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Santa Clara Magazine

Turning heads—and a whole building. Meet reVolve House. *Page 24*

A \$100 million gift—the biggest in SCU history. *Page 28*

Imagining the Sobrato Campus for Discovery and Innovation. *Page 30*

We can alter wild species to save them. So should we? *Page 36*



FUTURE TENSE

01/08/17

FLOW, RIVER, FLOW. January marked the end of the drought here in Northern California. Thank multiple atmospheric rivers carrying the equivalent of many Mississippis each, says **Hari Mix**, an assistant professor of environmental studies and sciences who studies the phenomenon. Near-empty reservoirs were filled to overflowing, tranquil streams transformed to torrents; witness this scene on the South Yuba River. Some communities were flooded, and mudslides ensued. Snowpack is well over 100 percent normal. On the whole, the news is good, right? Yes, says water expert **Ed Maurer**, "but it will take several years of above-average rainfall to replenish groundwater reserves." Maurer is a professor of civil engineering whose recent work has focused on assessing the impact of climate change on water resources. During five years of drought, "to make up for shortfalls, people pumped groundwater, especially in the Central Valley and the San Joaquin Valley." Another Bay Area authority on water suggests we take a page from John Steinbeck's novel *East of Eden* and try not to repeat this cycle: "And it never failed that during the dry years the people forgot about the rich years, and during the wet years they lost all memory of the dry years. It was always that way."



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DIGITAL EXCLUSIVES

Timely features, interviews, videos, slideshows, makeshift dentist offices, unwanted LinkedIn requests, microscopic water bears, and the quest for sustainable computing. Here's some of the latest.



STATE OF THE UNIVERSITY
President Michael Engh, S.J., M.Div. '82 recaps a year of successes, challenges, and results from the Blue Ribbon Commission for Diversity and Inclusion.



EARTH ATTACKS! Is intergalactic immigration safe? For humans, maybe. But what about Martian microbes? Two scholars consider the effect space travelers could have on the red planet.



COMFORT IN DISCOMFORT Can't save the world in a week, but SCU students with Global Medical Brigades can bring health care to rural Nicaragua.

COVER ILLUSTRATIONS BY TAVIS COBURN; TABLE OF CONTENTS ILLUSTRATION BY JASON HOLLEY

ILLUSTRATION BY DAVID PLUNKERT; COMFORT PHOTO BY CHARLES BARRY; MARS IMAGE BY ISTOCK; UNIVERSITY SEAL PHOTO BY FJ GAYLOR PHOTOGRAPHY

Things to Come

BEFORE WE PROCEED, dear reader, indulge in a moment from our back pages: last spring, a conversation with **John A. Sobrato '60** that wrapped up with enthusiasm over the new law school building that would soon rise, and the new STEM campus. Perhaps that perked up your ears: *New STEM campus?* "Wait till you see what's coming," Sobrato said. "It's gonna be terrific." So now, see the future unfold. (And since this is a magazine, we mean that literally.)

What you'll see is made possible by the biggest gift in the history of Santa Clara University: From John A. and Susan Sobrato, \$100 million to build the Sobrato Campus for Discovery and Innovation.

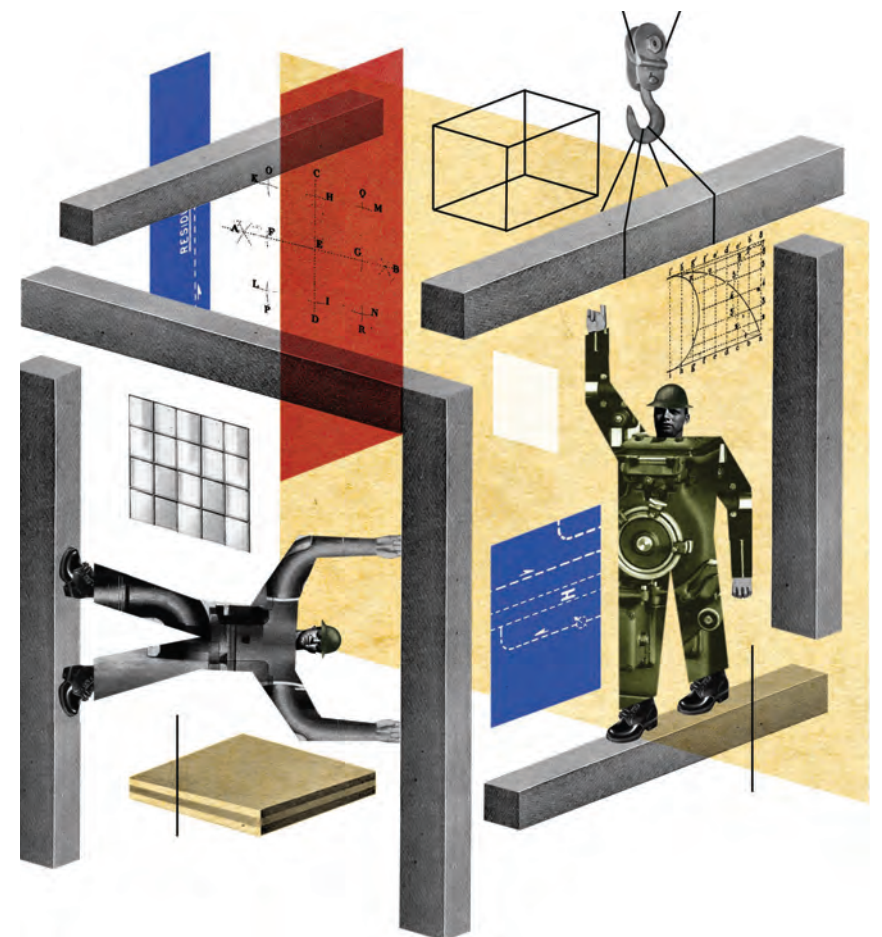
And since we're talking superlatives, the gatefold of the artist's vision in this mag is the biggest thing we've ever done, too. Rendered by artist Tavis Coburn, it hints at the radiant future imagined on his cover illustration: a world we might build, and soon—of hyperloops and jet packs and flying cars, rockets that blast into the sky, then land and blast off again.

Celestial dreams? In January, this world lost the last man to walk on the Moon. That was back in 1972. His mother was Slovak and his father was Czech, and he said that coming back into the Earth's atmosphere was "like being immersed in a sheet of fire, a comet, a shooting star."

That was us, people: We sent him there. But what about back on the ground? That's why you build something big and bold: to do the work that needs to be done. Call it a Moonshot. As John A. Sobrato puts it: "The world today faces some really immense problems. We're talking about climate change, global health, poverty, energy sustainability."

This building will be a meeting place for work on science and tech and engineering at an institution where fundamental questions of ethics—*what is the right thing to do?*—are at the heart of the matter. And where work is sparked by imagination and creativity and beauty and truth, and the sense of shaping whole persons of many stripes and sizes.

There will be lots more to come as relates to this tale. And yeah, it's gonna be terrific.



Letters



Those hands worked for love and peace. But boy did they work. Photographer Michael Collopy's portraits of Mother Teresa are captivating—and we're not the only ones who think so. Readers chimed in with memories of the saint and other musings on our previous edition. Read more, discuss: magazine.scu.edu.

Write us: scmagazine@scu.edu

In this together: President Michael Engh, S.J., encourages students headed for the meningitis vaccination clinic one year ago.

COME TOGETHER

I translated for Mother Teresa once. Her accent was so thick that the Polish translator could not understand her English. So, I “translated” her English for the Polish translator to then translate into Polish. Before, I had always thought of her as a gentle, quiet woman who committed her life to the poor. I learned from watching her that she was a determined force who did not take “No” for an answer from Church or government officials—no matter who or how high up they were.

In Poland, she wanted to open a homeless shelter, even though the official line was that there were no homeless in communist Poland and the government controlled all the



property. She simply kept insisting that she was going to open one and that she needed “X” property—until the authorities gave in. If she had not been fearless in the face of authorities who said “No,” she would not have made the difference she did.

Jane Leftwich Curry
Professor of political science, SCU

MISSION CRITICAL

I read with particular interest the article in the summer edition of *Santa Clara Magazine* about how courageously and almost seamlessly President **Michael Engh, S.J.** and his leadership team in various departments handled the meningitis episode. Even more intriguing, Super Bowl 50 and many of the planned activities were scheduled on campus during that time. Kudos to the leadership!

It has been more than 27 years since the Bay Area was rocked by the Loma Prieta earthquake, which destroyed many homes and some of our highways. I was just elevated to a cabinet position in my school district and assigned to develop an earthquake disaster plan for the district and its schools.

Lu Jenkins '57
San Jose

The oral history of the meningitis crisis that **Harold Gutmann** crafted helped earn this magazine an award for staff writing, presented by the western region of the Council for Advancement and Support of Education (CASE) in March. The award recognized five articles, including “Believe in Us,” Gutmann’s collaboration with **Jeff Gire** on retelling the story of the 1993 NCAA basketball playoffs; Gire’s story “Silence Broken,” about

the making of the Oscar-winning film *Spotlight*; “An American Story,” a profile of **Francisco Jiménez '66** by **Steven Boyd Saum**; and “Sweet Wood” by **Matt Morgan**—the story of the new Bronco basketball court, which earns some praise below. —Ed.

