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CAL POLY POMONA
WINTER | SPRING 2018

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ADVANTAGE





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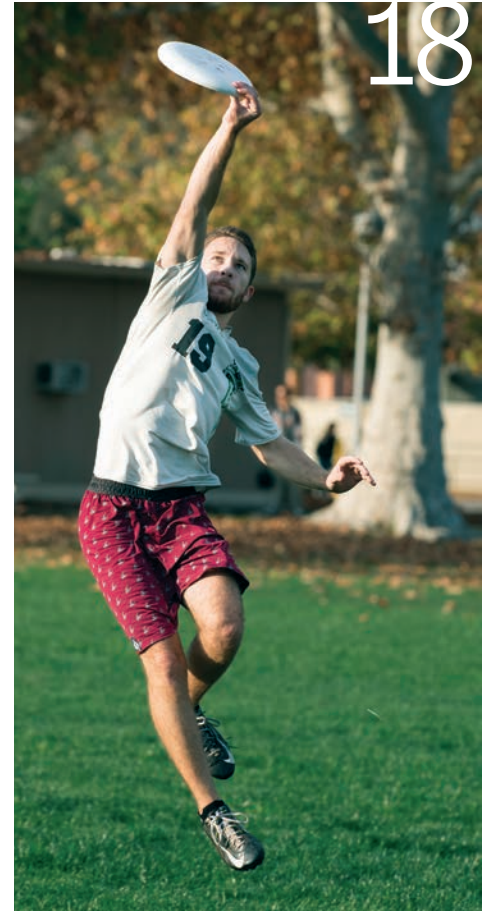
what's



▶▶▶▶ **ON THE COVER:** Inspired by the polytechnic theme of creativity, discovery and innovation, designer Ani Markarian employs modern design trends of altering color channels and using unconventional ordering of letters and words to illustrate The Polytechnic Advantage.

As part of its commitment to green printing, CPP Magazine is printed on FSC®-certified paper. The Forest Stewardship Council™ (FSC) promotes environmentally appropriate, socially beneficial and economically viable management of the world's forests.





inside

PRESIDENT'S MESSAGE

Soraya M. Coley addresses how a polytechnic education prepares students for the Future of Work and Human Engagement. [Page 2](#)

THE POLYTECHNIC ADVANTAGE

What does it mean to be a polytechnic university? Just ask our students. [Page 3](#)

BIG DATA IS THE NEW OIL

The digital commodity is driving the future of education and work, writes Dean Erik Rolland. [Page 14](#)

EARNING THEIR WINGS

Nearly 1,000 Cal Poly Pomona alumni work at Boeing, thanks to a longtime partnership with the aerospace company. [Page 16](#)

LEARN BY PLAYING

There's life outside of the classroom. University photographer Tom Zasadzinski explores how students relax, unwind and have fun. [Page 18](#)

LIFELONG BUILDER

Bill Jacobson fell in love with Rose Float when he was a student 60 years ago. Today, he shares his passion with a new generation of Rose Floaters. [Page 22](#)

NEWS

[Page 29](#)

DATES

[Page 33](#)

OUR POLYTECHNIC *Advantage*

A college education must do much more than help students master a subject area and find a job after graduation. It should also teach them to ask questions, interact with others and be open to new experiences.

Academic excellence is central to our mission at Cal Poly Pomona, and an emphasis on hands-on learning means we reach beyond the textbook to provide knowledge through experience. Our **Inclusive Polytechnic Model** prepares students to think critically, solve problems dynamically, communicate effectively, work collaboratively and lead. With these and other foundational skills, our graduates possess the competitive edge to be successful in today's rapidly evolving job market.

Human Engagement is critical to the **Future of Work**, and a meaningful education teaches students to connect with people. Employers may expect that employees understand how to leverage artificial intelligence and work side-by-side with machines, but they also demand teamwork and collaboration. Cal Poly Pomona faculty are ensuring that graduates are positioned to thrive because our polytechnic curriculum has equipped them with the tools to communicate and adapt.

Students are encouraged to take intelligent risks and to step out of their comfort zone. Lauren Horgan, a senior majoring in marketing who wants to be an entrepreneur, knows that falling short is just a stop on the road to success.

"The greatest risk you can take is not taking any risk at all," she says. "Failure is one of life's greatest change agents. Without it, we can never grow."

Students like Lauren face the Future of Work and Human Engagement with confidence, knowing their polytechnic education has prepared them to succeed.


Soraya M. Coley, President



feature story

THE

POLYTECHNIC

ADVANTAGE

FABRICATION
CULTURAL
SOIL SAMPLING
MARTIN DEPLAN
WINDIAR DEVLING
KINCHIAR PRELONG
WASTE WATER PRESERVATION
VANUATU SHOP
EPIDEMIOLOGY
PLANT BREEDING
PIG ULTRASOUND
ETHNOBOTANY
FABRICATION
CULTURAL
SOIL SAMPLING
MARTIN DEPLAN
WINDIAR DEVLING
KINCHIAR PRELONG
WASTE WATER PRESERVATION
VANUATU SHOP
EPIDEMIOLOGY
PLANT BREEDING
PIG ULTRASOUND
ETHNOBOTANY
ANTHROPOLOGY
DEVELOPMENT CLINIC
TREATMENT
WORK





POLYTECHNIC is **▶▶▶▶ Exploring Your Surroundings**

When you're a geology student, all of Southern California can be your classroom.

For his GSC 333 course, Professor Jonathan Nourse discusses geologic structures, shows photos of stress states, and teaches plotting and diagramming techniques.

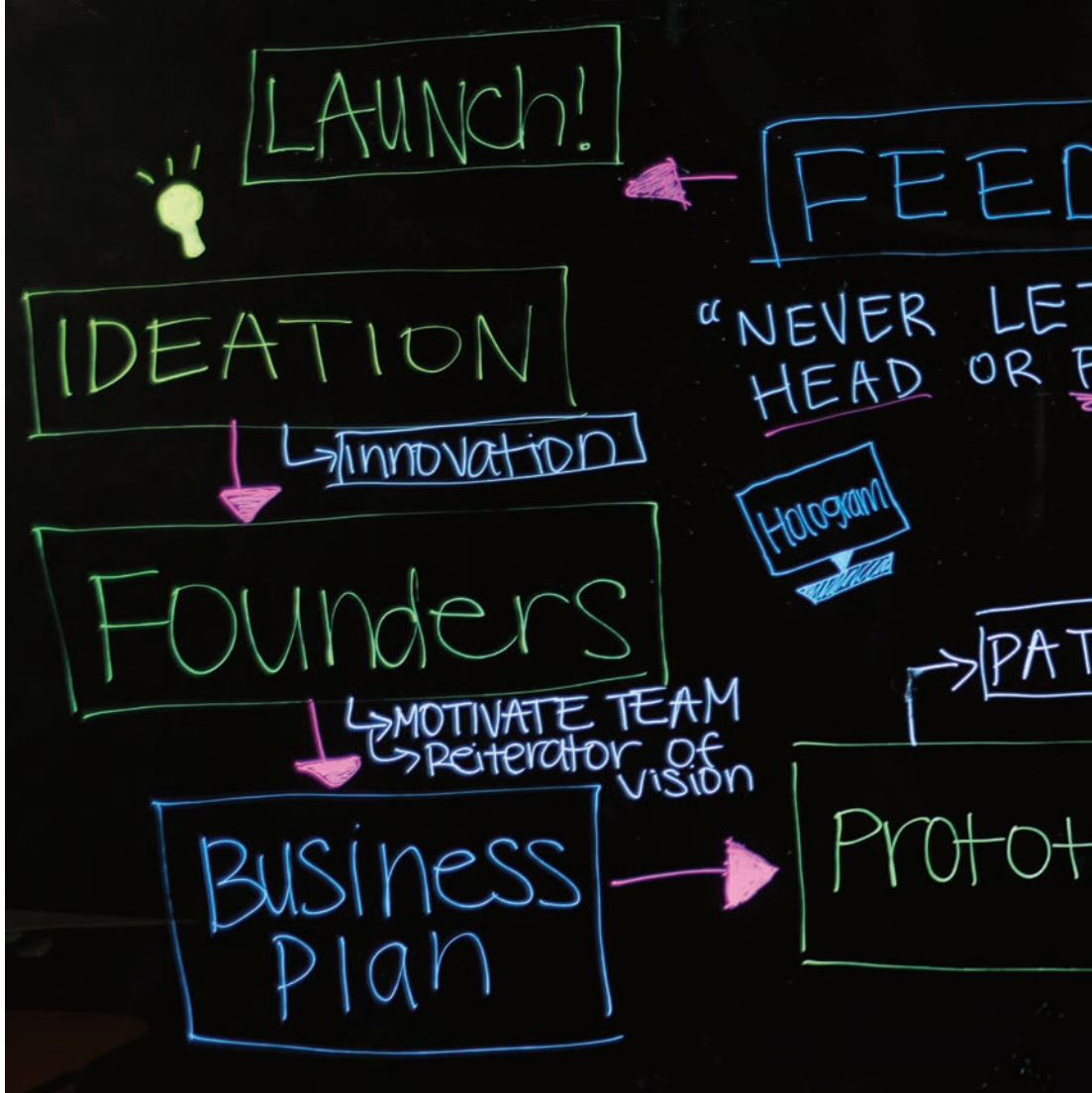
For the lab portion of the class, Nourse doesn't offer a manual. The most important tools for students — besides a calculator, ruler and pencils — are their senses.

