection of ethics and technology. Because of his dedication to this topic, in 2022, Dr. Gaudet was made the School's first Director of Ethics Programs and Initiatives. In this position, he is focusing on making sure ethics touches every part of the engineering education.

The School of Engineering envisions an engineering community that inspires and develops engineering leaders of competence, conscience, and compassion—entrepreneurial thinkers who will build a more just, humane, and sustainable world. "The Engineering and the Good Life program aligns with our vision and Jesuit values by encouraging students to perceive themselves as engineers with a moral responsibility to society," said Dr. Gaudet. It seeks to enlighten students about the ethical dimensions of their work and how engineering decisions can impact humanity and the environment. Additionally, this program connects engineering students with the broader concept of the good life and how technology can contribute to it. It underscores the importance of integrating ethics, values, and technology in engineering education.

A significant part of engineering ethics revolves around the trust that the public places in engineers. People rely on engineers to guarantee the safety and welfare of the community. This trust forms the foundation of their ethical duties, emphasizing the need for engineers to have the right skills and understanding to maintain this trust and behave ethically in their work. "We need to make sure that our technologies are being built with ethical considerations in mind, and engineering should have a purpose beyond just financial gain," said Dr. Gaudet. Moreover, engineering ethics must acknowledge the profound influence of culture and ideas on technology and engineering choices. Engineers must consider these cultural dynamics and their ethical implications as they shape their work. By doing so, they can navigate the complex intersection of technology and society with a heightened sense of responsibility and integrity.

According to Dr. Gaudet, bridging the disciplines of engineering, ethics, and philosophy, encourages responsible and ethical engineering practices by focusing on real-world problem-solving. Instead of imposing a particular ethic on students, Dr. Gaudet provides them with frameworks, language, and tools—empowering the students to articulate and integrate their existing ethical beliefs into their engineering work. This fosters critical thinking and autonomous ethical decision-making.

Dr. Gaudet acknowledges that students often enter engineering with a desire to serve the public good, but an overemphasis on technical education can make them lose sight of this during their education. Educators play a vital role in helping students hold onto this passion throughout their engineering careers, ensuring that they always consider ethics as a top priority in their professional lives. Engineering and the Good Life will allow students to have a better understanding of ethics and responsibility in an era of rapid technological advancement, so they can contribute to creating a more ethical and responsible future of engineers who are trusted and respected, taking on the role of guardians of technology and humanity. Engineering and the Good Life demonstrates Santa Clara University's commitment to its Jesuit values, emphasizing the importance of integrity, service, and care for others in the pursuit of academic and professional excellence.



ALUMNI PROFILE

B.S. Electrical Engineering
Santa Clara University

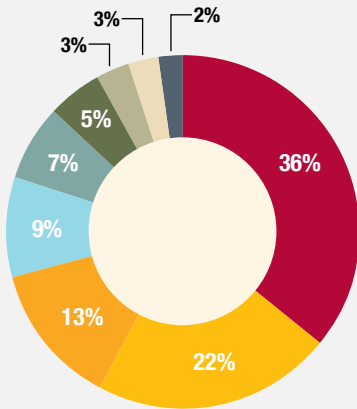
M.S. Design, Business, and Technology
University of Southern California

JOCELYN TAN '15

Jocelyn Tan is currently on the board of the Technology Ethics Council at SCU's Markkula Center of Ethics. She is also the founder of Sisu VR, a company focused on workplace misconduct and safety response training using virtual reality. The training is based on real stories and experienced from multiple first-person perspectives. Sisu VR's mission is to empower professionals to work with greater courage, kindness, and empathy.

"The Engineering Ethics Hackworth Fellowship was such an enjoyable and impactful experience—so much so it largely inspired the founding of my business. Fast-forward to 2023, working with the VR Ethics Hackworth Fellows to turn my Engineering Ethics cases into educational and immersive learning experiences has truly enabled my dream to enact change and give back to SCU!"