HARDWOOD EXCELLENCE

I’d like to offer a welcome to new men’s basketball coach **Herb Sendek**. I look forward to watching his teams compete in a league in which many schools are investing more in their programs.

That said, the pursuit by many colleges to entertain and make money from athletic programs can run counter to their goals as academic institutions. At SCU, a priority has been to compete without straying from our core values: high graduation rates, high levels of academic achievement for students and student-athletes, running clean programs, barring the use of performance-enhancing drugs, and not giving significant advantage to athletes in the admissions process over other students.

The SCU basketball program has been fortunate to have coaches who competed at a high level while embodying important core values—namely **Carroll Williams** and **Dick Davey**. With these excellent coaches, one thing was a given: The teams would improve dramatically throughout the season. Teaching, learning, and development were apparent. I hope to see Sendek embody the unique values of the school in his pursuit of excellence. Do it right and do it to the best of your ability.

And, great magazine! I have a daughter who just graduated with an English degree from Oberlin. She works in the school’s communications department and contributes to its magazine. I want to show her your/our magazine. It is always so good! You guys do a great job!

Chris Goode '84
Granada Hills, California

Loved the centerfold of the new floor in the Leavey Center. How about a feature on the changes of the logos and fonts of the school’s letters and mascot over time? Thanks for all the good work.

J. Mark Atlas '72, J.D.'75
Willows, California

See the digital mag for “Bringing Back a Classic” (January 2016). **Jeff Gire** takes a tour of Bronco logos and uniforms—and a few top hats. —Ed.



The Alameda, by California artist Charles H. Harmon, hangs in the reception area of the Adobe Lodge. The willow trees depicted here inspired the Catala Club to plant willow trees on campus.

WILLOW TREE OASIS

The women of the Catala Club thank you for the last page (by **Grace Ogi-hara '16**) in the summer issue. We are so proud to have a spot of land on this beautiful campus and to have been able to provide financial support to undergraduate students for so many years.

Betty Ford
Catala Club member since 1974
San Jose

STARING INTO THE FUTURE

The photograph “Student Working in Art Department Computer Room” that appeared in the Art Warehouse digital exclusive once ran as a section front in *The Washington Post*. It was in the early days of digital photography, and that photo was shot on film!



I was asked by the head of University communications, **Paul Hennessy**, to shoot a photo of one of our art students working on a digital photograph in the department’s computer lab. The newspaper needed the photo by the next day. **Susan Felter** was the art professor who was working with computers on digital photography, and this was one of her

students, **Carolyn Hamilton '92**. At that time, I still didn’t even have a computer on my desk, nor had I worked with one at all. I met with the student and shot the photo on film. I had to turn out the lights in the lab, expose for the screen, and use a strobe to light the student.

After that, I went to my darkroom in the basement of Daly Science. I processed the film, dried it with a hair dryer, printed one frame, and took it to FedEx to send to the *Post*.

Charles Barry
SCU Photographer, 1988–2015

THE \$100 MILLION GIFT

The news came Jan. 21 at the Golden Circle Theatre Party: **John A. '60** and **Susan Sobrato** were giving \$100 million to build the Sobrato Campus for Discovery and Innovation. Some early reactions via Facebook:

What incredible generosity and passion for SCU! Thank you to the Sobratos!

Carol Rickerts O'Mahony

Thank you, John and Susan: amazing generosity.

Frederick Ferrer '80

Thank you for supporting science and technology!

Jennifer Garibaldi '83

Wow! What a wonderful and generous gift. God bless.

Melinda Kenney

Blessings, love, and gratitude to the Sobrato family!

Heidi Le Baron Leupp '84

The Sobrato Family are amazing people! Many thanks! Your family over the years have demonstrated compassion in multiple ways to our community! All of my kids graduated from SCU! Thanks again for making this awesome University a better place!

Karen Luther

AWARD SEASON

Recent awards for the mag brought in some notes of “well done!” including this one:

Just a note to congratulate you all on this well-deserved recognition. I spent time with **Paul Locatelli, S.J. '60** and some of his pals 15 years ago while doing graduate work in the Bay Area. He became one of my heroes, along with some of the fathers at my own alma mater, Boston College. I thumbed through some old issues of *Santa Clara Magazine* while visiting the library on campus. It is one of the few college magazines with a strong journalistic bent. Which is my way of saying, it always published great stories. So, well done yous all. Keep up the good work.

Gene Roman
Freelance reporter,
New York Daily News

More good news: A pair of national awards for your mag were presented in New York in October—an **EDDIE** for editorial excellence, naming us best magazine published by any nonprofit or association (beating Harvard’s and Columbia’s mags, we’ll note), and an **OZZIE** for design, for illustrations by **Emiliano Ponzi** for “Change the Game” in our Fall 2015 edition. Presented by Folio Magazine for more than 20 years, the **EDDIEs** and **OZZIEs** honor the best in magazine publishing. Other winners this year included Foreign Affairs, Scientific American, and Travel + Leisure.

In the Bay Area, SCM picked up a little hardware from the San Francisco Peninsula Press Club: Best Page Design (“Silicon Valley Story,” by **Michael S. Malone '75, MBA '77, Summer 2015**), Best Feature Design (“Change the Game,” **John Farnsworth’s** essay, Fall 2015), and second place for best sports feature (“A Wild Generosity,” **Bryan Doyle’s** tribute to **Steve Nash '96**, Fall 2015). We also received second place for Overall Excellence. Awards were judged by journalists from around the country. —Ed.

Mission Matters

NEWS FROM SANTA CLARA



Topping off Charney Hall—the new home for the School of Law. People involved in planning and construction were invited to sign the ceremonial beam. Check out our digital edition and zoom in to see the names!

Legal Grounds

THE WAY **Howard Charney MBA '73, J.D. '77** sees it, given the changing landscape of legal education, universities have three options. One, get out of the market. Two, stay the course. Three, double down.

Santa Clara made the call to double down—and to make the legal education the University offers vital and unique. And Charney helped.

With its sleek design and state-of-the-art facilities, the Howard S. and Alida S. Charney Hall of Law is a bold investment in the future of law at Santa Clara University. Funded in part by a \$10 million lead gift by the Charneys, the 96,000-square-foot building broke ground in August 2016 and, with its steel beams rising, the building is already staking its claim in the SCU skyline, on track for a 2018 opening.

“We believe that it will be a new 21st-century home for a law school in Silicon Valley,” Charney said at the groundbreaking.

The new facility is designed to serve up to 650 J.D. and 100 non-J.D. students. It is open and flexible, a modern, eco-friendly interpretation of the University’s signature Mission-style architecture. Charney Hall will offer collaborative spaces for integrated learning and research including a digital Knowledge Center, the Panelli Courtroom, and Distinguished Interview Rooms for students to meet with employers.

“As the local economy and the world economy have evolved to high tech, so has Santa Clara Law,” President **Michael Engh, S.J.** says. “Charney Hall will raise its visibility. It’s going to strengthen its competitiveness, and it’s going to help Santa Clara Law lead at the intersection of law, technology, business, justice, and ethics.”

With mindful architecture and green technology, the building will actually reduce operating costs, Charney points out, but it’s an investment all the same. The law school’s vision—embodied in its new home—is a commitment to what thrives at Santa Clara: expertise in the complexities of the digital age, the expanding reach of bioengineering, and the unfolding possibilities of nanotechnology.

“We’re focusing on areas that we believe the law school can be without peer in the United States, if not the world,” Charney says. “We believe in our heart of hearts that they will serve us well as we go forward.”

Its physical footprint puts Charney Hall in good company. It brushes shoulders with the Leavy School of Business and Vari Hall, home of the Markkula Center for Applied Ethics and the political science department. And it’s in the same location as the third site of Mission Santa Clara in the 1780s.

“It’s on a spot that’s historic and looks to the future in terms of the advance of legal thought, education, technology, and greater collaboration,” President Engh says. “This new professional district will encourage interdisciplinary collaboration and innovation as well as greater opportunity for engagement with the community.”



WORDS BY MATT MORGAN; PHOTOGRAPHY BY JOANNE LEE; ILLUSTRATION BY KYLIE HILTON



Where Do You Stand? Together. On Nov. 30, 2016, President **Michael Engh, S.J.**, and the presidents of 26 Jesuit colleges in the United States raised a collective voice of support for undocumented students. They published an open letter pledging legal protection of students on campus, promotion of the Deferred Action for Childhood Arrivals program, and support for students of all faiths.



For students at Santa Clara—and at many universities across the country—the fear in admitting undocumented status is real. It can result in the stripping of what you’ve grown to love: your friends, your home, your school, your country. In a contentious election season, that fear became constant.

Undocumented students were used as a talking point and sometimes a political target. Then-candidate Donald Trump vowed to rescind DACA—a program that currently allows undocumented young people who came to the United States as children to stay until they complete their education, provided they register with the government—effectively punishing undocumented students who came forward.