During one trip to the San Gabriel Canyon, students could see and touch the rock formations, measure the angles of the rock lines, sketch and interpret the geometric relationships.

Say you're watching an episode of "Jessica Jones" on Netflix and you're in love with the black leather jacket that lead actress Krysten Ritter wears. How do you find the jacket?

For Lauren Horgan, the answer is simple. With Zaluma, her idea for combining object recognition and E-commerce, you can click on the jacket to see which retailers carry it, receive a price match and read user reviews. The software will also directly take you to purchase the jacket on the website of your choice.

The consumer-centric software will be a blend of object recognition, augmented reality, E-commerce and various integrated coding languages. To one day bring it to market, Horgan lives and breathes her startup Zaluma in her spare moments — cold-calling investors, seeking computer developers, enlisting like-minded founders, researching the legal issues and continually refining the business plan.



POLYTECHNIC is

▶▶▶▶▶ Preparing for Success

"Ever since I was a kid, I've dreamed of being an entrepreneur," says the marketing senior. "You can't be afraid to fail or pivot along the way. The greatest risk you can take is not taking any risk at all."

Horgan transferred to Cal Poly Pomona from CSU Channel Islands to better focus on her entrepreneurial aspirations to create a successful startup. After graduation, she plans to apply to law school to study intellectual property law and to one day patent her own ideas while helping other entrepreneurs patent theirs. She has placed among the top three in every business competition she's participated in, including the Cal Poly Pomona Bronco Startup Challenge (2nd place), the Cal Poly Pomona Women's Entrepreneurship Competition (1st place), and the Aspire 3 New Venture Challenge (1st place). These competitions have given her real world experience, feedback and a

network of like-minded mentors.

Horgan follows a dedicated schedule. She regularly wakes up at 3 a.m. to begin working and spends anywhere from 75 to 80 hours per week on her startup. She believes that her ambitions require a commitment to an unconventional lifestyle.

"Within the realm of software, the only way to stay ahead of the competition is to work while most are sleeping," she says. "If you're passionate about something, you'll find the time for it."

Horgan has even developed an exit strategy in case her startup suddenly takes off before she finishes college or law school.

"I have a hunch that sometime in the startup process, Zaluma will take off and I'll have to be prepared for the opportunities that accompany that. I can always go back

to school. It'll certainly be harder, but it's doable," she says. "Sometimes, you have to trust your own intuition, take risks and believe in yourself when no one else does."

Growing up in San Diego, Horgan's entrepreneurial spirit came alive when she was 11. Her older sister is deaf in one ear, so she came up with the idea of a new cell phone case that would allow her sister to hear better. This idea led to a variety of others. At the time, the people around her dismissed the ideas and said they wouldn't work. Their lack of support only fueled her passion.

For the next few years, Horgan dreamed up new ideas and wrote them down in an "invention notebook." She's had enough ideas over the years to fill six notebooks. Today, she still jots down new ideas in her seventh.

"Never let anyone tell you that you can't



do something, because the only one who has the ability to place those limitations on you is yourself," she says.

Perseverance and time management are also lessons Horgan taught herself as a teenager. In high school, she was the worst member of the wrestling team, and her teammates mercilessly rubbed it in. Again, their ridicule only fueled her drive to prove them wrong.

Every morning, she woke up at 4 a.m. to run before school. She also ran during lunch. And after practice, she continued practicing longer than anyone else on the team. After much failure, Horgan later became the 2014 CIF champion in her weight class.

"I've been encouraged by my experiences in life. When I was growing up, I encountered failure a lot, which, looking back, has taught me to embrace it. Failure is one of life's greatest change agents; without it we can never grow. Failure is part of the process and embracing it early on, while sticking to your vision, will ultimately help you to succeed," she says. "I'm nowhere near there yet."

WHAT'S IN A NAME?

Finding a company name that is not already trademarked is not as easy as it sounds. After two months of brainstorming and searching the trademark database, Horgan landed upon **ZALUMA**. The word has no meaning, but that's the point. Many well-known companies — Zillow, Sony and Xerox, to name a few — started with a made-up name to be unique, memorable and ownable.



POLYTECHNIC IS

▶▶▶▶▶ *Seeking New Experiences*

Music and teaching are in Jose Moreno's blood, which is probably why he chose to major in music education. When the Pomona native applied to the university while at Garey High School, Moreno imagined he would one day become a high school band teacher.

Five years later, Moreno says his experiences in the music department and performances across Southern California have changed his perspective. The classically trained clarinetist says he intentionally steps out of his musical comfort zone so he can succeed as a professional musician.

"When I first came to Cal Poly Pomona, I had a notion of what music was, but I never knew of all the possibilities out there," he says. "During my college undergrad years, I've performed in many places. I've played for several directors and performed with different colleagues along the way. Each new experience is a learning opportunity. It's important to keep those connections and never burn bridges; you never know when someone might call you for a music opportunity."

Take the Cal Poly Pomona MIDI Ensemble, for example. For the campus' electronic music group, Moreno played the EWI (Electronic Wind Instrument) hooked up to a sound module that can mimic virtually any type of instrument — flute, trumpet, synthesizer.

He also played jazz music for the first time at Cal Poly Pomona, joining the campus' Jazz Band to diversify his repertoire. "I'm graduating soon, so I want to be prepared for any challenges that come my way. The L.A. scene is really competitive."

About two years ago, a friend he knew from elementary school messaged him about an opening for a clarinetist in Viento de Oro, a well-established Mexican banda that performs across Southern California. "My intention was only to help out for that one time and leave. I ultimately ended up loving it and staying around."

