She had the drive
to fuel her dreams.
pg. 10
Welcome to the 2018-2019 edition of The Rock. This edition is brimming with stories about the remarkable accomplishments of our students, alumni and faculty. We are proud of recent alumni like José Ruvalcaba ’18, a first-generation student who entered Pacific at the age of 40. With the support of his wife, young children and our dedicated faculty, José completed his civil engineering degree last spring and is now living his lifelong dream as a design engineer in San Ramon.

For mechanical engineering graduate Marielle Cortez ’18, the dream was working with automobiles. Through her CO-OP experience at Toyota, she was able to realize that dream and is now a design engineer with the company.

At the School of Engineering and Computer Science (SOECS), we’re in the business of making dreams come true. Students like José and Marielle, and countless others, make me proud to serve as dean of this exceptional school.

We are expanding support for our students through experiential learning opportunities, growth in our CO-OP program, and opportunities for student engagement inside and outside the classroom. Through a generous alumni gift, we’ve been able to create an Office of Diversity, led by Patricia Lopez, our first diversity coordinator.

We continue to focus on upgrading our labs and facilities as well. I am proud to showcase a complete remodel of our engineering materials laboratory. Thanks to a generous seed gift from Stockton-based Valimet, we’ve been able to complete a major upgrade of this undergraduate and graduate lab, which will benefit 100 students each year.

With their Pacific education in hand, SOECS alumni continue to take root across the globe. This edition highlights the Gulf Alumni Association, an active international alumni group with over 100 engineering alumni in the Persian Gulf region. Members credit their experience at Pacific for preparing them to take leadership roles in their home countries. I hope more of you will write in to soecsoutreach@pacific.edu and tell us what you’re up to in your corner of the world.

It has been a busy year at Pacific, and we are excited about what the future holds; I am grateful that you are taking this journey with us. For all of your support and all you do for our students, thank you.

With best regards,

Steven Howell, PhD
Dean, School of Engineering and Computer Science

RIGHT
Dean Howell and José Ruvalcaba at Above and Beyond, an award ceremony where Pacific’s adult students are celebrated for their academic accomplishments and what they have overcome to earn their degrees.
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HISTORY OF THE ROCK

The Rock magazine is named after a large rock brought to campus by some sneaky engineers back in the 1960s. Now known as one of two “graffiti rocks,” it has since become a beloved campus tradition for students to come out late at night to paint over it. On any given day it may display Greek letters, a birthday wish, a political statement, welcome new students or advertise an event.
Pacific’s MESA Engineering Program (MEP) is designed to empower first-generation and low-income students to develop personally and professionally while at Pacific. MEP provides students with resources and workshops tailored to their needs as engineering and computer science students and future innovators in the workplace. Students have access to resources including:

- Free tutoring
- 24/7 access to a dedicated study room with computers and printers
- Personal and professional development workshops
- Internship, volunteer and scholarship opportunities
- Networking with other MEP members

CONTACT: Patricia Lopez | plopez@pacific.edu | 209.932.2887

“As a first-generation Mexican-American college student, it has made a significant difference being surrounded with hard workers and amazing talent. I will be forever indebted to MEP and the team that has made it possible for my dreams to come true.”

—NAZARET CISNEROS ’20
The School of Engineering and Computer Science’s new diversity coordinator brings a deep personal understanding of what’s needed to support students.

Patricia Lopez knows the challenges of being the first in one’s family to pursue higher education.

The daughter of immigrants from Oaxaca, Mexico, Lopez began her college journey when she enrolled in California State University, Stanislaus, to earn a bachelor’s degree in social sciences.

Education has always been an important part of Lopez’s life, even though her parents had little schooling — her father dropped out of middle school and her mother only finished elementary school.

“My parents always emphasized the importance of an education but were unable to guide us because they did not have the knowledge. College was not really something that was discussed,” she said.

But Lopez broke the mold. It wasn’t an easy path.

“I didn’t know what it meant to be in college or what it took to remain in college,” said Lopez. She didn’t realize, for example, that tutoring was available for the asking or know what forms she needed to apply for financial aid and how to complete them properly.

“I see myself in a lot of the students I’ve had the privilege to help because they come from the same background I did. Most of them are first-generation college students.”

—Patricia Lopez

Before joining Pacific, Lopez provided administrative services for student support programs at California State University, Sacramento, where she worked primarily with first-generation college students from migrant farmworker families and supported undocumented students. Her responsibilities included planning events and supervising peer mentors for these two groups.