In the days following the election, un-

certainty gripped members of the campus community. On Nov. 17, roughly 200 students walked out of class for a rally in front of the Mission Church. Some faculty, staff, and administrators joined in a show of support. Organizers, including **Marlene Cerritos-Rivas '18**, took to microphones before marching to the Benson Center, voicing concerns regarding the proposed changes to DACA that could lead to their deportation. Cerritos-Rivas leads the Undocumented Students and Allies Association, a student group that supports and advocates for undocumented students and the broader undocumented community.

A statement of support from President Engh followed shortly. Fr. Engh and other Jesuit presidents see “the work of teaching, scholarship, and the formation of

minds and spirits as a sacred trust.” They have a responsibility to uphold the dignity of every person and promote a living faith that works for justice. “Experience has shown us that our communities are immeasurably enriched by the presence, intelligence, and committed contributions of undocumented students, as well as of faculty and staff of every color and from every faith tradition,” the letter read.

The letter closed with a statement by Pope Francis, referencing 2016 as the Year of Mercy: “Every human being is a child of God! He or she bears the image of Christ! We ourselves need to see, and then to enable others to see, that migrants and refugees do not only represent a problem to be solved, but are brothers and sisters to be welcomed, respected, and loved.”

Members of the campus community showed support for undocumented students at a walk-out demonstration Nov. 17, holding signs and chanting “Who is her ally? I am!” as they marched together.



“We’re Absolutely Back.” Eleven years since its last Elite Eight, Santa Clara roared deep into the playoffs this year. The Broncos rode a disciplined offense and gritty defense. Wunderkind goalie **Melissa Lowder '19** blocked the shots needed to upset top-seeded Stanford and N.C. State. In the end, the Broncos fell a game short of the national semifinals. But they’re dreaming of more rings.

Leave the world a little better than you found it. Good advice for life and soccer, **Jordan Jesolva '17** thinks. Playing at Santa Clara comes with the weight of a national title perched on your shoulders. Carrying that legacy forward is a thrilling and awesome responsibility.

Sitting at 9-6-4 at regular season's end, the Broncos were in danger of missing the NCAA tournament this season. But they weren't done.

SCU made the tournament—though unseeded—and found it played pretty well with nothing to lose. Goalie Melissa Lowder shut out three straight opponents, including top-seeded Stanford—a favorite to win the title—before losing to Georgetown 1-0 in the national quarterfinals. “People didn't really expect anything from us,” Jesolva says. “It definitely was just [us] trying to prove everyone wrong.”

This late-season run was about redemption in a way. At least making things right. After tearing her ACL as a sophomore, Jesolva effectively lost the majority of two seasons to injury—going scoreless each year, for the first time in her life. As a senior, she found new life via a midseason position change, leading the team in goals with 10, including four in her final five games.

“Our program hasn't been to the Elite Eight in a long time,” Jesolva says. “Being able to leave that challenge to every other team coming into the program is pretty cool.”

The Elite Eight run, combined with a strong incoming recruiting class and the arrival of transfer **Maria Sanchez '19** (a member of Mexico's World Cup team), gives the program momentum. Shortly after the loss to Georgetown, Smith was already looking to next year. With the Final Four at Avaya Stadium in San Jose, the coach had his players watch Georgetown practice on SCU's field. Meanwhile, he hit the road.

“We landed a huge recruit ... and I sent a text to my staff from the road saying ‘We are absolutely back,’” Smith says. “We're looking forward to being in the conversation every year for the national championship.”

Santa Clara won nine of its final 11 games of the season, before falling to Georgetown 1-0.



CALL IT JB2K

GUARD **JARED BROWNRIDGE '17** pulled off something even **Kurt Rambis '80** and **Steve Nash '96** didn't: He scored 2,000 points at SCU. Brownridge reached that milestone Jan. 5, in a 70-42 win over Portland. The communication major from Aurora, Illinois, is one of only four active players in the country—and the second in school history—to hit that mark. Brownridge crossed the finish line in style, converting a fast break reverse layup around Alec Wintering for the landmark basket. “It feels great to get

the win,” Brownridge said. “That's the only thing that mattered. Individually, it feels great to reach a milestone. I've put in a lot of work at Santa Clara to get there.” The first season under accomplished head coach **Herb Sendek** hasn't been as smooth as the team hoped, mixing impressive wins (Jan. 26 over BYU) with disappointing losses (Gonzaga, twice). But the Broncos are getting better: SCU has improved its monthly record each month this season, with January serving as its best split at 5-3.



TWIST OF FATE One bum ankle changed the path of a promising season for SCU volleyball. Following a school-best 9-0 start—including two top 25 wins and a No. 17 national ranking—setter **Kirsten Mead '18** was sidelined with an ankle injury in September, missing 14 matches. Despite a first-team, all-conference effort by outside hitter **Nikki Hess '17**, the Broncos dropped seven straight, finishing 16-14 and missing the NCAA tournament for the first time since 2013. The good news? Six key contributors return next fall. And a dynamite recruiting class should help, too.

NASH BASH Two-time WCC Player of the Year. First at Santa Clara in assists. And two NBA MVPs. **Steve Nash '96** will someday be enshrined in Springfield, but first he'll take his place in the SCU Hall of Fame. Nash will be inducted at the Red & White Hall of Fame Celebration at the Leavey Center on May 13. Want to be there? Check the Bronco Bench Foundation website for tickets.



Coach Herb Sendek presented Jared Brownridge with the game ball after he scored his 2,000th point. Brownridge is now the second leading scorer in SCU history behind Kevin Foster '13 (2,423).



Family Business

FOR THREE GENERATIONS already, **Nate Kratch '15** and his family have helped pay the bills with a ball. His dad, Robert, notched eight seasons in the NFL, winning a Super Bowl in 1991 with the New York Giants. His mom, Kristi, was a high jumper at Iowa. Brother Colby played tight end at Toledo and is a graduate assistant at Michigan State. Even one grandmother, Dorsey Anderson Dinkla, played for the All-American Red Heads, a barnstorming basketball team enshrined in the pro



basketball hall of fame in 2012. “It's like any normal family,” Nate says. “Sports are just a huge thing for us—the way other families who are big into art or music.” Nate has been playing with the Broncos since the 2014 season. He earned his psychology degree in three years and will complete a master's in 2019. He plans to go into sports psychology or marriage and family therapy. And coursework has helped him on the court, where he leads the Broncos in rebounding and is third in scoring. Here's one thing it taught him: “Not to be so hard on myself if I do make a mistake,” Nate says. “That's part of why I got into psych, to improve as a person and as a basketball player.”



The grandmother of Nate Kratch, Dorsey Anderson Dinkla, once scored 70 points in a high school basketball game.

WORDS BY HAROLD GUTMANN AND MATT MORGAN. PHOTOGRAPHY BY DON JEDLOVEC

JARED BROWNRIDGE AND NATE KRATCH PHOTOS BY DON JEDLOVEC. DORSEY ANDERSON DINKLA PHOTO COURTESY KRATCH FAMILY. STEVE NASH PHOTO COURTESY SCU ATHLETICS. VOLLEYBALL PHOTO BY ADOBE STOCK

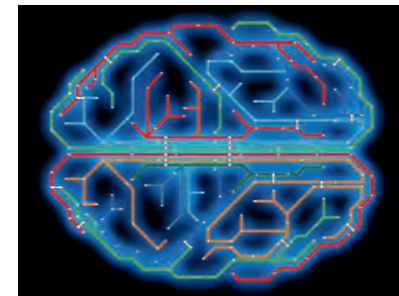


William Rewak, S.J.: priest and poet, scholar and educator—and founder of this magazine

MAJOR CHANGES A historic and overdue change came in fall 2016: Students can major in women's and gender studies and ethnic studies as standalone subjects. Both were formerly companion majors and required a second field of study. "I can't overestimate the importance of the symbolism," women's and gender studies chair **Linda Garber** says. "It is an important institutional acknowledgment that the study of diversity and systems of power and privilege and oppression are real academic pursuits."

This is a fitting time for the change. **Anna Sampaio '92**, chair of the Department of Ethnic Studies, says she views her classes as continuations of conversations she's already having. Santa Clara's ethnic studies program is one of a handful culminating in a bachelor of science, approaching the field from a social science perspective. Sampaio says ethnic studies helps students find the right critical lens for important issues. "You take ethnic studies to be a better citizen of the world, to be a better version of yourself," Sampaio says.

BRAIN SCIENCE A major in neuroscience becomes available to students starting fall 2017. Offering training in a variety of fields, such as psychology, biology, chemistry, and neuroethics, the major addresses cognitive issues like



aging, Alzheimer's, and autism. "Our understanding of the brain is still in its infancy," chair **Patti Simone** says. "But the problems to be worked on have the potential to impact us all."

ADIEU, KENNEDY COMMONS ... and thanks for a decade of experiment and inspiration. Built in 2005 to pilot new architectural elements—including a living green roof—the commons was one of the first entirely green academic buildings in the country. As part of renovations for Dunne Hall in summer 2016, the commons was torn down. But design elements it tested live on: as part of the Joanne E. Harrington Learning Commons, Sobrato Family Technology Center, and Orradre Library; the Paul L. Locatelli, S.J. Student Activity Center; Lucas Hall, home to the Leavey School of Business; Graham Hall; and the Schott Admissions and Enrollment Services Building.