2022-2023 IN NUMBERS



Undergraduate Enrollment by Major Academic Year 2022-23

- 36% Computer Science and Engineering
- 22% Mechanical Engineering
- 13% Bioengineering
- 9% Civil Engineering
- 7% Electrical Engineering
- 5% Electrical and Computer Engineering
- 3% General Engineering
- 3% Web Design and Engineering
- 2% Undeclared

Undergraduate Enrollment
1137



13%
Increase from Last Year

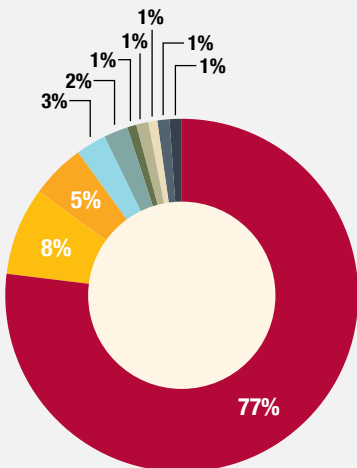
29%
Women Students



First Year's (Class of 2026)
Record breaking 35% women



24%
Underrepresented Minorities



Graduate Enrollment by Major Academic Year 2022-23

- 77% Computer Science and Engineering
- 8% Electrical and Computer Engineering
- 5% Mechanical Engineering
- 3% Engineering Management and Leadership
- 2% Robotics and Automation
- 1% Bioengineering
- 1% Power Systems and Sustainable Energy
- 1% Civil Engineering
- 1% Aerospace Engineering
- 1% Applied Mathematics

Graduate Enrollment
737



26%
Increase from Last Year

675
Master's

62
Doctoral

66%
non-resident students

33%
women

TRANSFORMING POWER SYSTEMS FOR A SUSTAINABLE FUTURE



Dr. Maryam Khanbaghi, an associate professor in the Department of Electrical and Computer Engineering and director of the Power Systems and Sustainable Energy Program, has been awarded the highly prestigious National Science Foundation (NSF) CAREER award for her effort to combat climate challenges by revolutionizing power systems. This accolade underscores her emerging leadership in the power systems field and acknowledges her

innovative contributions, marking a vital step toward a greener and more sustainable future. The project introduces a comprehensive framework to model a multi-layer power system. This framework considers intermittent renewable energy sources and establishes a robust scheduling scheme to empower system operators to deliver power efficiently.

According to Dr. Khanbaghi, the significance of the project extends well beyond its technical achievements. She is deeply committed to cultivating the next generation of engineers to the power and energy field, fostering an integrated effort to ensure a sustainable future. She is dedicated to increasing awareness among local underserved communities about the impact and utilization of renewable energies. She understands the importance of diversity and sustainability in engineering and is particularly committed to promoting and engaging women in electrical engineering. Dr. Khanbaghi's leadership and expertise, alongside her commitment to promoting women's involvement in electrical engineering, not only ensure technical excellence but also speak to the project's broader societal impact.

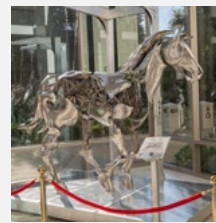
On the technical side, the project envisions two major advancements. First, to improve the grid's resilience by implementing microgrids and reducing dependence on long transmission lines, while also developing an advanced supervisory algorithm for more efficient energy management. This algorithm will enable system operators to take appropriate actions for delivering power to customers more reliably and efficiently. Her expertise and leadership in this area ensure that the project is driven by cutting-edge research and innovative solutions that show promise to enhance sustainability, promote energy efficiency, and foster technological innovation, potentially leading to economic benefits and a more reliable energy supply for all.

Under Dr. Khanbaghi's guidance, the intellectual merits of the project lie in establishing a fundamental framework for the energy management of a modernized electric grid that is agile, reconfigurable, clean, and resilient. Its transformative potential lies in the provision of a comprehensive model for a multi-layer power system, accounting for intermittent renewable energy sources, and an efficient scheduling scheme enabling system operators to make informed decisions in delivering power to consumers.

Although the project has the transformative potential to create a more efficient and reliable energy management system, it does come with its share of challenges. While the recruitment of qualified Ph.D. students is a significant hurdle, her experience in mentoring and training researchers ensures the project's success. With her guidance, the team will be well-equipped to tackle the challenges that arise during the project's five-year timeline from September 2023. This project represents a vital step toward a sustainable and resilient energy landscape. By embracing innovation, collaboration, and a commitment to a greener future, Dr. Khanbaghi and her team strive to revolutionize our power systems with the ultimate goal of ensuring a cleaner, more reliable, and more efficient energy future for generations to come.

Dr. Khanbaghi's interest in this project stems from a deep-rooted desire to improve people's lives and reduce the impact of blackouts. "As an engineer, it's not just about problem-solving, but about improving people's lives through the application of science," said Dr. Khanbaghi. She envisions a future where we rely solely on clean energy sources by restructuring the grid. While Santa Clara University serves as the initial testing ground for her transformative solutions, her vision extends nationwide. Dr. Khanbaghi's project aims to collaborate with other universities, fostering a collective effort to revolutionize the energy sector, ensuring clean, reliable power access for all, and contributing to a more environmentally conscious society.