Lopez has years of experience ensuring that students from diverse backgrounds get the help they need, whether it’s academic support services or information about scholarships and research opportunities. As the School of Engineering and Computer Science’s diversity coordinator, she is excited to leverage her knowledge and experience to help Pacific students succeed academically and personally.

“I see myself in a lot of the students I’ve had the privilege to help, because they come from the same background I did,” Lopez said. “Most of them are first-generation college students.”

Lopez also works closely with the student clubs and organizations in the School of Engineering and Computer Science and oversees the MESA Engineering Program (MEP). MEP helps first-generation and low-income students develop personally and professionally with resources such as free tutoring, 24/7 access to a dedicated study room, placement in internships and volunteer opportunities, professional workshops and networking through industry events and conferences.

She recently undertook a remodel of the MEP room to create a centralized area where students can relax and be creative. Improvements include updated furniture, appliances, printing services and study areas.

“I didn’t want the student lounge to be just another space on campus,” Lopez said. “I wanted a place where students who are commuting and those who spend hours on campus can see it as a home away from home.”

She says her favorite part of the job is getting to know young people individually.

“Working with students of diverse backgrounds has humbled me,” Lopez said. “Everyone has their own journey and their own story. I’m just here to help them achieve their goals.”
Pacific STEM Day
Pacific STEM Day welcomes high school seniors and transfer students to tour Pacific’s campus and meet staff, faculty and students. Pictured are Stockton Unified School District high school students interested in majors offered in the School of Engineering and Computer Science.

Senior Project Day
Pacific seniors showcase and demonstrate what they’ve learned in the classroom with design projects that are presented before a panel of alumni and industry experts.
Awards Banquet
Dr. Camilla Saviz (left) presents (L-R) the Academic Excellence Award to Alisha Rodriguez and Outstanding Graduate Awards to Daryll Mendoza, Micaela Robertson, and Khalid Bafakih.

Commencement
Congratulations to the class of 2018! We are honored to celebrate you and cheer you on as you transition from Pacific students to lifelong Tigers.

CO-OP Experience
CO-OP is an experiential internship program for students of the School of Engineering and Computer Science. Pictured is Mechanical Engineering Student Mackenzie Cook ’19 at his CO-OP with the Department of Water Resources.

Career Fair
The Fall Career Fair brought 42 employers and over 160 students and alumni to campus. The event proved to be a continued success, leading to the addition of the SOECS spring career fair.

Career Fair
The Fall Career Fair brought 42 employers and over 160 students and alumni to campus. The event proved to be a continued success, leading to the addition of the SOECS spring career fair.
Do you know someone who would be a great candidate for the 2019 Alumnus of the Year or the Distinguished Service Award? Please send your nominations to: SOECSoutreach@Pacific.edu by April 20, 2019.

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

AWARDS OF DISTINCTION

Luci Lagrimas
Distinguished Alumnus Award

Luci Lagrimas, engineering manager at Cisco Talos in San Jose, California, was awarded the 2018 Distinguished Alumnus Award by the School of Engineering and Computer Science in recognition of her impressive career in engineering and her devotion to University of the Pacific. While at Pacific, Lagrimas was named three-time All-American Field Hockey honoree (1981–1984) and earned a degree in electrical engineering. In addition to her career at Cisco, Lagrimas professionally mentors the Society of Women Engineers student organization, umpires for NCAA Field Hockey, and serves on the Dean’s Council of the School of Engineering and Computer Science.

George Campbell
Distinguished Service Award

George Campbell, president and COO of Valimet Inc. in Stockton, California, was awarded the 2018 Outstanding Service Award by the School of Engineering and Computer Science in recognition of his successful career in engineering and his immense dedication to the Stockton community. He has been president of Valimet for 25 years, guiding the company to both technological and commercial success. In addition, Campbell has made significant contributions to the Stockton community. He and his wife, Leslie, are active supporters and volunteers for the Stockton Homeless Shelter as well as Cleveland Elementary School. He has served many years on the Dean’s Council of the School of engineering and Computer Science.

AWARDS BANQUET 2019
Josh Steimel is a recent graduate of Massachusetts Institute of Technology, where he earned bachelor’s and doctoral degrees in materials science and engineering, specializing in polymers and biomaterials. His research interests include creating synthetic or experimental systems that mimic biological processes. In particular, he works on measuring the strength of biological interactions using magnetic particles.

Steimel’s work is interdisciplinary, involving mechanical, biological, chemical and electrical engineering as well as physics and computer science concepts. He is starting a new lab at Pacific, the Laboratory for Biomimetic Active Matter Systems.