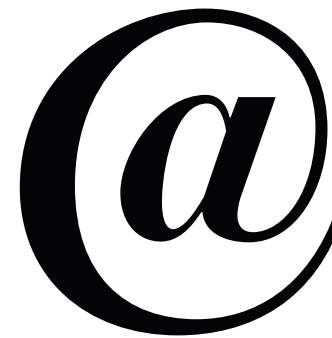
Chancellor Emeritus

THIS SUMMER TURNED a page for **William Rewak, S.J.**: He stepped down as Chancellor of SCU, a post he had held since 2011. We're blessed to still have him as part of our community as Chancellor Emeritus—and we're glad that he has more time to write poetry. Fr. Rewak came to Santa Clara in 1970 to teach English. He served as president of the University for a dozen years (1976–88) and as president of Spring Hill College in Mobile, Alabama. He founded this magazine, charting the course so: "We are here for that human interchange where

wisdom is born, to serve intellect and to touch the human heart." He has a new collection of verse, *Harmony: New and Selected Poems*—which draws from the collections *The Right Taxi* and *The Orphan Bear*. In an interview a couple years ago, he spoke of how "the creation of a poem is itself a prayer, an acknowledgment and praise of something, or someone, lying at the heart of our experience." In his honor, the Jesuit community has named an endowed chair for him. Its first recipient: Professor **Shannon Vallor** of the Department of Philosophy.

MEET MATT

IN AUGUST WE welcomed **Matthew G. Dewey** as associate vice president for marketing and communications. He comes via the University of Illinois at Urbana-Champaign, where he was senior director of marketing and communications and led an 11-person team that supported a planned \$2.5 billion capital campaign. Note that U of I is ranked No. 11 among public universities by *U.S. News & World Report*. Dewey hails from the Land of Lincoln originally and is an alumnus of the University of Notre Dame Mendoza College of Business. He also captained the track and field team for the Fighting Irish and competed in shot put, discus, and hammer throw. At SCU, he helms work in media relations, social media, creative services, and digital properties. We at *Santa Clara Magazine* are part of his crew, too.



Accompany Me. Casa de la Solidaridad in El Salvador was founded by SCU in 1999 to reimagine what study abroad could be. International students learn alongside Salvadorans and work in local communities. But in spring 2016, the program was suspended over safety concerns in the country. Great news came in November: The Casa is back—and accepting applications for fall 2017.



The CASA study abroad program engages students in the culture, economy, and existence of the Salvadoran poor. Along with classes held at the Universidad Centroamericana (UCA), students spend time in service placements throughout the region: with medical clinics, adult education programs, English and art classes, even local farming initiatives.

One such CASA placement: *Centro Hogar*, or home center. In December 2007, the child development center lost its funding and could no longer financially support its 35 preschoolers, children who were growing up exposed to extreme poverty—gangs, drugs, human trafficking, and sexual exploitation.

Juan Velasco, an associate professor of English who teaches in the CASA program, decided to create a grassroots

campaign to raise funds for these children. Serendipitously, enough donations from around the world arrived to ensure the children could stay. Soon after, the center re-established itself as Programa Velasco, a nonprofit so named by the parents to honor the man whose program to date has helped 341 children secure scholarships to continue their education.

Organizations like this illuminate why halting CASA enrollment in support of student safety was such a difficult decision, considering that the program and the University already have homegrown relationships with the U.S. Embassy and the Peace Corps, the Salvadoran government, and Catholic Relief Services.

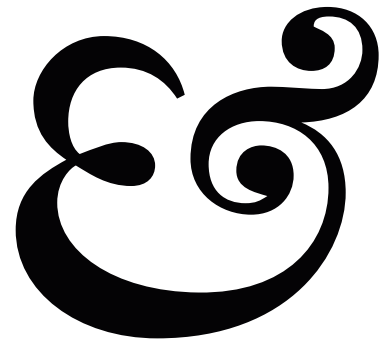
But as students of the country's history know, violence in El Salvador didn't

end with the civil war. Recent surges in murder rates led to a state department travel advisory. Yet in March, several CASA alumni created a Change.org petition, urging SCU to relaunch the study abroad program. Provost **Dennis Jacobs** responded by arranging for an independent security assessment team to travel to El Salvador and evaluate whether the program could again run. Following the review, CASA got the green light to resume. It was a week of other cheerful news about El Salvador for SCU, as well: **Thomas Smolich, S.J., M.Div '86**, international director of Jesuit Refugee Service (JRS), received the Christians for Peace in El Salvador (CRISPAZ) Award for his work serving the poor and espousing the Salvadoran theology of social justice and peace.

Global, local: The Casa program brings students from many campuses in the United States and beyond—and they study alongside Romero Scholar students from El Salvador. Here are Maura Bernt, a student from St. Joseph's University, and Maria Demetria Peñate, from El Salvador.

WORDS BY STEVEN BOYD SALIM AND MATT MORGAN. FR. WILLIAM REWAK PHOTO BY CHARLES BARRY. ILLUSTRATION BY KYLE HILTON. BRAIN ART BY GETTY IMAGES

WORDS BY ALICIA GONZALES '09. PHOTOGRAPHY BY QUINN FITZGERALD



Faith & Fiesta, community and culture, religion and retelling—all converge in celebration of La Virgen del Tepeyac (Our Lady of Guadalupe), a tradition at Santa Clara for two decades. The patron saint of Mexico and a cultural icon throughout the Americas, La Virgen represents a spiritual blending of Spanish and Aztec heritage, owing to her miraculous apparition to the indigenous peasant Juan Diego in 1531.



Citlalecuahitli Cynthia Montiel dances outside the Mission. For more images from the celebration, check out our online gallery at magazine.scu.edu.

It starts with drums, darkness, and incense. The heartbeat of a people, suffering but resilient. Latino Catholicism is experienced through the five senses, **María del Socorro Castañeda-Liles '98** says, and it's on full display during La Virgen del Tepeyac at the Mission Church. Through colorful costume, dance, and song—both painful and triumphant—the community claims relevance: *We belong here.*

It started with a dream. Fr. Mateo Sheedy led Sacred Heart Parish, with a church a few miles from the University but worlds away in opportunity in the 1990s. Members of Sacred Heart didn't always

finish high school, few attended four-year college, and fewer enrolled at Santa Clara.

Castañeda-Liles, now a professor in religious studies at SCU, was a member of Teatro Corazón (the Sacred Parish theatre group) while a senior at SCU. She sought to bridge the gap by moving the Sacred Heart's re-enactment of La Virgen to the Mission. Initially she was told no, the Mission was not for performances. Fr. Sheedy reminded her that *Flor y Canto* (flower and song) was not a performance: "This is the way that we pray," he said.

With lobbying by Fr. Sheedy, Eastside Project director Pia Moriarty, and **Ana**

Maria Piñeda, who taught a class on Our Lady of Guadalupe, the University was convinced—and La Virgen became a Santa Clara tradition. Following the inaugural performance in 1997, then-provost **Stephen Privett, S.J., M.Div. '72** was so moved by the ceremony that he declared that SCU would establish a full four-year scholarship for one student per year from Sacred Heart. This was Fr. Sheedy's dream realized. The first San Juan Diego scholarship was awarded in 2001. Recipients have gone on to graduate study and to practice law, and several work at Santa Clara.

WORDS BY MATT MORGAN AND ALCIA GONZALES '09. PHOTOGRAPHY BY CHARLES BARRY

GOOD LISTEN Is there a common good in our common home? That's a question explored in *INTEGRAL*, a new series of podcasts launched by SCU's Ignatian Center for Jesuit Education. Each season highlights a different theme, with season one discussing how issues of racial and ethnic justice intersect with the concept of the common good. Featuring Santa Clara scholars from a broad range of disciplines, episodes use faculty research to explore urgent ethical dilemmas—immigration and national identity, race and mass incarceration—and inspire listeners to act in the best interest of humanity. Hear it: scu.edu/integral



FIVE BUCKS TO A GRAND Call it an exercise in startup creation. Teams of students in **Robert Eberhart's** Intro to Entrepreneurship class take \$5 and try to turn a profit in one weekend. Sound dubious? Not at all. Last spring, six teams in Eberhart's class turned \$30 into \$1,135 in just 48 hours—the largest collective profit in the three-year history of the challenge. Eberhart is an assistant professor of management. The ideas, he says, were mostly straightforward—selling boba tea or spam musubi (rice, seaweed, and spam—yum!), but the impact was lasting. **Zachary Lamb '16** used skills he learned from class to launch Runner Inc. with **Mike Roletti '16** and **Sam Kujovich '16**, an app that lets college students pay classmates to carry out basic chores, like laundry and grocery shopping.

TOP EARNERS Santa Clara grads get their money's worth, according to PayScale, Inc. Mid-career salaries for undergrad SCU alumni now rank in the country's top 2 percent, according to the 2016-17 report. Narrow in, and alumni with business degrees rank in the top 1 percent, earning a median \$124,000—a figure topped by alumni of only two schools in the country.