Moreno is also part of an ensemble that's introducing a relatively new style of music to campus. Working under Music Professor Jessie Vallejo, the group is experimentally fusing two traditional genres of Mexican music: mariachi and banda.

"It's a unique fusion," he says. "You have mariachi, which is really expressive, while banda is really loud and gets the party going. If there was a party, you'd have a mariachi midday and bring in the banda at night to dance the night away. So bringing both together is really interesting."

Directing a high school band is still on Moreno's list of career goals, but that list has grown to include three new dream jobs: music conductor at a university, bass clarinet player for the United States Marine Band or a musician for a philharmonic orchestra.

Cal Poly Pomona's polytechnic philosophy means that his future options aren't limited to his past experiences or his current knowledge.

"We're not just learning how to do something. We're not just learning information. We're learning to be more hands on," Moreno says. "You see the drive that everyone has, students wanting to do more and branch out to do more. I love it because it means they are actually passionate about it."

"They're here for more than a degree. They want to better themselves. They want to soak up as much information before going out into the real world. They want to bring their experiences to their future career, future students, future performances, and I think that is really special."



POLYTECHNIC IS

▶▶▶▶▶ *Communicating*

Engineering student Nicole Quintero wants to defy the stereotypes that society has about engineers.

First, she is a woman.

Second, she was a theater geek in high school.

And third, she seeks out opportunities to talk to new people.

Quintero is studying industrial engineering, which involves understanding engineering processes and helping employees and equipment operate more efficiently. In her four years at Cal Poly Pomona, she has secured multiple internships, including one at Kaiser Permanente South Bay Medical Center. Last summer, she was at a Nestle factory in Bloomington, Illinois, and this summer, she'll be with PepsiCo in California.

From her first internship, Quintero decided that she wanted to become a manager and lead engineering teams. To do that, she realized that she needed to learn to communicate effectively.

"It wasn't until my first internship that I got a feel of what I wanted to do. I was inspired to be a manager who would be there for the people, for the team. I knew that I could be someone who could listen to others and interact with them," says Quintero.

"Cal Poly Pomona definitely helps you out with that, especially in classes when you have to team up. A lot of the time, I like taking on the role of the leader. It's learning about how to

interact with people and how to get your point across because everyone is different."

To gain more opportunities to interact with people, she became an Outreach Ambassador — they're the students who visit high schools to talk about the university in addition to giving campus tours to prospective Broncos. Two years later, Quintero took a lead position to train new Outreach Ambassadors.

Quintero says she proudly represents the 25,000 Cal Poly Pomona students on school visits and is excited to be part of someone's college decision-making process.

"I never visited any colleges in high school, which is one of the things that I regret," she says. "One way I can give back to people is by



providing helpful tips I wish someone would've given me when I was their age.”

Communications skills — or what corporate recruiters call “soft skills” — have been key to Quintero’s success.

When she was a freshman, Quintero initiated a conversation during a Society of Women Engineers meeting on campus with the guest speaker, who was representing INROADS, an international organization committed to preparing minority youth for corporate and community leadership.

“I just approached her because I was curious about getting to know her, and I wanted to learn more about the organization,” Quintero says. “After our conversation, she told me, ‘Apply and I will help you find an internship for the summer.’”

The following summer, she was interning at Kaiser’s warehouse supply chain in the South Bay.

This past fall, Quintero stopped by the Career Fair in the University Quad and talked with a handful of recruiters. The next day, she was called in for a follow-up interview on campus. The day after her interview, she was offered a full-time, four-month co-op position with Bimbo Bakeries, which owns major brands such as Sara Lee, Oroweat and Ball Park. Quintero wasn’t sure about putting her studies on hold and leaving her family for two quarters, but the recruiter convinced her to take the chance.

For the first five months of 2018, Quintero has been living in Portland and working at Bimbo. Her job includes working alongside the bakery’s production supervisor and conducting time studies on the employees and machinery. The company also sent her to Philadelphia for two weeks of leadership training.

“I consider myself an introvert, and most people don’t believe me when I tell them that,” she says, laughing. “My advice to anyone is to take opportunities that are presented in your life because you’ll never know how far they’ll take you.”



POLYTECHNIC IS

▶▶▶▶▶ Pursuing New Ideas

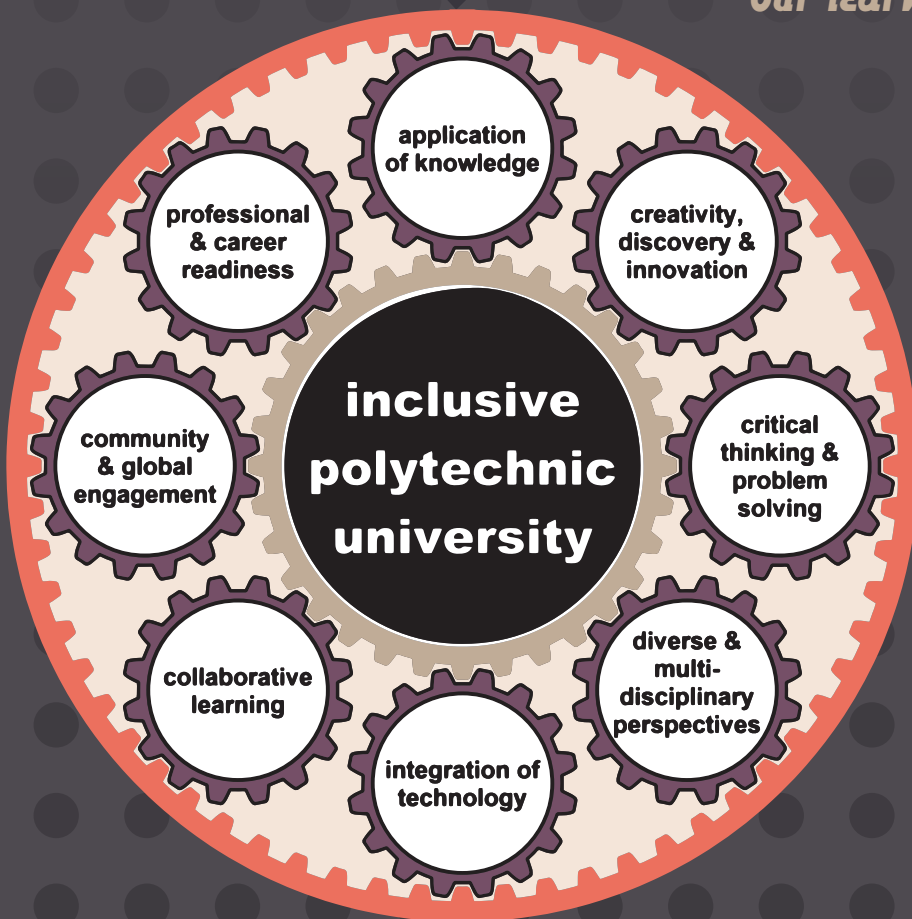
THE IDEA: The Baja SAE team is building a new electronically controlled CVT (continuously variable transmission) for this year's competition. It has potentially two significant advantages. Less rotating mass improves efficiency. And, the main controller reads data from the CVT and the engine and reacts accordingly, keeping the car at an optimal RPM.

THE PROBLEM: The CVT overheats. And acceleration in the first three or four seconds needs improvement.

THE POLYTECHNIC SOLUTION: Students have been designing and building the new electronic CVT since 2016. A team of three engineering students — electrical, mechanical and computer — are refining the computer coding. Another team will test-drive the car to see if the CVT passes the obstacle course and endurance trials. In the spring, the Baja car and its new electronic CVT should be ready for competition. The backup plan? There's always the manual version.