The Faculty Early Career Development (CAREER) Program offers the National Science Foundation's most prestigious awards in support of early-career faculty who have the potential to serve as academic role models in research and education and to lead advances in the mission of their department or organization.



INSPIRING CREATIVITY: THE KINETIC DESIGN ART CHALLENGE AT SANTA CLARA UNIVERSITY

Excitement took over the Sobrato Campus for Discovery and Innovation on September 25, as SCU Presents, the Cultural Commission of the City of Santa Clara, the College of Arts and Sciences, and the School of Engineering, came together to host the opening ceremony of 'The Mechanical Horse.' This life-size horse, made of metal and moving gears, is the brainchild of artist and metal sculptor Adrian Landon. The ceremony was attended by the campus community with remarks from special guests City of Santa Clara Mayor Lisa Gillmor and SCU President Julie Sullivan.

At the ceremony, Professor Christopher Kitts kicked off this year's Innovation Challenge. The "**Kinetic Design Art Challenge**," inspired by this interactive sculpture, invites students to design and fabricate unique, artistic devices that incorporate mechanical motion. This challenge is a testament to the collaborative spirit of the community, encouraging the intersection of art and engineering. It promises to inspire creativity and innovation within the community and academia alike.

In January, a panel of judges will evaluate and select the most outstanding entries in each category. Thanks to an additional generous sponsor from Autodesk, the overall winner, selected across all categories, will receive the prestigious \$2,500 Best In Show prize, while top entries in the remaining categories will be awarded \$500 each. Follow updates on the Kinetic Design Art Challenge by visiting our [Maker Lab web page](#).



Be sure to visit 'The Mechanical Horse' at the Board of Fellows North Lobby. This incredible display will remain on exhibit until January 21, 2024.

NEW PH.D. IN BIOENGINEERING

To keep up with the increasing demand from students and industry, the School of Engineering has launched a new Ph.D. degree program in Bioengineering and is now accepting applications! The School established this program to further enhance the academic quality and reputation of the department while taking a significant stride in furthering its research.

Dr. Yuling Yan, professor of Bioengineering and the founding chair of the department, states, "Our faculty are actively engaged in cutting-edge research, with many successfully obtaining funding from prestigious sources, including NIH and NSF, as well as various corporate and foundation partners. The introduction of the Ph.D. program will reinforce our position as a prominent leader in the rapidly expanding field of bioengineering and enhance Santa Clara University's reputation as a top-tier educational institution."

The introduction of the Bioengineering Ph.D. program promises a multitude of benefits for the institution and its wider community. It will attract higher caliber faculty members with cutting-edge research portfolios, expand and enhance our community of scholars, and draw more external research funding. In doing so, it facilitates a more comprehensive education for students and prepares them for successful careers in biomedical engineering and related fields. This program has also positioned Santa Clara University as a magnet for industry professionals in the Bay Area, capitalizing on its established industrial connections to foster meaningful collaborations with the region's prominent medical device and biotechnology sectors.

By facilitating an educational framework that intersects engineering, life sciences, and medicine, the program is strategically designed to empower graduates with an intricate



Photo by Adam Hays Photography

understanding of how the dynamic field of bioengineering can catalyze groundbreaking discoveries, ultimately serving to elevate human health standards and enhance patient outcomes. Furthermore, Santa Clara University's strategic location in the heart of Silicon Valley serves as an incubator for fostering robust research collaborations with local medical device, biotechnology, and biopharmaceutical industries.



Learn more about engineering graduate programs at our website.

DID YOU KNOW?

CIVIL ENGINEERING

Civil engineering encompasses a wide range of subfields, including Geotechnical Engineering, Water Resource Engineering, Environmental Engineering, Structural Engineering, Transportation Engineering, and Construction Engineering and Management, all emphasizing sustainable design choices. Opportunities in civil engineering are extensive, ranging from influencing public policy on infrastructure decisions to designing the world's tallest buildings. Graduates can work in various settings, from offices to the field, engaging in tasks such as detailed infrastructure design, managing transportation systems, developing water storage systems, and protecting the environment from pollution. Additionally, they may communicate designs to builders, conduct research on climate change's effects on infrastructure resilience, develop eco-friendly building materials, and monitor and enhance the health of natural resources. In essence, civil engineering offers a multitude of career paths for those committed to environmental protection and creating resilient infrastructure to improve the quality of life for our neighbors and friends.