WORDS BY STEVEN BOYD SAJIM. WOMAN OF WISDOM BY DONALD JACKSON. FROM ST. JOHN'S BIBLE. MISSION GARDENS PHOTO BY JOANNE LEE. SPAM MUSUBI BY SHUTTERSTOCK

QUAD GOALS

THE MISSION GARDENS offer a peace hard to come by. The pendent wisteria and the well-tended roses can transform even emails into poetry. These grounds—still shouldering adobe from the late-18th century—were recently named the No. 1 most beautiful campus quad in the country by College Rank. We concur.



Woman of Wisdom

AS SHE ENDS a 40-year teaching career at the Jesuit School of Theology of Santa Clara, pioneering feminist theologian and biblical scholar Sr. **Sandra Schneiders** has donated her professional papers to the University. Not long after Vatican II, Immaculate Heart of Mary Sister Sandra Schneiders was one of the first two nuns to receive a theology doctorate from a pontifical university. That was one of many firsts to come. She was the first non-Jesuit and first woman professor to be tenured at the Jesuit School of Theology. She is an oft-cited theologian of St. John's Gospel and in the field of hermeneutics, or how to interpret texts. As one of the first U.S. scholars to define Christian spirituality as an advanced, multidisciplinary field of study, she helped establish the country's first doctoral program in Christian spirituality, at the Graduate Theological Union in Berkeley. She is a highly regarded and sought-after expert in the modern-day theology and spirituality of women religious. Like many pioneering women, Schneiders faced intense criticism and outright hostility over the years. But she trusted what was truly her "prophetic" role—an enunciator of truths—such as clear biblical support for women as church leaders; and a denunciator of policies that enshrine apathy toward the poor.

SCU celebrated key moments in Sandra Schneiders' scholarship with an exhibit paired with images from the illuminated St. John's Bible.



LET'S EAT!

FED UP WITH the tenor of our country's political shouting match? You might find something useful, maybe even uplifting, in **Janet Flammang's** *Table Talk: Building Democracy One Meal at a Time* (University of Illinois Press). A professor emerita of political science, Flammang puts forward this basic idea—informed by scholarly studies and wide-ranging anecdotes: “We can develop our civil selves by sharing food and ideas at tables where there are ground rules about listening, sharing, and respect.” But there's the rub, right? Flammang's anecdotes display a nuanced understanding of the dynamics of kitchen, diplomatic, and even hostile tables. She writes about the difference between authoritative and authoritarian dynamics at a family dinner table, for example. “Conversations take work,” she acknowledges, but “are well worth the effort because they are the building blocks of democracy, fashioned one meal at a time.” So let's eat. And converse!



Are we in an age when reactive, 140-character bursts—and quick, often solo meals—have replaced familial or social dinners where thoughtful conversations that undergird a viable democracy have a seat?

TOTAL SUPREMACY Next time you're in Washington, stop by the National Archives and take a look: There, in Article VI, the Constitution specifies that treaties are “the supreme Law of the Land; and the judges in every state shall be bound thereby, anything in the Constitution or laws of any state to the contrary notwithstanding.” The supremacy of international treaties over state laws was bedrock



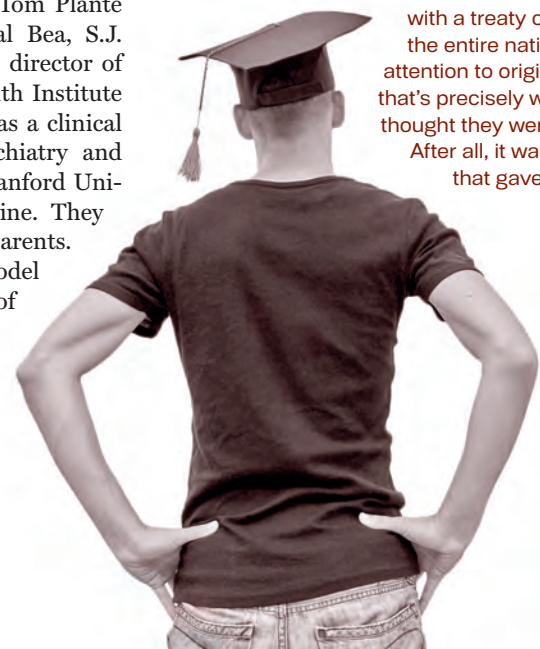
principle for 150 years, observes **David L. Sloss**, a professor of law at SCU. But as his new book makes clear, something happened: *The Death of Treaty Supremacy: An Invisible Constitutional Change* (Oxford University Press) traces the trouble to 1945 and the signing of the UN Charter, which includes the requirement to uphold “human rights ... for all without distinction as to race.” Five years later, a California state court used that charter and the supremacy clause to overturn a law discriminating against Japanese nationals. Implications for Jim Crow laws on the books were clear. Conservatives proposed a constitutional amendment to invalidate the supremacy clause. Liberals argued that an amendment wasn't necessary; the clause was optional, they said—only treaties that stipulated how they would be executed (self-executing) fell under the supremacy clause. It has been interpreted thus ever since. “The optional supremacy rule impairs the president's ability to conduct foreign policy,” Sloss notes. President George W. Bush learned that firsthand; in *Medellin v. Texas*, he ordered Texas to comply with U.S. treaty obligations. The Supreme Court ruled that Texas didn't have to; the treaty provision in question was non-self-executing. The result: “Texas subverted U.S. compliance with a treaty obligation that binds the entire nation.” For those paying attention to original intent, Sloss says, that's precisely what the Framers thought they were trying to avert. After all, it was a treaty (Paris, 1783) that gave us a country.

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The Integrity Thing

ONE HOPES THAT college environs instill a sense of the importance of integrity—especially academic. Here at Santa Clara, to underscore that point, in 2015 the University inaugurated an official Academic Integrity Pledge for students. But academics present only some of the ethical territory (Cheat on a test? Download a paper?) a college student is forced to navigate. From alcohol abuse, dating apps and the lure of hookups, to discrimination and sexual assault—how do you nurture an ethical self? To answer that, psychologists **Thomas G. Plante** and Lori G. Plante wrote *Graduating with Honor: Best Practices to*

Promote Ethics Development in College Students (Praeger). Tom Plante is the Augustin Cardinal Bea, S.J. University Professor and director of the Spirituality and Health Institute at SCU, and wife Lori was a clinical faculty member in psychiatry and behavioral sciences at Stanford University School of Medicine. They also bring experience as parents. Their goal: “Provide a model for imparting the skills of ethical decision-making to college students during a time of great transition, temptation, and unprecedented freedom.”



WORDS BY ALDEN MUDGE AND STEVEN BOYD SAUM. ILLUSTRATION BY RICHARD MA. PHOTOGRAPHY BY GETTY IMAGES

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When We Were Governor. Recognize her? In 1931, this woman's death at the age of 72 was front-page news. She was memorialized as one of the greatest women in U.S. history. Today? Very few people have heard of Belle Case La Follette. **Nancy C. Unger**, professor of history at SCU, can sympathize—though she would also like to change that.



Those who have heard of Belle La Follette usually view her as the estimable wife and helpmate of Progressive icon, Wisconsin governor, and U.S. Senator Bob La Follette—or, possibly, as the involved mother of the succeeding generation of Wisconsin Progressive leaders, Philip and Robert Jr.

Unger once held a similar view of Belle La Follette's role in American history—despite having devoted a chapter to Belle in the biography *Fighting Bob La Follette: The Righteous Reformer*. Now Unger has reassessed, and writes: “The facts reveal a far more complicated and independent Belle Case La Follette.”

Belle La Follette's egalitarian activism was heavily influenced by her close relationship with her grandmother, who shared the hard work of 19th-century farm life in rough equality with her husband.

A fascinating aspect of Unger's new book, *Belle La Follette: Progressive Era Reformer*, is her brief and vivid depiction of how the shift from farm life to an urban life—where men worked for wages and women stayed home—resulted in a dramatic change in the cultural view of the fairer sex. It wasn't a view Belle or her husband shared. She was the first woman to graduate from the University of Wisconsin Law School at a time when there were only 56 women attorneys in the United States. She was so deeply engaged with Robert La Follette's political career that he sometimes said, “when we were governor.”

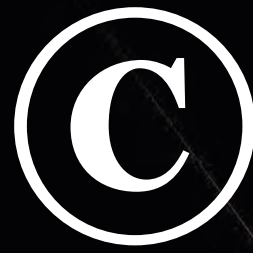
She was also shy. To the disappointment of many contemporary feminists, she turned down the chance to succeed her husband as U.S. senator, opting to continue a Progressive dynasty through

the candidacy of her son. She wrote frequently about parental roles that promoted independence for children but was herself a very controlling mother. She and her husband had a very close relationship—but she put off marrying Bob until she had earned money of her own. She espoused causes ranging from an opposition to capital punishment to the right of a woman not to take her husband's name upon marriage. At the time, these views were far outside the mainstream.

She fiercely opposed racism and was a vigorous critic of President Wilson's acceptance of the re-segregation of the U.S. Civil Service. Her uncompromising pacifism—with her and her husband's opposition to America's entry into World War I—made them political pariahs for a while. And she led a lifelong fight for women's suffrage.

Meet me at the Fox River Fair: Belle La Follette in 1912. After leading a lifelong fight for suffrage, finally, at age 61, she was allowed to vote.