DEFINING AN INCLUSIVE POLYTECHNIC *Education*

*What does it mean to be
an Inclusive Polytechnic
University in the 21st century?
How does the future of Work
shape our academic programs and
our learn-by-doing philosophy?*



Throughout the year, the university is coming together to discuss the Academic Master Plan – what we teach our students and how we teach them. The plan also influences our facilities and learning spaces, technology, and professional development for faculty and staff.

Guided by the university's Strategic Plan, our model for an Inclusive Polytechnic University broadly defines the elements that are key to our identity.



*The Growing
Amount of Data:*
**THE FOURTH
INDUSTRIAL
REVOLUTION**

By Erik Rolland

Most of us grab our mobile phone in the morning and carry it around with us all day. Many of us also use a mobile tracker, like a Fitbit or Apple Watch, for exercise or sleep. Most modern cars have some type of trackable computer. Even your purchases on Amazon are tracked individually from the warehouse to your home.

The result is that we and many of the things around us are never lost (thanks to GPS and sensors everywhere), and we are almost always connected. The byproduct of our connectivity, however, is mountains of data — data that can be processed for a greater understanding and for value creation. In 2017, the Economist magazine declared that data is the new oil: Data itself becomes the key source of value creation and economic growth.

This means that resources will be controlled by those who understand data, increasing the economic importance of data and knowledge as opposed to natural or physical resources. This will reshape economies and continue the shift further away from tangible resources, such as production facilities, toward intangible resources that are derived from data and information-related products and services.

The abundance of data is the foundation for the “Fourth Industrial Revolution.” Data and technologies are blurring the lines between the physical, digital and biological systems. Driven by both human and machine intelligence, data is independently contributing to unskilled and skilled labor tasks, threatening to replace the human in many cases.

The Value of Data

Prior to the 1990s, we suffered from a lack of data, but the opposite is true today — we have too much data. We often lack time and resources to store, process and analyze data, as well as to make better decisions with it or learn from what we have.

Despite the challenges, the promise remains one of value creation. Your Facebook profile can tell us with a great certainty your psychographic profile. That is, we can quickly understand your political views, who your friends are and what interests you have. Your demographic profile, age, geographic

coordinates, education and income are already known by your browser and your computing devices, and such data is constantly being updated and revised.

This information is often beneficial to us as citizens and consumers: our health data can be analyzed and aggregated, and our consumer-related needs can be better understood and addressed. The real promise is for humanity to advance and for organizations to more effectively and efficiently serve their customers.

The challenges of the Fourth Industrial Revolution are not only technical ones. As we become increasingly more efficient in analytics through artificial intelligence and machine learning, we in turn create major behavioral and socio-economic challenges. For example, we may replace or reduce human involvement in many jobs. While that may provide some benefits, such as replacing a car driver with an automated and improved driving system, it can also pose challenges to many professions, even highly skilled ones such as accountants, physicians and lawyers.

For example, in the financial industry it will mean massive job losses, with a predicted decrease of over 200,000 jobs by 2025. Accounting firms are scrambling to provide new value-added services beyond taxes, and the list goes on and on. The social impact will likely be uneven in the sense that higher-income consumers will be more likely to deploy data-driven technologies, and this may lead to wider wealth-gaps in society.

The Future of Big Data — and Work

There is no doubt that big data drives major changes to the future of work; many jobs will change, and some will disappear. It also enables improvements and new job creation in many areas.

On a daily basis, we all make decisions. The success of most organizations, like of individuals, depends on the ability to make good decisions. By augmenting physical data with knowledge collected from other sources (such as behavioral data), we can imagine a future in which our decisions may be much better supported with all kinds of available data, information and knowledge. The key to good decision-making will then be to combine data and information into formats that are usable on the spot. This will include the combination of machine intelligence, human intelligence and tools to allow the human decision-maker to interact with big data and information generated from it.

The future workplace will need experts from all fields to help create the tools that allow human and machine intelligence to come together and make decisions that are far superior to what we expect in 2018.

At the College of Business Administration, we realize that the digital enterprise behind today's organizations run on complex data essential for timely decision-making and insight into consumers, operations and markets. Our upcoming Center for Innovative Analytics aims at preparing the next generation workforce with skills that leverage the interaction between human and machine intelligence through advanced visualization technology and innovative analytics. This initiative for analytics will serve as a nexus of interdisciplinary experiential learning and innovation that will engage in applied research to address the challenges of organizations and society that are grounded in big data.

We are building on Cal Poly Pomona's 80 years of leadership in polytechnic education and hands-on experiences. Preparing our students for the future of work means that we are educating them for careers that are just emerging, and for challenges that have yet to be discovered. Our values of community engagement, inclusivity, and social and environmental responsibility take on great importance to ensure that as society moves forward, we lead the change in a positive direction where we do not unintentionally become a society of haves and have-nots.

Erik Rolland is dean of the College of Business Administration at Cal Poly Pomona. His research embodies a range of management and engineering areas, electronic commerce, service science, and modeling of complex technology and management problems.



DESTINATION: SUCCESS

THE CPP | BOEING PARTNERSHIP

HAS HELPED
HUNDREDS OF
CAREERS TAKE OFF

By Clay Fowler

The surprising part of Kristin Sharou-Alfonsi and Michelle Alfonsi's professional lives is that the mother and daughter landed jobs one floor apart for a company that employs 140,000 people across the United States.

What's not surprising is that they are both Cal Poly Pomona graduates who work for The Boeing Company.

The world's largest aerospace company actively recruits from 77 universities across



From left: Boeing employees connect at a recent Cal Poly Pomona alumni reception. Engineering students prepare a hexicopter for a survey at Spadra Farm on campus. Mother and daughter Kristin Sharou-Alfonsi and Michelle Alfonsi are CPP alumnae and Boeing employees.



“WE LOOK TO OUR CAL POLY POMONA STUDENTS TO COME IN AND HIT THE GROUND RUNNING!”

the country. Cal Poly Pomona is not only one of them, its contribution of employees to Boeing is matched only by a select few elite institutions.

The number of CPP alumni working at Boeing is fast approaching 1,000. As Kristin Sharou-Alfonsi ('87, mechanical engineering) and Michelle Alfonsi ('13, mechanical engineering) clearly demonstrate, the relationship between the university and the company spans generations.

“It’s a great engineering school. It’s hands on, so you would expect them to go there for students,” says Sharou-Alfonsi, a project engineer in her 25th year at Boeing. “I take great pride in my school.”

Cal Poly Pomona’s learn-by-doing approach has long made an impression at Boeing, which has four sites in Southern California. In fact, it’s common for Boeing hiring managers to expressly request that candidates from Cal Poly Pomona be among the pools of applicants for their highly competitive positions.

“Cal Poly Pomona alumni have a different kind of education than some of our other schools,” says Teresa Vallejo, college and diversity recruiter at Boeing. “We look to our Cal Poly Pomona students to come in and hit the ground running. They’re very eager and they’re pretty aggressive in wanting to soak up as much as they can when they get their foot in the door. I like that.”

Vallejo even has a team of volunteer employees who are Cal Poly Pomona alumni and help her recruit from their alma mater.

“Even if its 20, 30 years down the line, they still want to give back and they still have that connection to the university,” Vallejo says. “It’s a testament to what they experienced at Cal Poly Pomona.”

Matthew Yeseta ('08, electronic and computer engineering technology) was introduced to Boeing more than nine years ago when he was a student. When he stopped by the Boeing booth at the university’s High-Tech Career Fair, he felt an instant connection.

Yeseta, who is in charge of powering satellite systems at the company, began his career there much the same way he left off at Cal Poly Pomona.