“I find active matter to be a very attractive field of study due to the myriad interactions and behavior that can emerge in these systems. Pacific students have been extremely impressive in not only their technical aptitude, but also the effort that they put forth in classes. I’m extremely happy and excited to be at Pacific, and I cannot wait to start developing Materials Science Labs.”

—Josh Steimel

Afsoon Yousefi Zowj holds master’s degrees in both computer science and network engineering from the University of Vermont and Amirkabir University of Technology in Tehran, Iran. Before coming to Pacific, she was recruited by Vermont Information Processing Inc. to join the company’s iOS development team, where she worked in software engineering, deployment testing and maintenance employing Kanban methodology. Her research interests include developing cell phone applications, evolutionary algorithms and machine learning. She enjoys teaching computer and information processing, algorithm analysis and data structures.

“Designing and developing a new software program or app has always been a beautiful phenomenon to me. Developing is the fine combination of art, science and personality. I am grateful to be involved with the process of students becoming masterminds behind these developments.”

—Afsoon Yousefi Zowj
Brian Weick joined the Pacific faculty in 1995 and has greatly contributed to the development of the Mechanical Engineering Department during his tenure. Serving as chair of the department from 2000 to 2014, he enhanced recruitment efforts and the program curriculum resulting in higher enrollment in both the undergraduate and graduate mechanical engineering programs. In addition to teaching more than 12 undergraduate and graduate courses, Weick developed undergraduate laboratories for Materials Science and Manufacturing. His research on the durability of magnetic tape and optimal conditions for archival storage, which he plans to continue in retirement, have made a great impact in the field of mechanical engineering.

Jennifer Ross embodies the teacher-scholar model and has brought national recognition to the university since joining Pacific in 1993. She has been the principal investigator for four National Science Foundation grants supporting innovation and new pedagogy for undergraduate engineering education. She has demonstrated excellence as a faculty member through her innovative curriculum and scholarly endeavors while also serving on numerous university and school committees. Ross served at the request of President Pamela A. Elbeck on the university wide Status of Women Faculty Ad-Hoc Committee and was recognized with the university’s Champion of Diversity Award in 2017. Her leadership includes more than four years of distinguished service as chair of Electrical and Computer Engineering and two and a half years as associate dean, in which she led department chairs and program directors in preparing for a successful ABET accreditation process during the 2017–18 academic year. Over her nearly 19 years at Pacific, Ross has remained on the cutting-edge of her profession, invested wholly in the intellectual development and support of Pacific students and represented the university with honor, distinction and immense pride.
William Stringfellow joined Pacific in 2004 as the director of the Ecological Engineering Research Program. He also held an appointment in the Energy Geosciences Division at Lawrence Berkeley National Laboratory. Stringfellow supervised and mentored numerous students and an active team of research engineers and scientists on projects to study water quality in the San Joaquin River, assess the role of biodegradation in the Deepwater Horizon Oil Spill, develop biomass energy projects using agricultural waste products, evaluate hazards to water resources from well stimulation (e.g., hydraulic fracturing) in California as part of Senate Bill No. 4, and improve treatment methods for oilfield-produced water. He taught courses on ecological engineering, industrial waste treatment, applied microbiology and managing technology in the Master of Science in Engineering Science program. Stringfellow plans to continue working on research projects with Pacific faculty in retirement.

Gary Martin retired in January after 36 years of outstanding service. Beginning in 1983 as cooperative education coordinator, he later served as the director of the program before becoming assistant dean. He led the co-operative education program in a period of transition, growth and modernization, helping to develop strong CO-OP placements for SOECS students, including seeing the expansion of the program to Germany and Japan. He also authored a textbook that was used to help prepare SOECS students for success in the CO-OP experience and helped oversee the Engineering Industry Fellowship program. As assistant dean, Martin was instrumental in developing the Bioengineering and blended Master of Science in Engineering Science degree programs. He has led successful student recruitment efforts, expanded transfer relationships with community colleges and wrote the initial grant proposal that resulted in establishment of the Pacific Mathematics, Engineering and Science Achievement (MESA) program. His many recognitions include the Hoefer Award for Leadership and Experiential Learning, the San Joaquin Engineers Council Distinguished Service Award and the Pacific Alumni Association Faculty Mentor Award. After retirement, he joined Clark Pacific as the Human Resources Business Partner for the Engineering and Business Development skill teams.
Where Did Her Drive Take Her?
After graduation, Cortez started working as an exterior body design engineer at Toyota, where she previously completed three CO-OPs.
Marielle Cortez has grown up around cars as far back as she can remember. She fondly recalls going to car shows and races as a child and spending hours with her dad in the garage while he worked on his car. Through these experiences, she developed a passion for cars.