WORDS BY ALDEN MUDGE. PHOTOGRAPHY COURTESY NANCY UNGER



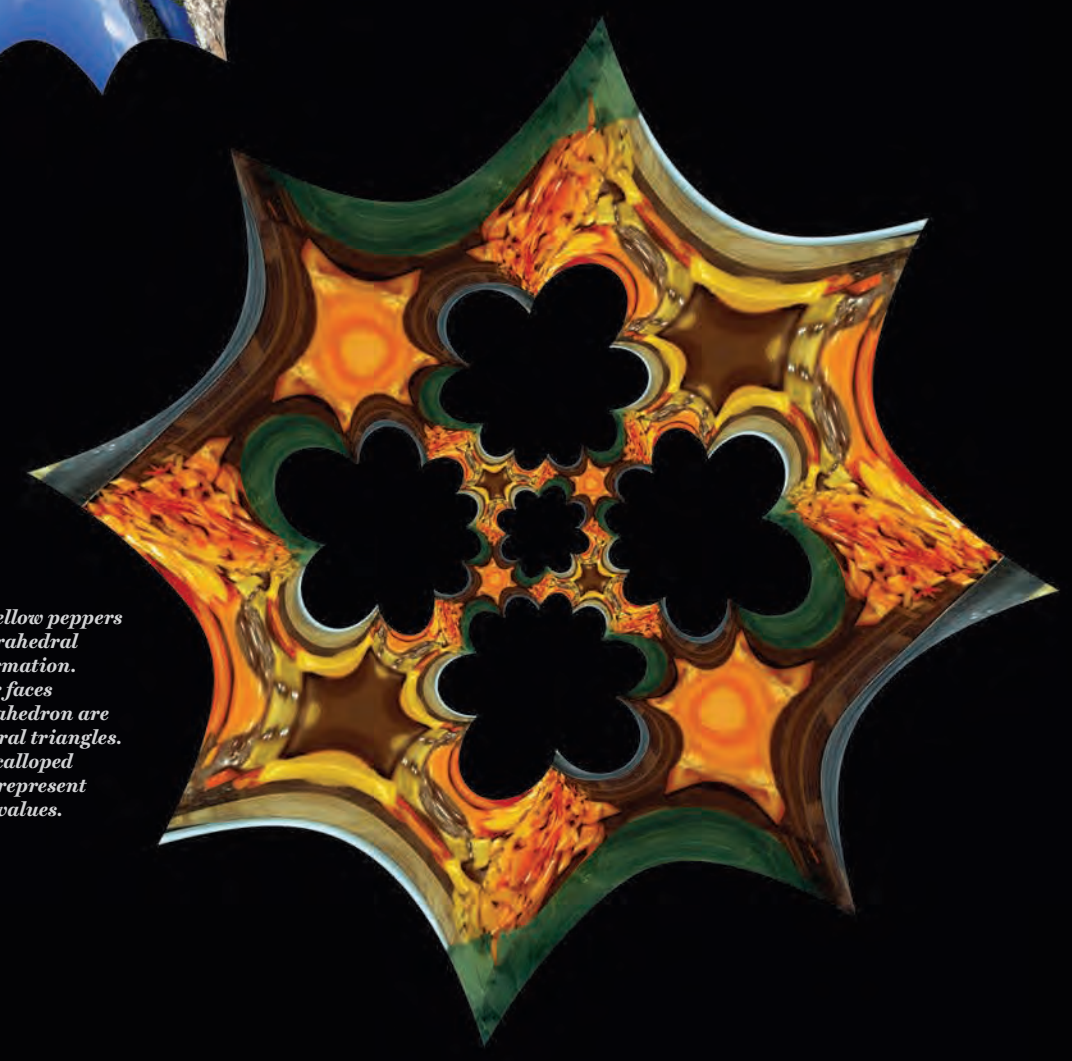
Symmetry Reflects Us. It brings us “face-to-face with the grand structure of mathematics,” as mathematician **Frank Farris** puts it. Years ago Farris, an associate professor of mathematics and computer science, bridged mathematical realms and photographic material with what he calls a “domain-coloring algorithm.” His resulting work weds waveforms to nature photography, and it has been exhibited in

galleries and at universities across the country. The book *Creating Symmetry: The Artful Mathematics of Wallpaper Patterns* (Princeton University Press) collects scores of his images: beginning in the familiar plane of Euclidean geometry, employing complex equations to generate rosettes, friezes, and wallpaper patterns (any pattern with translational symmetry in two independent directions). To follow the mathematical threads requires understanding calculus. The big story unfolding is the beauty of the Earth.

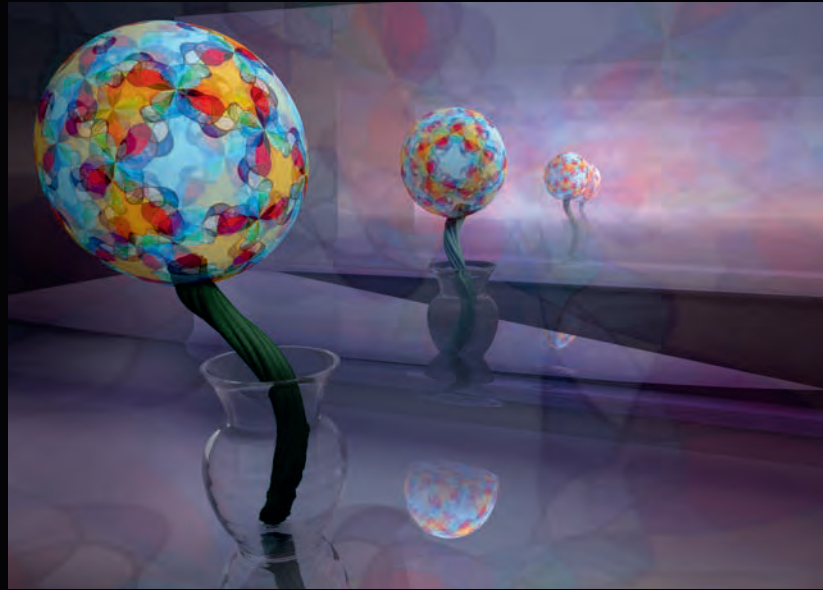
Playing off the color wheel of a rhododendron blossom, this rosette function showcases both mirror and five-fold symmetry.



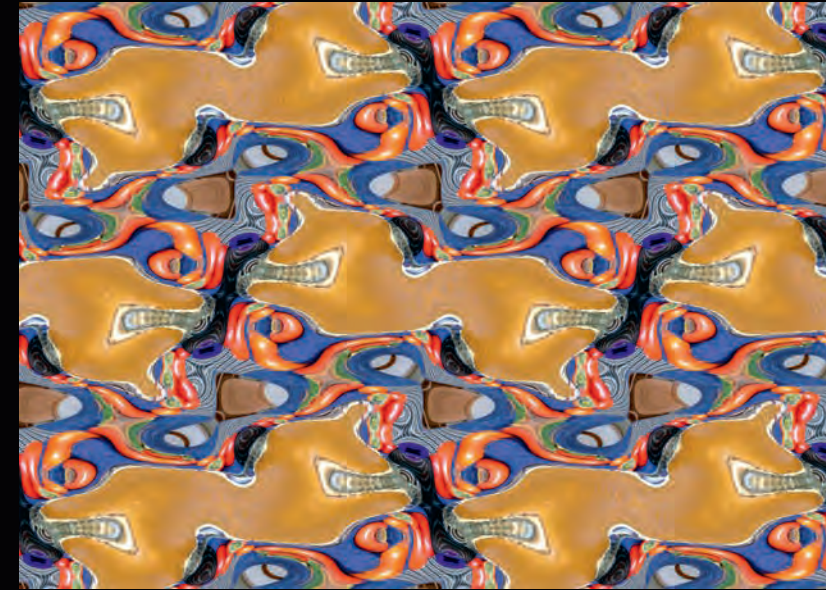
Sliced yellow peppers meet tetrahedral transformation. The four faces of a tetrahedron are equilateral triangles. Black, scalloped regions represent infinite values.



A Sierra Nevada Lake transformed by octahedral symmetry. An octahedron, an 8-sided solid, shares the same symmetry group as a cube.



Twenty-sided figures gird the globe in "Icosahedral Lampflower." Also at play: ray-tracing, a technique for simulating the path of light as it bounces through the world.

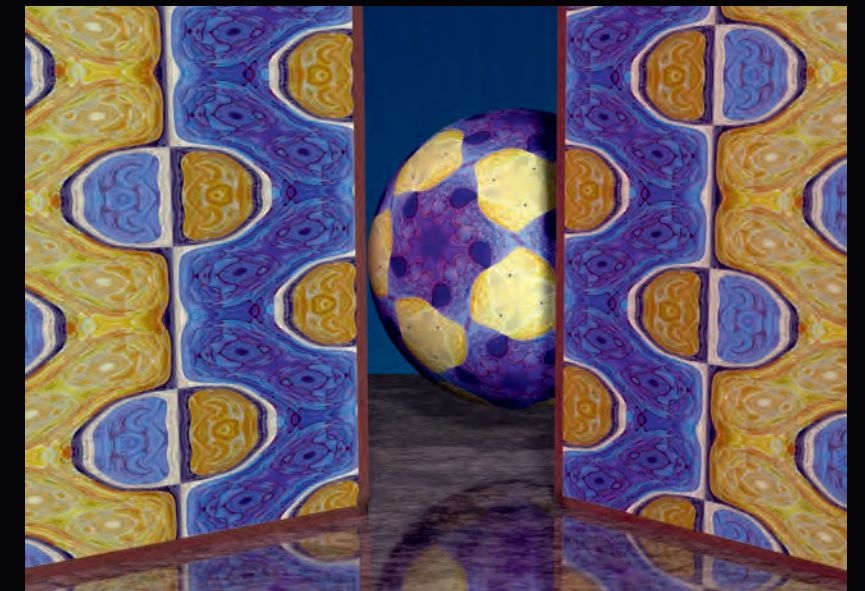


A pumpkin pie surprisingly turns into carousel horses using a trick created by Farris's wave approach.