BIOENGINEERING

Bioengineering offers a diverse spectrum of specialized fields, including biomedical device engineering, biotechnology and pharmaceuticals, medical imaging, biomechanics and biomaterials, and Bio AI, all contributing to advancements in healthcare and human well-being. Opportunities in bioengineering are vast, spanning the design of advanced medical technologies, drug development, refining diagnostic techniques, enhancing human performance, and pioneering AI-based solutions for personalized medicine and disease treatment. Graduates may find themselves engaging in research, development, and practical implementation, ultimately contributing to improving the quality of life for individuals and communities.

KAIRAN QUAZI'S REMARKABLE JOURNEY: FROM EARLY LEARNER TO STARLINK ENGINEER

While most kids at the age of 14 are spending their summer vacation going to the beach, hanging out with their friends, or attending summer school, Kairan Quazi is starting his first job as an engineer for SpaceX's Starlink just one month after graduating with his Bachelor's Degree in Computer Science and Engineering from Santa Clara University (SCU). Kairan's journey into computer science and engineering began at a young age, excelling in the subject and completing his school's computer science curriculum up to the 8th grade level by the time he was in 2nd grade. Throughout his accelerated academic career he has faced challenges, but with the support of his family and friends, he has officially become Santa Clara's youngest graduate.

Encouraged by an elementary school instructor, Kairan enrolled in an advanced programming school, where he collaborated with industry professionals on challenging technical projects. At just six years old, Cathy O'Neil's "Weapons of Math Destruction" inspired him, sparking a passion for AI and using technology for societal good. At 10 years old, he secured a prestigious internship with the Human AI Lab at Intel Labs, contributing to the development of a predictive speech generation system to aid disabled individuals, famously used by Dr. Stephen Hawking.

To balance his advanced academics, Kairan's parents emphasized focusing his free time on hobbies and friendships, leading to him obtaining a black belt in Kajukenbo, a hybrid martial art from Hawaii. At SCU's School of Engineering, he found a community that shared his interests, facilitating the formation of deep bonds. Among these shared interests are his passion for video games and reading. Additionally, Kairan has been playing the piano for several years and recently took up tennis, finding joy in activities that keep him grounded. Traveling with his family and close friends is another favorite pastime, with recent adventures including cruising the fjords in Norway and revisiting London. Even though he was in a demanding academic environment, Kairan managed the stress exceptionally well, attributing it to his upbringing that prioritized intellectual curiosity and learning over exam-focused academics. This balanced approach to life has enabled Kairan to excel in both his academic pursuits and personal interests even with the challenges that have been thrown his way.

While his accelerated entrance into college was an impressive feat, it did not come without its obstacles. Kairan started college at only nine years old. Although he was thriving at Las Positas Community College, because of his unique position, the California Department of Education could not waive his K-12 graduation requirements. He balanced his college courses and worked backward to qualify for his highschool diploma a year later. While on an accelerated learning track, Kairan always had the support of his elementary school friends and his classmates in college from both Las Positas Community College and later at SCU.

Finding peers with common interests at Santa Clara has been an important part of Kairan's student experience. Amidst the memories that have shaped his college journey, a fond moment Kairan cherishes is from the Fall of 2020. On the first day of classes, the university featured him on its Instagram page, and he was astonished by the overwhelming response. Hundreds of welcome emails and Instagram direct messages poured in from fellow students, making him feel instantly welcomed and appreciated. Through this experience, he quickly formed numerous new friendships, confirming that he was exactly where he was meant to be.

However, there was a drawback of being underage in college that Kairan found humorous – Kairan attempted to rush the engineering fraternity Theta Tau, only to discover that even professional fraternities require members to be at least 18 years old. Nonetheless, he received a kind letter inviting him to participate informally in their events, showcasing the campus community's camaraderie and inclusiveness.