When it came to choosing mechanical engineering as her major, she thought about how the environment she grew up in had influenced her personality and interests. She fell in love with the idea of applying engineering in a creative way, particularly through Computer Aided Design (CAD). This led Cortez to her dream of becoming a design engineer in the automotive industry.

During her time at Pacific, Cortez volunteered for Expanding Your Horizons, a STEM career conference for 6th- to 12th-grade girls, and Habitat for Humanity. She also was involved in the Association of Engineering Students, Kappa Alpha Theta fraternity and the Society of Women Engineers (SWE) Team Tech, where she was the design lead of the team for two years. Each year, the team works with an industry partner to develop a product from start to finish and participate in the national conference. Her experiences with SWE allowed her to showcase a strong resume when looking for a CO-OP to gain work experience.

At the SOECS career fair portion of the conference, Cortez walked right up to a representative from Toyota, shared her elevator pitch and locked down an interview for the following morning. A few days later, she received an offer to be a design engineer for Toyota, securing her dream job at the age of 20.

She excelled in her position and she decided to delay her graduation from 2017 to 2018 and complete two more CO-OPs with the company. Cortez now works as an exterior body design engineer at Toyota.

While it seems like everything went her way, her life journey has not always been easy. She has struggled with mental illness, including depression, anxiety and post-traumatic stress disorder (PTSD).

“It is my hope to inspire others with my story to continue to persevere through their own personal hardships,” said Cortez. She continues to be a strong advocate for supporting those dealing with similar circumstances.

Cortez attributes her dream achievement and job success to the research opportunities and committed professors at Pacific.

“I really appreciate all the support I have received during my years as an undergrad at Pacific, and I am so proud to have achieved my dream as a design engineer in the automotive industry,” said Cortez.
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The hybrid (classroom and online) program is offered at Pacific’s San Francisco Campus. Designed for working professionals, the MS in Data Science equips students with the transferable skills and industry connections to be game changers across multiple industries.

For more information:
go.Pacific.edu/DataScience

DATA SCIENCE MINOR

The College of Pacific offers an undergraduate minor in Data Science at the Stockton Campus. The program is developed for non-computer science majors and can serve as an accelerated path to the MS in Data Science.

For more information:
go.Pacific.edu/DSminor
Alex Katona ‘18 never expected to earn a nomination for the Forbes 2019 “Top 30 under 30” list, but that’s just one of many accolades he has received since graduating from Pacific’s Data Science program last spring.

“I invented a new graphics chart called a Poly Area Chart, which was selected by Kantara as one of the top 101 visualizations worldwide. I have been internationally recognized and received nominations for multiple awards,” said Katona. “All of this happened within six months of graduating using a fraction of what I learned in the program. The skills I gained in this program enabled me compete at that level.”

Pacific’s Data Science program prides itself on its interdisciplinary approach to data science—integrating storytelling, math, computer science, creative and critical thinking, interpersonal communication skills and real-world application through capstone projects in partnership with industry.

Alex chose Pacific’s MS Data Science program because the classes were delivered through a combination of online and Saturday meetings.

“The program is intelligently designed for working professionals. I could continue to work full-time while taking classes full-time. This is possible because the in-person classes are held on Saturdays and the online classes are held after office hours.” Alex continued, “For my capstone project, I got to work with Charles Schwab, which helped me apply everything I’d learned in the program—something very few universities offered. I would strongly recommend this program to anyone considering a career in data science or advancing within the field.”

“I have been internationally recognized and received nominations for multiple awards. All of this happened within six months of graduating, using a fraction of what I learned in the program.”

—Alex Katona ‘18
There have been multiple occasions where I wanted to give up, and I am glad I didn’t. My wife and two sons are my driving force and motivation.”

—José Ruvalcaba, ’18
The college experience for José Ruvalcaba ’18 began later than most, but that didn’t stop him from pursuing his dream.

Growing up, higher education wasn’t understood or valued by his parents. In his father’s mind, education was too big of a dream and unachievable. Something changed for Ruvalcaba when he attended his cousin’s college graduation a few years ago. He saw her walk across the stage and decided, “I want that.”