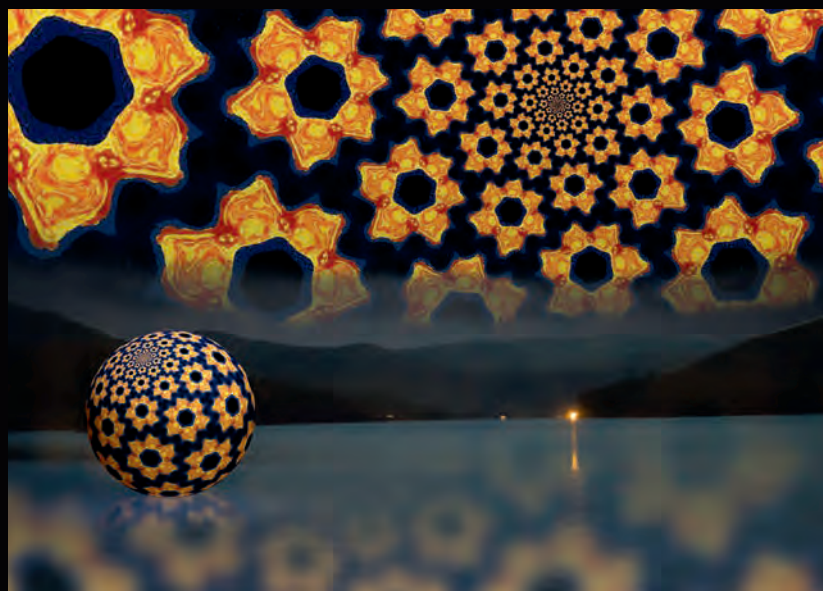
"They Arrive" as balls painted with polyhedral patterns land by moonlight on Upper Twin Lake in the Sierra Nevada.



"When the Butterfly Gates Open" shows color-reversing wall-paper symmetry on the gates and icosahedral symmetry on the floating globe.



"Starry Night of Fire" captures a spiral of stars mirrored on a lake. The floating globe reflects the same pattern, but in reverse.



"Temple of the Peach" uses a pattern representing non-Euclidean geometry around the inside of a cylinder.



MONUMENT CUTE



Visitors to the remnants of the monument also saw picket signs carried by Hater Girl—who protested the culture of cute Hello Kitty promoted.

ONLY FRAGMENTS REMAIN: a hunk of granite that's half a whisker, and stone carved to make the oval hollow of a Hello Kitty eye. They once adorned the great Hello Kitty monument, 65 feet across—a Mt. Rushmore of feline cute. Did you ever visit? It's a story and installation created by **Kathy Aoki**, associate professor of studio art, for "Formidable Fragments" at the Berkeley Art Center last fall. The monument was carved into the Yukon Mountains by a visionary artist who once created a mash-up between Hello Kitty and Velma Dinkley—the brainy, glasses-wearing, turtlenecked character from Scooby Doo. "What I'm trying to deliver to you is how ridiculous this investment in cute culture can be," Aoki says. It's a message delivered with a nod and a wink—along with the serious questions about having a brain to think and a mouth to speak, and not being afraid to use them. *Read and see more: magazine.scu.edu*



Marks the Spot

INSPIRED BY ANCIENT art and architecture of Mexico, **Pancho Jiménez '93** works with big shapes—such as a series inspired by enormous Olmec heads—covered with details cast in ceramic molds: baby doll faces, theatre masks, teddy bears, typewriters, ballet slippers, pumpkins, chariot wheels. He had his first solo show at the Triton Museum in the city of Santa Clara last fall. And curators from a number of California museums took note and purchased some pieces for their collections: You'll now find his work in the Crocker Art Museum in Sacramento, the Autry Museum of the American West in Los Angeles, as well as the Triton Museum itself. Jiménez is a senior lecturer in studio art at SCU. Explore his work in the Edward M. Dowd Art and Art History Building.

LIKE CHORDS IN A SONG is how Bay Area sculptor Bruce Beasley sees the individual shapes in his work. Take *Rondo I*, a series of shining, nearly intertwined rings that invite interactions within the sculpture and with the natural environment surrounding it. Since fall 2016, the sculpture's permanent home has been the Mission Campus, next to the entrance of the de Saisset Museum. (That's the sculptor and sculpture on campus, below.) Beasley finds inspiration in what he calls "the building blocks of nature," that is, the various forces that shape and sustain the universe. His work is internationally known and featured in major museum collections, including New York's Museum of Modern Art, the Fine Arts Museums of San Francisco, the Solomon R. Guggenheim Museum, and dozens of others. Thanks go to the artist himself and the de Saisset Museum for bringing this lovely piece here—part of the University's vision to develop a prominent and robust public art collection for the enjoyment of the campus and wider community.



WOW, WHAT A LINEUP! This winter the College of Arts and Sciences has hosted a dynamite series of artists to campus: Bosnian-born painter Amer Kobaslija, award-winning actress Anna Deavere Smith, and global music project The Silk Road Ensemble. As Frank Sinatra Artists in Residence, Smith and Silk Road Ensemble have been working closely with students. Smith will host public lectures and engage photography and creative writing students in her process, culminating in a spring quarter exhibition in the de Saisset Museum. *The West Wing* actress and MacArthur Fellow will also oversee and co-direct a winter quarter artistic production by students. Musicians from Silk Road Ensemble have also been spending time with students, faculty, and the community—performing at Music at Noon and a formal concert, with more in store in May. Kobaslija arrives on campus in March to lecture and work with students, but you can check out his work now. An exhibit featuring his paintings opened in the gallery of the new Edward M. Dowd Art and Art History Building in January. Check back in our next mag for the highlights, or visit the digital mag today.

WORDS BY STEVEN BOTO SAUM AND ESTHER YOUNG '18. PHOTO OF PANCHO JIMÉNEZ SCULPTURE BY CHARLES BARRR. BRUCE BEASLEY PHOTO BY JOANNEE LEE. HELLO KITTY PHOTO COURTESY KARI ORVIK.

PHOTOGRAPHY COURTESY LORENZO AGIUS

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One Voice is the title of a symposium SCU hosted Nov. 18 about sexual assault on campuses. D.A. Jeff Rosen led the conference for law enforcement and campus leaders. Congresswoman Jackie Speier shared gut-wrenching cases of sexual assault from around the country. Actress and activist Sharon Stone read from the victim statement by Emily Doe in the Stanford sexual assault case.



From that letter:
 “To girls everywhere, I am with you ... I hope that by speaking today, you absorbed a small amount of light, a small knowing that you can't be silenced, a small satisfaction that justice was served, a small assurance that we are getting somewhere, and a big, big knowing that you are important, unquestionably, you are untouchable, you are beautiful, you are to be valued, respected, undeniably, every minute of every day, you are powerful and nobody can take that away from you.”

Sharon Stone read one letter. But, she said, there are many Emily Does who have not been heard, and we need to change the culture and the laws around sexual assault.



Voice of the Victim

The Brock Turner case put campus sexual assault in the headlines.

Alaleh Kianerci J.D. '07 let its victims be heard.

BY MATT MORGAN

ALALEH KIANERCI CALLS the Brock Turner case a perfect storm: a white, privileged student-athlete accused of sexually assaulting an unconscious woman behind a dumpster. There was little question as to guilt, in a traditional sense. Turner, then a swimmer at Stanford, was caught in the act. He ran and was tackled. The question was how far the American judicial system had come in addressing its issues with sexual assault. Kianerci, the deputy district attorney assigned to the case, thought it would bring privilege, consent, and rape into the spotlight. But even she couldn't have predicted the media storm that followed Turner's conviction and surprisingly lenient six-month sentence.

"It was such an important case for a lot of different reasons," Kianerci says. "With the sentencing, it's just taken a whole new life force—but for good."

It was a big story from the start, but local big. That changed when BuzzFeed posted victim Emily Doe's impact letter. Originally, the letter was a response to the probation report that Doe believed misrepresented her wishes for Turner's punishment. Kianerci encouraged Doe to write the letter, hoping that the probation officer would change her recommendation for sentencing: "You don't know me," the letter begins, addressing Turner, "but you've been inside me, and that's why we're here today."

When Kianerci saw the letter, she knew others needed to read it as well. In addition to submitting the letter to the probation officer, Kianerci posted it on the Santa Clara County District Attorney's website. BuzzFeed republished it. CNN's Ashleigh Banfield read it on the air. Within days it reached millions. Letters of support poured in.