Kairan, having experienced the challenges and opportunities of being an accelerated learner within a sequential system, offers valuable advice to others in similar positions. He emphasizes the importance of building a network of mentors across industries aligned with their passions, a practice he started at age nine. These mentors have amplified his learning and provided invaluable perspectives and support for executing his project ideas. Additionally, Kairan advises, "build a network of friends across different majors, industries, and backgrounds where you can challenge and shape each other's views. I am really grateful for a large group of close friends at SCU where we serve as sounding boards for each other." Looking towards the future, Kairan shares his intense desire for impact in the world of technology, whether as a founder operating at the intersection of data, AI, and security or as an innovative leader from within. His ultimate goal is to effect innovation with a tangible impact on daily lives while giving voice to outliers who don't fit conventional assessment boxes, ensuring their perspectives are heard and valued.

As Kairan begins his journey at SpaceX's Starlink, he is filled with excitement and purpose. The opportunity to be a part of something so much bigger than he ever imagined fills him with awe and anticipation. Beyond the obvious societal benefits of internet access, he is eager to explore the broader applications of Starlink's technology, particularly in areas like precision farming, where satellite images could revolutionize agricultural practices. Stepping into the SpaceX culture, he embraces the principles of ownership and accountability, ready to thrive in this environment even as a new addition to the team. While he may have experienced imposter syndrome during the interviews, he feels honored and humbled by the trust in his abilities and potential to work on some of the most challenging problems in the field.

A culmination of his experience, the encouragement from his parents, and the support of the engineering community, has filled Kairan with a deep sense of inspiration and determination. Kairan is excited to contribute the skills he learned at SCU's School of Engineering and his passion to the cutting-edge innovations at Starlink, knowing that this experience will profoundly shape the trajectory of his professional journey.

ENRICHING DIVERSITY: EXPLORING THE ENGINEERING JOURNEY WITH HISPANIC STUDENTS AT SANTA CLARA UNIVERSITY

Meet Eduardo Noyola, Cinthya Jauregui, and Gerardo Aguayo Quezada - three engineering students whose Hispanic heritage has influenced their paths in both engineering and life. In this interview, we delve into the experiences and motivations of these talented individuals as they share their unique perspectives on engineering, problem-solving, and the advice they offer to fellow Hispanic students aspiring to pursue careers in this dynamic field.



Eduardo Noyola '26
Bioengineering

What sparked your interest in engineering and how did you decide to pursue the field?

In high school, I had the opportunity to work in a biology lab, which fascinated me as I delved into the world of cells and life sciences. At that point, I was torn between the idea of pursuing a career in medicine or majoring in biology. However, when I joined a maker lab, where I worked on a range of projects including 3D printing, my path started to align. It was this exposure to hands-on engineering and creative problem-solving that led me to discover an interest in

mechanical engineering. However, after doing more research and having a “panesito y cafecito” with my mom, I discovered that I wanted to get into Bioengineering.

What advice would you give to other Hispanics who want to pursue engineering?

My advice to other Hispanic students is not to feel inferior and to pursue their ambitions without being deterred by any perceived limitations due to their ethnicity. I encourage students to recognize their worth and capabilities, and that everyone has the potential to

achieve their goals regardless of their background.

How has your Hispanic heritage influenced your approach to problem-solving?

My parents taught me the importance of a strong work ethic and the value of perseverance and determination instilled in us by our family. Our community’s hard-working mindset has motivated me to push through challenging times and stay focused on my goals.



Gerardo Aguayo Quezada '26
Bioengineering

What sparked your interest in engineering and how did you decide to pursue the field?

In high school, I joined a robotics class initially. I considered a career in marine biology but was deterred by the deep-sea diving requirement. Eventually, I discovered a passion for the creativity involved in engineering. I explored robotics at Bellarmine College prep but found the environment not as inclusive. However, my interest in cultural projects and bioengineering led me to further explore the field, solidifying my decision to pursue engineering at Santa Clara University’s Bioengineering Department. Additionally, my personal experiences, such as my grandpa’s health struggles, also influenced

my choice to use bioengineering for studying the body and finding remedies for conditions like dementia and Alzheimer’s.

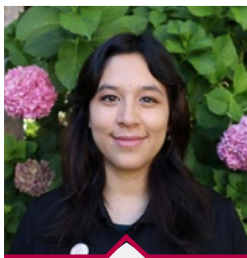
What advice would you give to other Hispanics who want to pursue engineering?

I encourage other Hispanic students to overcome the societal stereotypes and expectations that may deter them from pursuing engineering. Emphasizing the importance of trying and not underestimating their capabilities, I advise them to seek a strong support network and explore diverse interests to gain a holistic perspective. Additionally, I highlight the significance of perseverance and the importance

of staying motivated, even when faced with challenges.

How has your Hispanic heritage influenced your approach to problem-solving?