He and his wife, Mayra, seized that inspiration and developed a plan to make his dream possible. She took full financial responsibility by becoming the family’s sole earner for four years as he started going to school at Diablo Valley College.

Initially not certain what he wanted to major in, he narrowed it down to civil engineering, because he had worked in construction for 18 years. Ruvalcaba chose to transfer to Pacific, because it was close to home in Tracy, an important consideration since he and his wife are raising two young boys, Emiliano and Elias. He was also particularly intrigued by the personal attention, faculty support for students, and the amount of resources available.

Ruvalcaba describes meeting his adviser and professor, Camilla Saviz, as one of the major highlights of his time at Pacific.

“She genuinely cares about her students,” Ruvalcaba said. She and other professors in the civil engineering department were always welcoming and supportive both in and out of the classroom.”

As a husband, parent and full-time student, Ruvalcaba didn’t have much free time, but when he did, he was involved in the Pacific chapters of the American Society of Civil Engineers, MESA Engineering Program and SUCCESs TRiO program, a federally funded program to provide educational opportunities for low-income and disabled Americans.

Ruvalcaba did his cooperative education experiential internship at BKF Engineers in Walnut Creek, where he assisted engineers in plan production and drafted construction details for land development projects using AutoCAD, a computer-aided design program for 2-D and 3-D design and drafting.

Ruvalcaba now works for Carlson, Barbee & Gibson Inc. in San Ramon as a design engineer, a job he landed after attending Pacific’s School of Engineering and Computer Science Career Fair in fall 2017.

Ruvalcaba credits his wife for being his biggest fan and the reason he was able to go to school full time.

“At 40, balancing family and engineering schooling can be challenging,” Ruvalcaba said. “There have been multiple occasions where I wanted to give up, and am glad I didn’t. My wife and two sons are my driving force and motivation.”

The family connection to Pacific extends beyond his wife and sons. His sister, Gabriela Ruvalcaba ’19, is also studying civil engineering at Pacific.
ALUMNI NEWS

Cheyanne Harris ’17
After graduating with a degree in civil engineering in 2017, Cheyanne was selected to participate in the Water Education Foundation’s Water Leaders Program, a professional development program for early- to mid-career professionals to brainstorm solutions to California's complex water system. She currently works as a civil engineer for Brown and Caldwell in the greater Sacramento area.

Josh Paul Thomas ’11
Josh graduated with a degree in engineering management in 2011 and is now working as a project manager at Cumming, an international project and cost consultancy in San Francisco. He is also recently engaged.

Karen Vences ’15 and Alejandro Cabrera ’15
Karen Vences and Alejandro Cabrera met and fell in love at Pacific, as many of our alumni have. The two civil engineering grads recently tied the knot on September 8, 2018, at Morris Chapel, followed by a reception in Modesto. Karen works at the San Jose-Santa Clara Regional Wastewater Facility and Alejandro is working for BKF Engineers in Redwood City.

Ryan Liu ’07
2018 was full of new ventures for Ryan Liu, who earned degrees in electrical engineering and engineering management from SOECS in 2007. He started a job as a principal engineer with Booz Allen Hamilton in McLean, Virginia, and became a father on November 23, 2018, when he welcomed his first daughter, Aria, into the world.

Henry M. Hirata ’64
Henry is a retired civil engineer who doesn’t show any sign of slowing down. He continues to serve as a member of the SOECS Dean’s Council, the Pacific Athletic Foundation and Stockton Rotary Club, and he is involved in various community organizations. In his spare time, he likes traveling, working on his street rod and attending Pacific athletic events with his wife, Alice. He also enjoys spending time with his daughter and son-in-law, Karen and James Cairel, and his grandchildren, Jacob and Kaylee.
Pacific has been the destination of choice for international engineering students from Kuwait and the Persian Gulf region since the 1960s. The alumni in this region have remained a close-knit group through the years and formed the Gulf Alumni Association in 2006.

With about 130 members, this active regional alumni club meets annually to connect with each other and their Pacific roots. Although most of the association’s members are Kuwaiti, others come from neighboring countries in the gulf region.

“It’s a time for them to connect with each other and reconnect with the university,” said Dean Steven Howell, who marked his fourth trip to the country at the beginning of February. Joining him this year was Burnie Atterbury, vice president for University Development and Alumni Relations; and Ali Dashti ’90.