“A lot of the hands-on learning, getting involved, making mistakes and asking questions is what drove my development at the start of my career,” Yeseta says. “My education was very transferrable in that way. That’s very much the culture at Cal Poly Pomona and in Rose Float and in all my other clubs. That’s how you got the most out of your classes.”

While in school, Yeseta wasn’t privy to the depths of his university’s ties to Boeing. It didn’t take long for him to realize the connection given the number of alumni he encountered when he began working at Boeing’s El Segundo location.

John Ventimiglia ('89, aerospace engineering) estimates that 30 percent of the team with which he worked on the Solid Rocket Booster in the Guidance, Navigation & Control group — which supported NASA’s Space Shuttle program — was made up of Cal Poly Pomona graduates.

It’s not surprising given the geographic proximity between Boeing and Cal Poly Pomona — and that the university has a nationally top-ranked engineering program.

“When I was in school, I knew there was a Bronco community at Boeing,” Michelle Alfonsi says. “But I don’t think I quite realized how many people had come from Cal Poly Pomona throughout the years.”

OUTSIDE OF CLASSROOMS,
LABS AND MEETING ROOMS,
THE ENTIRE CAMPUS IS OPEN TO STUDENTS TO

LEARN
by
PLAYING

BY TOM ZASADZINSKI





ROCKIN'
IT

DIVING INTO MY STUDIES



CATCHING UP



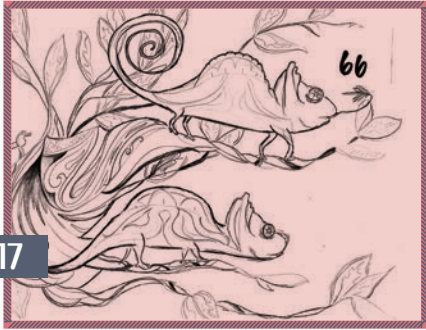
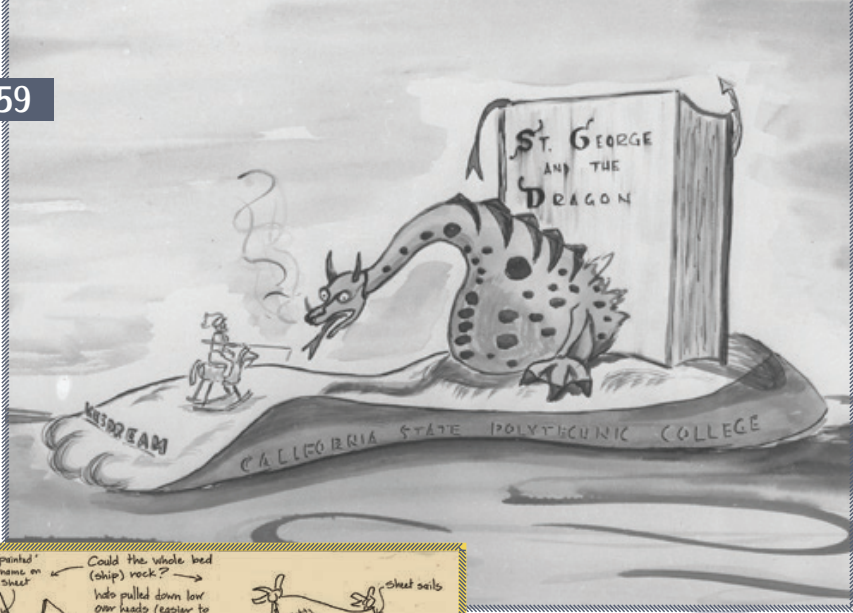