My Hispanic heritage instilled in me a strong work ethic, emphasizing resilience and perseverance. Watching my father and grandfather work tirelessly in construction, often for more than 12-hour shifts, taught me the importance of embracing hardship and facing challenges head-on. Balancing this with an emphasis on embracing emotions rather than suppressing them has helped me navigate the ups and downs of my academic journey, particularly in engineering.



Cinthya Jauregui '22, M.S. '24
General Engineering, Engineering Management and Leadership

What sparked your interest in engineering and how did you decide to pursue the field?

I joined engineering as it seemed to be the expected path, influenced by my strong performance in AP Physics classes during high school. I was unfamiliar with the field but believed it to be a natural choice for those inclined toward math. After enrolling in engineering, I discovered a passion for problem-solving and realized the impact engineering had on the quality of life of others particularly with medical devices, in the way they saved my father’s life.

What advice would you give to other Hispanics who want to pursue engineering?

Getting into engineering is challenging but very rewarding. I wholeheartedly encourage my fellow Hispanic students with a passion for this field to dive in and not let external factors (others dropping out or being the only Hispanic in the room) deter you. While hard work is an absolute must, prioritizing self-care is equally crucial. I cannot emphasize enough the significance of finding your community and a sense of belonging. In my case, it was the Society of Hispanic Professional Engineers (SHPE) and Lead. I strongly urge you to seek out a support system because sometimes seeing the statistics can be very disheartening

and classes can feel daunting, but a community motivates you to keep going and reminds you, that you’re not alone.

How has your Hispanic heritage influenced your approach to problem-solving?

Honestly, the warmth and empathy characteristic of Hispanic communities, which they integrate into their witty problem-solving approach. Through my experiences in church and Hispanic household dynamics, our community emphasizes the importance of being attentive to others’ needs. Our empathetic approach aims to address the needs of others, even when they are not explicitly communicated.

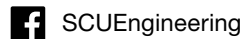


Santa Clara University
500 El Camino Real
Santa Clara, CA 95053

Nonprofit Org
US Postal
PAID
Permit No. 22
Santa Clara, CA

The Jesuit University in Silicon Valley

GIVE TO SCU ENGINEERING
scu.edu/engineering/give



SCUEngineering



@SCUEngineering



@SCUEngineering

PRESIDENTA SULLIVAN EXPANDE SUS COMPROMISOS PARA APOYAR ESTUDIANTES SUBREPRESENTADOS

En una carta que envió la Presidenta Sullivan a principios de este año, ella informó a la comunidad sobre los compromisos que está asumiendo la Universidad de Santa Clara para "fortalecer la comunidad de nuestros estudiantes de color, y aumentar significativamente el número de estudiantes de bajos ingresos y de grupos subrepresentados que asisten a Santa Clara." A continuación se presentan dos de las formas en que la Universidad se compromete a apoyar sus esfuerzos como Institución al Servicio de Hispanos (HSI, por sus siglas en inglés). La versión en inglés de su compromiso se puede ver en el canal de YouTube de la Universidad.

Creando un grupo asesor para ayudar a acelerar el proceso de convertirnos en una HSI.

Hemos obtenido el estatus de "HSI emergente" al incrementar nuestra matrícula de estudiantes hispanos/latinos del 15% al 19% en la última década. En estos momentos, estamos creando un grupo asesor, dirigido por la Vicepresidenta de Gestión de Matrícula, Eva Blanco Masías. Este grupo asesor nos ayudará a mantener nuestro enfoque en el trayecto de múltiples años para obtener la designación completa de HSI, aumentando nuestra matrícula de estudiantes hispanos/latinos de pregrado al 25% y asegurándonos de ser una comunidad

donde puedan prosperar y desarrollarse plenamente. La composición del grupo asesor incluirá representación de estudiantes, personal y profesores.

Apoyando a "Comunidad."

Nos comprometemos a apoyar a Comunidad, la coalición de organizaciones latinas de Santa Clara, incluyendo la asignación de personal para aumentar la interconexión, impacto y la creación de redes entre sí, así como con profesores, exalumnos y grupos comunitarios. Hemos asumido compromisos similares con las organizaciones de personas afrodescendientes y afroamericanas a medida que desarrollan e inauguran el Black Bronco Network, y esperamos seguir apoyando de manera similar a todos los grupos con intereses afines.



The English version of President Sullivan's commitment can be viewed on the University's YouTube channel.