Howell gave an update on the latest happenings in the School of Engineering and Computer Science—new programs, internships, lab and facility upgrades, enrollment trends and faculty activities. He also took the opportunity to visit high school college fairs to meet with prospective students. Atterbury and Biedermann shared university news and updates on Leading with Purpose: the Campaign for University of the Pacific. Members of the Gulf Alumni Association have continuously demonstrated their commitment to Pacific through their generous gifts of time and financial support. They established the Kuwait alumni engineering endowment in 1995, which today supports activities for international students. Several Gulf alumni have served Pacific in various capacities, including on the School of Engineering and Computer Science Dean’s Council and the university’s Board of Regents.

Many of the roughly 2,500 students Kuwait’s government sends to universities overseas each year end up at schools on the West Coast, drawn to the region’s mild winters. But those who enroll at Pacific, Howell said, are also drawn to its size and culture.

Pacific’s small class sizes and the professors’ mentoring relationships with students are important for these students. Faculty are available to spend time with them, including helping them acclimate to Western society’s very different culture, Howell said. And that has been a winning combination for these alumni.

The Kuwaiti engineers graduating from Pacific have flourished in their careers, Howell said, noting that many have launched or purchased companies, or work for the government or petroleum companies.

“They attribute their success to the support they received as students at Pacific,” he said.
It was research with purpose for this first-generation student and Powell Scholar.

Attending college was a lifelong dream for Nasser Saleh. As the son of Lebanese immigrants, he would become the first in his family to get a college education. Concerned about the cost of an education, one of his middle school teachers suggested that if he performed well in school, he could get scholarships to help pay for college. He used those words as motivation to get through countless hours of studying.

His hard work paid off. Not only was Nasser accepted to the Pacific’s School of Engineering and Computer Science, but he was also selected as a Powell Scholar. Powell Scholars receive the university’s premier academic scholarship for high achieving students.

“I remember opening Pacific’s letter as my mom stood next to me. She cried tears of joy as we read it together,” remembers Saleh. He had the financial support he needed to attend his top-choice university and become part of a transformative academic program.

The Powell Scholars Program inspired him to leverage his education and provided him with the support and opportunities to do so. He worked on a Powell Scholars project for two years helping to develop a microgreen growing system that enables communities suffering through drought to grow produce during the winter. The project served as a learning tool for schoolchildren as well.

Studying at Pacific helped Saleh find his purpose. A cooperative education internship with Edwards Lifesciences in Irvine, California, propelled his desire to design new medical test methods to improve patient health.

“The education I received and experience I gained at Pacific helped me discover a passion that I did not know existed, in a field where I can directly improve people’s lives,” said Saleh. “I dream of someday pointing to someone’s heart and knowing that I worked on the device that keeps it beating.”

Since graduating in May 2018, Saleh is now working as a research and development engineer at Edwards Lifesciences, where he is helping to design heart valve therapies that improve and save lives.
“The education I received and experience I gained at Pacific helped me discover a passion that I did not know existed, in a field where I can directly improve people’s lives,”

—Nasser Saleh, ’18

WHAT HE’S DOING NOW:
Saleh is working as a research and development engineer at Edwards Lifesciences, where he is helping to design heart valve therapies that improve and save lives.
Exchange Programs

CO-OP Student Finds Success at Daimler as Students from Germany Explore Pacific

Thanks to the Pacific Cooperative Education Program (CO-OP), Gavin Tan ’20, an engineering management major, has had the chance to make a dream come true by working for Daimler AG in Germany. CO-OP is an experiential internship program for students of the School of Engineering and Computer Science. Meanwhile, Philippe du Maire, Holger Havlin and Jan Gross, students at Esslingen and Aalen universities in Germany, spent the fall semester getting to know the Pacific community and California.

All of these young men are driven and dedicated students utilizing Pacific’s global engineering initiatives to help further their career ambitions and personal goals.

WITH A LIFELONG LOVE OF CARS motivating his choice of major, Tan wanted to take advantage of the opportunities afforded by CO-OP to complete an engineering internship at an automotive company. After spending time online watching videos of cars, he was motivated to explore the automotive industry further and emailed his faculty advisor, Dr. Abel Fernandez.

“I didn’t think much of that email after that, until one day Dr. Fernandez sent me an email asking if I am free the next day, as there are some professors from Aalen University in Germany who are visiting Stockton,” said Tan. “He said there may be a potential opportunity to work at Daimler, and he wanted to introduce me. Can you imagine? I send my advisor a simple email over summer, and months later, not only does he remember, but he has a potential internship opportunity in the automotive industry that he wants to connect me with.”