#BALLISLIFE

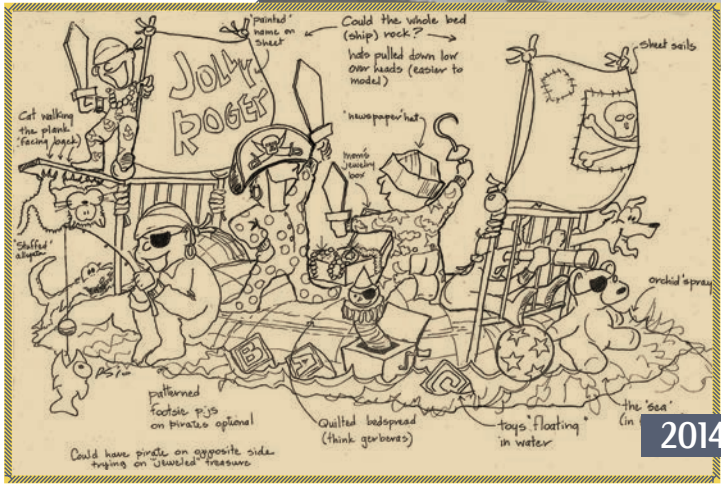


TAKING NOTES

1959



2017



2014

Rose Float Builder Travels Down Memory Lane with Students

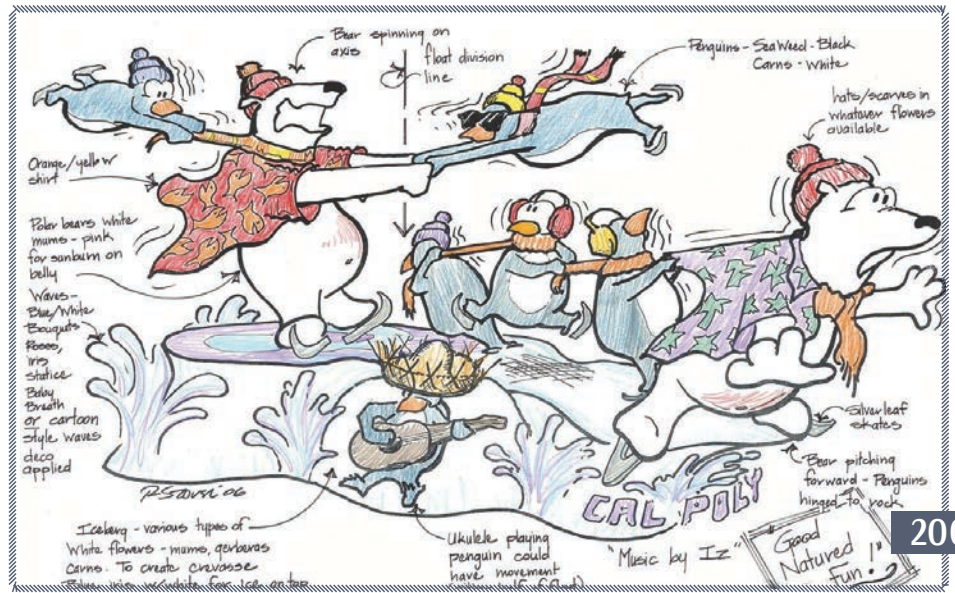


By Melanie Johnson

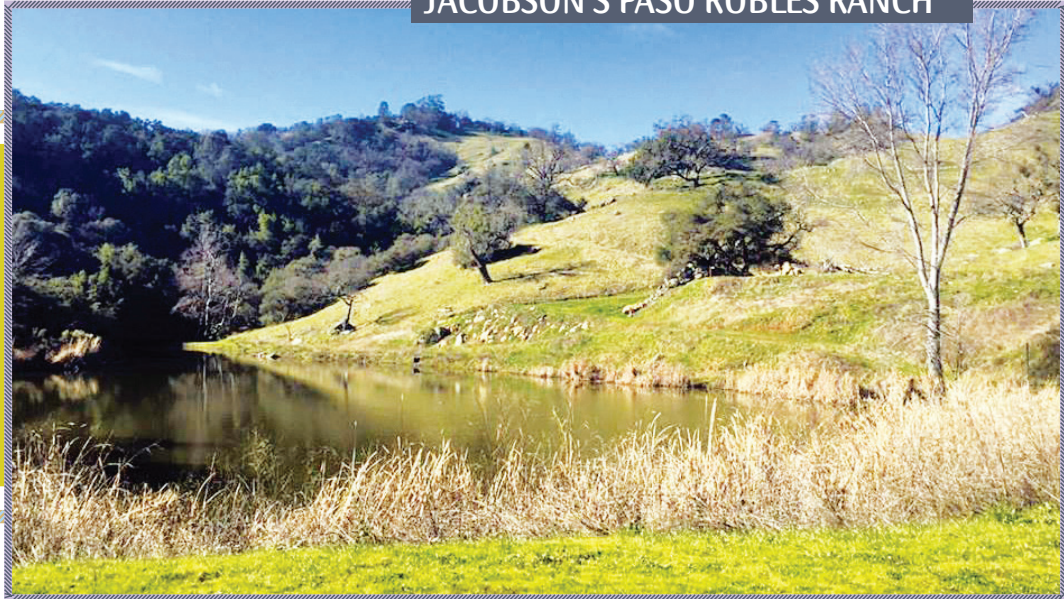
A couple of times a year, Bill Jacobson ('61, animal husbandry) opens his Paso Robles ranch to students involved with Rose Float.

The committee chairs from Cal Poly Pomona and San Luis Obispo hold an annual retreat on Jacobson's 411-acre property in winter. At the end of spring quarter, a larger retreat for all of the Rose Float team members takes place to give the students an opportunity to meet and bond before several months of hard work to bring the annual parade entry to life.

They pitch tents on the property and swim in the ponds, coming inside for meetings and to use the restrooms and kitchen. It's a chance for Jacobson, who loves to cook, to give the students tips in the kitchen and an opportunity to keep close ties to a program that meant so much to him when he was a student.



JACOBSON'S PASO ROBLES RANCH



“The thing I really like the most is watching the kids progress from when they are freshmen deciding to join the float group and haven’t even gotten a handle on school yet to seeing them over the next three or four years getting their education and working their summer jobs,” he says. “They go from department heads to float chair. It’s wonderful to watch these kids progress.”

Progress also applies to Cal Poly Pomona. Jacobson, who grew up in Burbank and Glendale, went to a very different university than the one these students attend.

In the late 1950s, Cal Poly Pomona was on the Voorhis campus in San Dimas and was all male.

“It was like a frat house,” he says. “It wasn’t a big campus. Everybody in

agriculture knew each other. We were really a very close group.”

He got involved in Rose Float on a lark. He was walking on campus when he found a friend welding a part of the float. Jacobson decided to help and by the following year, 1958, he was named co-chair of the Rose Float program.

In his first year at the helm, Cal Poly Pomona earned a prize for its “St. George and the Dragon” float. It featured a dragon that could turn its neck back and forth. The students sprayed an oil on the float’s carburetor to create the dragon’s smoke. An alumnus with a plant business in Hawaii sent the purple leaves to give the dragon its color.



Students from both campuses bond during a retreat at Jacobson's ranch over Memorial Day weekend.

“He is down to earth and he wants others to enjoy the ranch.”

Jacobson built floats from 1958 to 1960 with a crew of three to five students. The San Luis Obispo campus was not involved at that time.

For the 2018 float, “Dreams Take Flight,” the Rose Float team consisted of 28 students from the Pomona campus and 29 from San Luis Obispo. The float construction also received help from dozens of student volunteers.

After graduating from Cal Poly Pomona in 1961, Jacobson, an aspiring rancher, headed to graduate school in Florida, but he returned to Southern California to work in the family construction business after his dad became ill.

Jacobson did get a slice of that rancher's life, though. After working in the family business for a while, he moved to Australia and spent a year at a cattle ranch as a jackaroo, the country's version of a rancher.

In 1971, he went into the commercial real

estate business and got involved with horse breeding. He bought the Paso Robles property in 1977. It was raw land in the coastal foothills, and Jacobson had to clear it, drill wells, and build infrastructure before he started constructing buildings on the property in 1987.

The property features two barns with living quarters. He keeps a few cattle, mainly to keep the grass down.

“About 10 to 30 wild turkeys are walking around the place,” he says. “Mountain lions and bears come through.”

About six or seven years ago, alumnus Ron Simons ('64, agronomy; '68, food marketing), who is known as Mr. Cal Poly Pomona, asked Jacobson to consider hosting the Rose Float retreats on his ranch.

Janetta McDowell, Cal Poly Pomona's Rose Float director, says that Jacobson has welcomed the students with open arms, whether it's 15 or 80 people. He's the type of person who puts others first, she says.

“Because he was involved in Rose Float while he was here, he shares his experiences,” says McDowell, a 1997 liberal studies alumna. “He is down to earth and he wants others to enjoy the ranch.”

Jacobson says he enjoys being with the students.

“I spend a lot of time talking with them,” he says. “I like to share my success, not bragging, but telling them things that might help them.”

The students involved appreciate Jacobson's generosity and openness.

“He's such a kind man,” says Jerica Hurtado, Rose Float president and a second-year MBA student. “He likes to tell us stories about when he was on Rose Float. We bring our own food supplies, but he likes to cook. He'll make chili, ribs, whatever he happens to have on hand.”

Jon De Leon, a senior majoring in mechanical engineering who served as the 2018 design chair, says that Jacobson always makes the students feel welcome.

“It's indescribable,” he says. “I have never seen such generosity before. The first time I went there, I was like, ‘Wow. This man actually is letting 60-plus people into his beloved area’. He has so much patience and trust with all of us.”

SERVICE NETWORK

Campus Club Bridges the Global Digital Divide

By Melanie Johnson

When he was a high school student in his native Barcelona, Eduard Lucas needed to complete a community service project of some kind for required credits.

Lucas found his cause after one of the founders of LABDOO, a humanitarian social network dedicated to providing developing nations with refurbished laptops and tablets, came to his campus to talk about the program.

Now, the Cal Poly Pomona senior studying mechanical engineering is bringing his desire to help bridge the global digital divide to the university campus. Lucas, who plays on the Bronco men's soccer team, co-founded CPP LABDOO with soccer teammate Adi Azran, a graduating senior studying business.

"We started CPP LABDOO to reach out to the community and also to create a network between Cal Poly Pomona students who have a shared interest in technology and helping the world," Lucas says. "If you create a network of students, you can create a really powerful group of people."

The Irvine-based LABDOO was founded in 2010 by a group of students at UCLA and has spread across the globe. Groups of supporters form what the organization calls hubs to collect and clean used laptops and tablets and organize trips to deliver the items to local schools or other organizations. To reduce

the impact on the environment, the computers and electronic devices are delivered in person by those already planning personal or business trips to the various countries, rather than shipping them mail.

Since it launched, LABDOO has tagged more than 12,700 devices and delivered more than 8,300 to 120 countries.

Lucas and Azran formed Cal Poly Pomona's campus club in the fall with 15 members. The pair first recruited several of their teammates.

"It was kind of easy to get people to start it on our team because when you pitch to them what the club does, everyone is like 'That's a cool idea,'" Lucas says. "Everyone I told said 'Yeah, I have a laptop at home. It is collecting dust.'"

The idea clicked with Azran as soon as he heard it.

"I was in in like two seconds," he says.

CPP LABDOO collected 12 laptops during fall quarter and hosted a sanitizing marathon to get them cleaned and ready for delivery. The club plans to transport the devices to a school in Tijuana, Mexico.