As a result of that initial email exchange, Tan landed an internship at Daimler Trucks where he has worked in the purchasing department with diesel truck-exhaust system parts and to ensure after-treatment systems align on a global level. He also has gained experience in negotiating contracts and was involved with the establishment of a global lead-buying workshop.

Although working in a German-speaking environment was a challenging adjustment, Tan is thrilled with his experience at Daimler.

“The nature of my work is exciting; you really feel like the time you put in saves the company money today,” Tan says. “I think the coolest thing is each morning when I walk into the plant, I see the Mercedes Benz logo spinning atop the office building and I tell myself, ‘Dude, you work in the flagship building of the headquarters of Daimler!’ It’s been five months, and so far, that hasn’t gotten old yet!”
Tan’s experiences at Daimler will definitely shape his future ambitions. He wants to pursue a career in intellectual property and patent law as in-house legal counsel for a company such as Daimler.

“I think my CO-OP experience should come in handy when I am applying for jobs after graduation,” he says. At the same time, he is grateful to Dr. Fernandez and other faculty at the School of Engineering and Computer Science for their support.

“It really is the dedication of the faculty that serves as the backbone for the educational experience at Pacific.”

BACK HOME IN STOCKTON, students from Germany’s Esslingen and Aalen Universities had the opportunity to study at Pacific during the fall 2018 semester. Philippe du Maire was drawn to the chance to come to California and the opportunity to be the first person from Esslingen to take part in this exchange. Du Maire studied design and manufacturing at a technical high school in Germany, because he says, “it makes me happy to find solutions to problems.”

Like Tan, du Maire has found immersion in a new language an adjustment, but one he welcomes. During his time at Pacific, he embraced the local environment by joining the climbing club and participating in student trips to Yosemite National Park and other destinations. He says this has been a fantastic experience he recommends to future exchange students.

In the classroom, du Maire enjoyed participating in a group project to design a LEGO piece and then manufacture it in one of Pacific’s Engineering labs.

After he completes his bachelor’s degree, du Maire plans to go on to earn his master’s degree at Esslingen and then possibly work for Stihl, a company where he interned and liked the work culture.

Holger Havlin and Jan Gross came to Pacific from Aalen University. Havlin apprenticed in mechatronics which is a technology combining electronics and mechanical engineering.

Since he was “always very interested in cars and everything with an engine in it,” he chose to study engineering.

Gross was interested in technology because of its impact on his academic and personal life. He takes a great interest in “analyzing problems and finding solutions,” which led him to mechanical engineering, economics and management as fields of study.

Havlin is particularly interested in an opportunity to work with 3D models and printers. Likewise, Gross has enjoyed working on a project “to develop an innovative product, work out a business plan and print a 3D prototype” in one of his business classes. He says this was a perfect means of aligning his economic and technical pursuits.

Both Havlin and Gross are enthusiastic about Pacific’s bustling student life. Gross says he is able “to constantly meet new people and take advantage of the numerous activities and events here on campus.” Like du Maire, they also cited immersion in the English language as the most challenging aspect of the experience, though both are now comfortable conversing in English.

All three exchange students noted that it was a new experience to be graded on projects and midterms; at German universities, the final exam constitutes the entirety of a student’s grade.

As they enter their final semester of undergraduate study, Havlin and Gross both have exciting plans for the future. Havlin wants to work with engines and later pursue a master’s degree in Germany. As a student, Gross worked at Daimler and plans to write his bachelor’s thesis at Daimler Trucks, Global Procurement. After that, he wants to take part in another experience abroad as part of his master’s degree program.
James Hetrick named Fletcher-Jones Endowed Professor of Data Science

James Hetrick, Pacific’s award-winning, influential and internationally renowned scientist in the fields of particle physics and data science, was named the Fletcher-Jones Endowed Professor of Data Science in the School of Engineering and Computer Science in February 2018. This endowment, established by a gift from the Fletcher-Jones Foundation, funds the data science faculty position and provides additional program resources.

With the funding available through the endowment, Hetrick already has invested in the data science program. Last March, he sent five data science faculty members to the Strata Data Conference, the largest data conference series in the world, where they learned about new updates in big data and networked with leading researchers and industry leaders in the field.

“Our faculty interacted with thought leaders in the data science field, and those leaders learned about our program,” said Hetrick. “This opportunity would not have been possible without the endowment funding.”

The endowment will fund student research and projects, particularly paid summer fellowships that enable students to gain research experience by working on real-world projects. It also provides funds for computing resources, such as high-performance computers for student use.