"There are areas that don't have access to modern information and modern technology," Azran says. "Over here, we have access at our fingertips. This is a problem we are trying to solve."

All the files and data on the donated computers and tablets are erased, and students install free educational software packages designed for children.

The club hopes to go beyond collecting and sanitizing laptops by offering programming workshops and hosting speakers on tech-related topics in the future, Lucas says.

"The great part about LABDOO is that everyone can join," he says. "You don't have to be a computer science genius to help out with computers."



I AM FIRST

About a third of Cal Poly Pomona students are the first in their families to attend college. While they come with unique perspectives, challenges and experiences, they're also more likely to drop out of college.

The campus' "I am First" campaign shares the voices of individuals who are the first in their families to pursue a college degree. The stories of their journeys, including the struggles and successes, are reminders that their goals are within reach and that there is not one set path to success.

EVERADO BARRAZA



Peer Mentor Instructor 'I wanted to be part of the solution'

Everado Barraza grew up with only one parent and lived with extended family members under one roof. His father was imprisoned for most of his childhood, and college wasn't a priority for his mother, who needed him to work more than she needed him to get an education.

After rebelling during his teen years, Barraza realized that the only way to truly help his family was to take his studies seriously. He sought out tutoring from other classmates to pass high school and relied on student loans and a part-time job to make it through community college. The fear of college loans strained his relationship with mother while he attended UC Santa Cruz.

After graduating, he worked as a criminal investigator for the U.S. Department of Commerce. He found the work rewarding but emotionally draining, and he felt a tug to return to school to earn his master's degree in public administration.

Barraza decided he wanted to help students accomplish their goals and shifted his career to the education field.

"I wanted to be part of the solution rather than being on the other end, where I assisted in incarcerating criminals," he says.

As the coordinator for the Achieve Scholars program and a peer mentor instructor at Cal Poly Pomona, Barraza assists students in undergraduate research and also shares his journey with those who need encouragement. He hopes that his perseverance can inspire others who are experiencing similar challenges to not give up on their dreams.

LAURA AYON



Director of the Reading, Advising & Mentoring Program **A model of drive and perseverance**

The youngest of 16 children, **Laura Ayon** was born in Bellflower. Her grandfather was part of the Bracero Program, and her father worked and lived in both Mexico and the United States before permanently moving Laura's mother and three eldest siblings to the United States.

Her parents valued education and rewarded their children for making good grades, but Ayon didn't have direct exposure to higher education. Not all of her siblings went to college.

"The only books we had at our home was a set of encyclopedias," she says.

Ayon's older sister was part of the Harvey Mudd Upward Bound program, which provided college preparation during high school, and went to Pomona College. Ayon followed in her sister's footsteps.

Still, she encountered personal obstacles and doubted her abilities. "I just need to get past that first semester. I was looking at it semester by semester, survival. I knew I was going in ill-prepared but I didn't know how to fix that," Ayon says. "My time management was horrible, but the relationships with the professors helped."

She experienced an additional layer of isolation when her oldest daughter was born while she was a student.

Nonetheless, her experience at Pomona College, a small liberal arts campus,

provided her support from her professors, and she persevered and graduated with a bachelor's degree in sociology.

It wasn't long before Ayon returned to a college campus. Ayon joined RAMP (Reading, Advising & Mentoring Program) at Cal Poly Pomona as an advisor. With the support of her supervisor at the time, Carol Comfort, and the mentorship and guidance of Kathleen Massey, professor emeritus of English and foreign languages, Ayon enrolled in the graduate program at Cal Poly Pomona and earned her master's degree in English four years later.

"What I took out of grad school was very different from my undergraduate experience. My undergraduate experience was about survival, get the classes I need, get a decent grade, on to the next one. I try to impart to students to see the whole experience versus the degree itself," she says.

As director of RAMP, Ayon models the positive outcomes of drive and perseverance. She is passionate about guiding students, and her own three children, to be better prepared to succeed in college.

DAYNIE RIVERA



Communication senior 'I'm grateful for the opportunities'

Daynie Rivera was born in Managua, Nicaragua and immigrated to the United States when she was 6. Her parents went to college in their home country and shared the importance of higher education, but they lacked the knowledge of the U.S. educational system.

Rivera doesn't shy away from a challenge. After graduating from high school, she joined the workforce and worked a 9-to-5 job. Rivera also attended beauty school, did pageantry and modeling.

After working for four years, Rivera realized that without a college degree, her career options were extremely limited.

Because many of her friends attended Mt. SAC, she researched the school to see if it would be a good fit for her. It wasn't expensive and it was close to home. A couple of years later, she earned her associate degrees in communication and journalism before transferring to Cal Poly Pomona.

At Cal Poly Pomona, Rivera discovered a culture where people supported

one another, and she worked hard to earn good grades.

"I see myself here today and I love this school, I love the diversity, I love that we are hands on," the communication senior says. "You really, really work, and I like that because when you go into the real world, you'll actually be ready for what you have to do."

Rivera works as an office assistant for the Graduate Studies Office, writes for Spektrum Magazine, and is the arts and entertainment editor for The Poly Post.

"My journey was long, and I never thought that I would make it to Cal Poly Pomona. But I did, and I'm here, and I'm almost graduating," she says. "I'm grateful for the opportunities that I've had on campus, and I'm looking forward to what the future holds."

NEWS



The three newly discovered species are (clockwise from top right): *Placida kevin leei*, *Placida barackobamai* and *Placida brookae*.

Marine Biologists Discover Three New Species of Sea Slugs

Cal Poly Pomona Professor Ángel A. Valdés is part of a team that discovered three new species of sea slugs, one of which they named after former President Barack Obama. The researchers named the new species found in Hawaii *Placida barackobamai* to honor Obama's efforts to reduce carbon emissions globally as well as his proclamation in 2016 extending the Papahānaumokuākea Marine National Monument, one of the largest marine conservation areas in the world.

When recent specimens were collected, researchers thought they were the same species as the striking yellow-orange and black sea slugs, *Sacoglossa P. cremoniana*.

"They were found in the Mediterranean in the late 1800s and then in Japan in the 1950s. It was thought to be the same species," Valdés said. "Then a few years later it shows up in the Atlantic and then in California, Australia and the Philippines, all of these different places. So its range was expanding dramatically.

"We were intrigued because a diver found some of these animals off Catalina Island and collected some specimens for us. We sequenced their DNA and those of specimens from the Mediterranean and discovered they were different genetically."

To confirm their hypothesis that there was an Atlantic species and a Pacific species, Valdés and his research partner, Patrick J. Krug from Cal State LA, traveled to Maui in 2016

with five students to collect more specimens. They collected the algae that the sea slugs eat, took it back to the lab and then waited for the quarter-inch sea slugs to come out of their hiding places.

Guided by the molecular data, small differences in color patterns and tooth shape, researchers confirmed they had in fact found two new species in Hawaii, in addition to the new California species.

The team named the California species *Placida brookae* after Brooke Peterson, the diver who collected the specimens from Catalina Island. The second Hawaiian species, *Placida kevinleei*, was named after Kevin Lee, an adventurer, naturalist and photographer.

The work was funded by a three-year, \$700,000 National Science Foundation grant to study *Sacoglossa* sea slugs. The results were published in the online journal *Marine Biodiversity*.





Rose Float Wins Past President Award

“Dreams Take Flight,” the Cal Poly Universities’ 2018 Rose Float, won the Past President Award in the 129th Rose Parade.

The Past President Trophy honors the most outstanding innovation in the use of floral and non-floral materials.

Covered in more than 45,000 fresh flowers, the 54-foot-long float featured three young animals flying high above twinkling stars and puffy clouds at sunrise.

Paula the koala, covered in buffalo grass, led the way in her bright orange biplane. Ollie the otter skimmed the clouds in his yellow seaplane, and Rusty the red panda soared 20 feet above the crowd emitting a contrail from his green plane. Ollie’s fur was created from a layer of sheet moss topped with ground coffee. Rusty’s fur was gorilla hair or shredded redwood bark.

Student Veteran Invited to State of the Union Address

Agriculture graduate student Sommarani (Mayra) Chan visited Washington, D.C., for the first time in January to attend President Trump’s first State the Union address.

A veteran of the U.S. Army Reserve and the daughter of Cambodian immigrants, Chan attended the speech at the invitation of Rep. Norma J. Torres, who is a strong supporter of Cal Poly Pomona and its Veterans Resource Center.

“I do feel like I was part of history,” Chan said. “You cannot go through an experience like this D.C. trip and not become involved in what’s going on with the issues. It was a huge learning experience. It was life-changing for me. I never really talked about politics too much, but now I feel that I have to be involved with my civic responsibilities as an American and as a veteran. I have to be engaged.”

Her visit also included meetings with Rep. Torres; Rep. Adam Smith, ranking member of the House Armed Services Commission; and Rep. Mark Takano, vice ranking member of the House Committee on Veteran’s Affairs.

She discussed her experiences as a student veteran and how the campus’ Veterans Resource Center has supported her academic and personal success. She also shared her research interest on combating obesity in the veteran community.

During her military service, Chan served in Afghanistan and in Panama. She earned a bachelor’s degree in 2017 and is currently working on her master’s in nutrition and food science.





The Race to Space

Cal Poly Pomona has officially joined the race to become the first university to launch a liquid fuel rocket into space.

In December, University President Soraya M. Coley unveiled the new mobile rocket lab during a competition kickoff celebration.

“Thanks to the generosity of our donors, expert faculty, strong industry partnerships and some of the finest students you will ever find, we are expanding our rocketry program to give current and future students dynamic hands-on learning experiences,” Coley said. “We also hope to inspire children throughout the region to believe they too have a future in space or wherever their dreams take them.”

The Cal Poly Pomona team is preparing for the FAR-MARS Society Launch Contest on May 5, jointly sponsored by the Mars Society and the Friends of Amateur Astronomy. Cal Poly Pomona is one of 11 universities vying to achieve an altitude of 45,000 feet using a liquid fueled rocket. The next phase of the competition aims to reach outer space by achieving an altitude of 330,000 feet.

Cal Poly Pomona’s entry would not be possible without a \$1.67 million gift from Diamond Bar-based nonprofit National College Resources Foundation.

The university’s Liquid Rocket Program includes approximately 70 student members from two colleges and several departments, along with seven faculty advisors.

In December, students held their first test launch in the Mojave Desert.



Answering the Call for More Special Education Teachers

Future special education teachers will receive full-tuition scholarships from Cal Poly Pomona, thanks to a \$1.1 million federal grant to help alleviate high demand in Southern California.

The U.S. Department of Education grant will be available to students pursuing their first teaching credential in moderate/severe special education or adapted physical education authorization and their master’s degrees in special education or adapted physical education. The grant will potentially fund 63 scholarships over five years.

Nearly every state in the country, including California, has a shortage of special education teachers. Ninety percent of high-poverty area districts report having difficulty attracting quality special education teachers, according to Heather Wizikowski, project director and assistant professor in the College of Education & Integrative Studies.

“In addition, special education teachers leave the profession at almost double the rate of general education teachers after just a few years of teaching. California desperately needs quality teachers to teach students with disabilities,” she said.

High School Partnership Launches New Innovation Lab in Pomona

When Olukemi Sawyerr was tapped in 2015 to get the Student Innovation Idea Lab up and running, her first order of business was to find a space on campus where students could transform their nascent business and product ideas from paper to prototype.

Next, she began looking for a fabrication lab close enough to campus for budding entrepreneurs to get their products ready to present to potential investors and manufacturers.

Cal Poly Pomona found that hub of innovation less than three miles away at Ganesha High School in Pomona. The university and the Pomona Unified School District recently solidified their partnership to launch Innovation Orchard, a work space that will serve students from both campuses.

“The purpose of Innovation Orchard is to incubate student startup teams who have moved their ideas sufficiently along to where they need a space to work,” said Sawyerr, the university’s iLab director and professor of management and human resources. “We’re going to have a fabrication lab that will enable students to build high-quality prototypes — what they would send to a manufacturer.”

Last school year, Ganesha High reconfigured the space, moving walls and cabinets, putting in new outlets and adding a kitchenette. The university will provide the furnishings and equipment needed to complete the lab.

In addition, Cal Poly Pomona and Ganesha High are collaborating on a program that would enable high school students to take a four-unit entrepreneurship course for college credit. Also in the planning stage is a mentoring program.

“For Cal Poly Pomona, it’s an opportunity to learn about the creative process, to learn how to make an idea a reality,” Sawyerr said. “It’s also an opportunity for our students to be mentors of young people and contribute to strengthening the partnership to the university.”

Ganesha High Principal Jennifer Francev said that connecting her students with Cal Poly Pomona will help them gear up for college.

“We are really excited to have a partnership with Cal Poly Pomona for the Innovation Orchard,” Francev said. “I hope that this will prompt our students to look at Cal Poly Pomona as a viable option and to focus on entrepreneurship.”

Farm Bureau Gift Benefits Students

Agricultural students from Orange County will have more scholarship and educational opportunities at Cal Poly Pomona, thanks to a local farm bureau. The Orange County Farm Bureau donated \$165,000 to scholarships and fellowships in the Huntley College of Agriculture.

“Investing in the education of student leaders pursuing careers in agriculture is an investment in the future of agriculture,” Orange County Farm Bureau President Mark Lopez said. “What we see here at the Huntley College of Agriculture gives us hope for the long-term future of agriculture in Orange County and California.”

The bureau will give \$20,000 a year over five years to establish fellowships for undergraduates. Fellows will receive a stipend toward working on farms or traveling abroad.

“This will provide our students with valuable hands-on learning opportunities,” said Valerie Mellano, professor and chair of the plant science department. “They will have real-world experience, thanks to the Orange County Farm Bureau.”

The remaining \$65,000 will go toward a scholarship endowment.



what's up?



MARCH 8 **Sacred Music for the Soul**

Melodic sounds will fill the auditorium at Church of the Brethren in La Verne as the Cal Poly Pomona University Concert Choir, Kellogg Chamber Singers, Alumni Choir and Chamber Orchestra perform Maurice Durafle's "Requiem" and Leonard Bernstein's "Chichester Psalms." The performance features Niké St. Clair, director, and soloists Susan Ali, mezzo-soprano, and Chung-Uk Lee, bass.

<https://csupomona.tix.com/>

APRIL 24 & 25 **CPP Giving Day**

For 36 hours, the entire university community is invited to show its Bronco pride and make a gift toward student success. Donations of all amounts can make an impact, and there are a number of opportunities to make a gift count for double.

cpp.edu/giving

MAY 6 **Cal Poly Pomona Tasting & Auction**

Enjoy a variety of wine and microbrews, taste delicious bites from the region's top restaurants, and sit back and enjoy live entertainment at the university's annual fundraiser. All proceeds benefit student programs and the polytechnic academic experience. Tickets are on sale now.

<http://tasting.cpp.edu>

For more events, visit cpp.edu/alumni/events

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