Hetrick was a leading member of the analytics/data science program launch team, helping to guide its transition from its initial proposal into becoming a thriving graduate program offered on Pacific’s San Francisco Campus. In helping to build this exciting new program, he has developed extensive relationships with the surrounding business communities to create interest in the program and support for student research projects.

A leading researcher, Hetrick has published more than 150 research articles in scientific journals and peer-reviewed publications. He also has fostered and mentored hundreds of student research projects during his long tenure. His depth of research includes 13 months at the South Pole Station in Antarctica studying cosmic rays, solar wind, the auroras and the earth’s magnetosphere, as well as research in theoretical physics conducted at the Large Hadron Collider at CERN.

Hetrick holds joint appointments in the College of the Pacific and the School of Engineering and Computer Science. He joined the physics faculty in the College of the Pacific in 1997 and served 17 years as department chair. He has been recognized for his teaching and research with the university’s Eberhardt Teacher-Scholar Award and for his mentoring of students and alumni with the Faculty Mentor Award from the Pacific Alumni Association.
Materials Lab prepares students to excel in the workforce

Thanks to dedicated engineering faculty and Pacific’s generous donors, the School of Engineering and Computer Science remodeled and updated its Materials Lab last summer. The new cutting-edge equipment provides students with tools not available to them in most introductory Materials Science courses.

Alyssa Maich, a new faculty member in the Mechanical Engineering Department, worked very closely with Dean Steven Howell, Associate Dean Jennifer Ross and mechanical engineering faculty Tien Roehling and Brian Weick in developing the proposal and completing the lab remodel. Maich’s goal was to outfit the materials science lab with equipment at the forefront of current industry standards. When she presented the proposal to the Dean’s Council in spring 2017, George Campbell, President and COO of Valimet, generously made a seed gift to support the project. Provost Maria Pallavicini approved the balance of funding for the remodel.

The additions include scanning calorimeters, an X-ray diffractometer, tensile testers, polishing equipment, optical microscopes and an electron microscope with energy dispersive spectroscopy capability, as well as updated lab safety equipment. As a result, professors have been able to enhance the curriculum, giving students valuable hands-on experience that is directly applicable to industry practices before they enter the workforce.

“In Pacific’s Materials Science course, every student works in a multidisciplinary team to design and carry out an investigation into a material(s) of their choice,” said Maich. “The additional testing capabilities made possible with this new equipment allows them to carry out experiments that have more complexity than they were previously able to conduct.”

Students explore the new components of the renovated materials lab.
Jeffrey Wu ’19, a computer science major with a concentration in software development, is a John T. Chambers Scholarship recipient.
SCHOOL OF ENGINEERING AND COMPUTER SCIENCE CAMPAIGN

Since 1957, the School of Engineering and Computer Science has fostered a rich experiential learning environment that positions students of every background for career success. We are committed to continuing this tradition of excellence through Leading with Purpose: The Campaign for University of the Pacific. The school’s campaign goal is to raise $8.5 million to support key campaign initiatives. Gifts to these initiatives ensure students receive an outstanding college experience that prepares them for success in their lives and professions.

YOUR GIFT WILL DOUBLE

Pacific is uniquely positioned to match dollar for dollar many of the gifts we receive for scholarship and program support thanks to the “Powell Match Program.” The Powell Match was made possible by the generosity of the late Robert C. and Jeannette Powell.

SOECS CAMPAIGN INITIATIVES

STUDENT ACCESS
Ensure that every student has access to a comprehensive Pacific education, regardless of financial need.

LEARNING SPACES
Expand access and improve technology to create state-of-the-art facilities, such as the Design Studio, labs and instructional spaces.

EXPERIENTIAL LEARNING
Elevate experiential learning opportunities that propel student success and workforce readiness, including support for cooperative education, undergraduate research and international experiences.

DATA SCIENCE
Support for education and research in an understanding and real-world application of the flood of data in the 21st century.

DIVERSITY AND INCLUSION
Develop exceptional leaders of every background who understand and embrace the value of diversity and its marketplace implications.

CAMPAIGN PROGRESS

$8.5M GOAL

$4.79M RAISED

Amount remaining to reach goal
- Experiential Learning
- Diversity and Inclusion
- Data Science
- Learning Spaces
- Undesignated/Other
- Student Access
The Master of Science in Engineering Science program is designed to strengthen students' technical, analytical and professional breadth and depth. All students receiving an MSES degree will complete a set of core courses that covers broader subjects of research and analysis.

To apply to the Master of Science in Engineering Science program, please visit:

go.Pacific.edu/GradApply