"There are victims of sexual assault daily, and there are victims who write eloquent impact statements," Kianerci says. "This one was just different."

Turner was sentenced in June and released after serving three months. The judge in the case, Aaron Persky, became the target of a high-profile recall campaign.

Months later, remnants of the trial lingered in Kianerci's office in Palo Alto. On the shelf were boxes of documents with Turner's mug shot. Behind her chair was another box with Turner's face, this one with letters of support for the victim. When we spoke in October, *Law & Order: Special Victims Unit* was preparing to air an episode with a story similar to the Turner case.

"As much as it's died down since the sentencing, there are constantly things that bring it back into the realm of popular culture, which I think is a good thing," Kianerci says.

FINDING A CONNECTION

During the trial and after sentencing, Kianerci became the de facto voice for Doe, appearing on local and national news outlets. "I was really protective of her," Kianerci says.

Kianerci points to one part of the trial that troubles her. Kim Fromme, a clinical psychology professor at the University of Texas at Austin, is an expert witness who testified on behalf of Turner. Fromme conducted research that she believes shows intoxicated people aren't consent-impaired but memory impaired. It was an unfortunate reminder of the obstacles victims face when they attempt to bring their attackers to justice. "She's an educator," Kianerci says of Fromme. "She was a professor at a university that has young adults who are greatly affected by these types of cases."

A daughter of Iranian immigrants (her first name, *Alaleh*, means "tulip" in Farsi), Kianerci grew up in Santa Cruz. Her parents own a restaurant in San Jose, where she managed the bar her first semester at SCU law. She has a skill for connecting with people and witnesses.

"It made it easier to stay here as late as I could to make sure that when I cross-examined [Fromme], it really poked holes in her testimony," Kianerci says. "If I wasn't able to do that, the outcome could've been different."

BRINGING REAL CHANGE

As for Turner's light sentence, Kianerci doesn't blame the judge exclusively. He was acting within the law. "There are many judges in the state of California that would've done the same thing," she says.

Kianerci and Santa Clara District Attorney Jeff Rosen used public support as an opportunity to make long-term change. Two weeks after the trial, they testified in a legislative hearing for California AB-2888, a bill that closed a loophole allowing perpetrators who assaulted unconscious victims to avoid jail time. The bill passed unanimously. Gov. **Jerry Brown '59** issued a signing statement along with the law, and that letter explaining the rationale behind the law now hangs in Kianerci's office. Legislation that makes jail time mandatory can be problematic, as it often disproportionately affects people of color. In fact, in his letter, Brown mentions his general opposition to mandatory minimum sentences. Kianerci says that isn't the case here.

"I believe this is going to bring parity in the special treatment non-minorities [get]," Kianerci says. She likens the bill to what Mothers Against Drunk Driving has done for DUI laws. "Hopefully this case will have the same impact."

After sentencing in the Brock Turner case, Alaleh Kianerci J.D. '07 testified in a legislative hearing to close a loophole in sentencing for sexual assault perpetrators.

PHOTOGRAPHY BY JOANNE LEE



With a rotating base that allows solar panels to follow the sun, the rEvolvE House increases solar energy reserves by 30 percent. The tiny house took two years and the effort of roughly 20 students to complete.

BIG WIN

FOR A TINY HOUSE

The rEvolvE House won a state-wide competition in Sacramento. Now it's a home to help veterans with PTSD.

BY MATT MORGAN

WHEN THE rEvolvE House project started two years ago, **JJ Galvin '17** was a quiet college sophomore. He wasn't ready to lead a major construction project, he says, but he knew he wanted to learn.

At the award ceremony for the Sacramento Municipal Utility District (SMUD) 2016 Tiny House Competition, at Cosumnes River College on Oct. 15, Galvin was different: a vocal, confident senior, a leader, a champion. Galvin and his rEvolvE House teammates took first place in the inaugural competition. The contest was patterned after the U.S. Department of Energy's Solar Decathlon and featured nine houses judged on four categories: Architecture, Energy Efficiency, Communications, and Home Life. Their 238-square-foot house, which features a revolving base that allows solar panels to follow the sun, was named the overall winner and took honors for energy efficiency and communications. They bested entries from U.C. Berkeley, three Cal State schools, and four more colleges.

"I'm on cloud nine," Galvin said at the ceremony. "It's unreal that I'm blessed enough to be here and have this team around us and have the support that we've had."

During the award ceremony, Galvin, who volunteered as student team leader in fall 2015, was chosen by his teammates to hold the trophy in photos.

"Half the reason I came to Santa Clara was to work on projects like this," he admitted. "So I said, 'You know what, if no one else [is able] do it, I'm going to step up.'"

Galvin's transformation wasn't unique. Working on a house for half their college career forced all the students to become leaders, at various points. With Galvin, the final roster included 14 names—**Anna Harris '17, Gabriel Christ '17, Jack Dinkelspiel '17, James LeClercq '17, Jonathan Borst '19, Jun Chang '18, Marcus Grassi '17, Martin Prado '16, M.S. '18, Nico Metais '16, M.S. '18, Samantha Morehead '18, Taylor Mau '18, Thomas Chung '18, and George Giannos '18**—but other students cycled in and out of the project during the two-year commitment.

"I think this whole team can conquer the world now," said **Tim Hight**, the faculty advisor on the project and an associate professor of engineering. "They set themselves a huge target, and they probably exceeded it."

The day of the ceremony, Giannos, who served as student construction lead, was amazed at what his team had accomplished, sharing hugs with teammates and friends. They built something significant, something that would last.

"It's very difficult to do well on a project like this if you don't love each other," Giannos said. "That's the biggest part of this project. We've learned so much from each other."



“MAKE SOMEONE’S LIFE BETTER.”

Though small in stature, the rEvolv House is a fully functioning home. It has heat, air-conditioning, running water, a kitchen, a shower, a spiral staircase leading to a rooftop deck, a self-watering vertical garden, and a porch that doubles as the revolving mechanism, helping increase solar energy reserves by about 30 percent.

After the competition, the house was donated to Operation Freedom Paws—a nonprofit dedicated to teaching veterans suffering from PTSD, as well as others with disabilities, how to train their own service dogs. From Sacramento, the house came to Santa Clara for a short celebration on campus before heading to Gilroy for the town’s holiday parade. Finally, the house was inspected and prepped for Operation Freedom Paws, which hopes to start using it in early 2017.

The rEvolv House was designed with the veterans who would use it in mind. The doorways, showers, and appliances are all accessible from a wheelchair. When not in use, the bed folds into the wall, providing plenty of additional living space. Surfaces in the house are tough enough to withstand the claws of a dog while remaining easy to clean. There is even a vacuum built into the wall to collect dog hair and a drawer with dog bowls that emerges from the wall.

The cost of a service dog normally runs \$10,000 to \$60,000, but Operation Freedom Paws offers the dogs to clients at no cost. In the past, clients stayed in hotels paid for by Operation Freedom Paws. With the rEvolv House, the organization can reduce costs and help more people.

“That’s the coolest part,” Giannos said. “Our house has meaning, and it’s going to make someone’s life better.”

Tiny houses require extra emphasis on the details of design. Placing them in communities requires bigger changes to laws and building codes.

EVOLUTION/REVOLUTION.

Usually emails from foreign countries promising deals too good to be true belong in spam folders. But about two years before the SMUD competition, faculty advisor **James Reites, S.J., MST ’71** received an email from Colossun, a company in Spain, that changed the path of the project—eventually.

Colossun claimed it could equip the tiny house with solar panels that would revolve to follow the sun. The email sat in Reites’ inbox for about a year before he and Hight decided to respond. They knew the rEvolv House was too small for the revolving panels to sit on the roof, but there was a way that Colossun could help.

“We asked if we could rotate the house,” Hight said. They could. In Barcelona, Colossun worked on a design to revolve the house. Oddly, the development of a rotating base actually had nothing to do with the naming of the house, which came much earlier. “It was more ‘evolve’ and a revolution in that sense,” Hight said.

While Colossun figured out the logistics of the rotating platform and how to get it halfway around the world, the rEvolv House team was busy working on the rest of the structure. Building a tiny house for competitions like SMUD is a multiyear endeavor. Students, mostly from the engineering program but not exclusively, joined and left the project, with some staying on the team throughout. The students spent half their college careers building the house. And putting their sweat (and a little blood) into it is more than a metaphor.

As the competition drew near and the house started to take shape, the company that produced the revolving plat-

form ran into a roadblock of international proportions. The team had scheduled Hanjin Shipping to transport the crate containing the material for the platform across the ocean, departing Barcelona on Sept. 1, 2016. But the day before the platform was set to sail, Hanjin declared bankruptcy. Globally, around 90 of Hanjin’s vessels were stranded at sea; anyone in queue for shipping with the company was out of luck.

“So we scramble, scramble, scramble,” Hight said. “We have this sponsor, Pasha, a transportation company. They worked with us in the past and the founder, **George W. Pasha IV ’84**, is an alum. They’ve been extremely good to us and generous and solve our problems. He said, ‘We’ll take care of this. Don’t stress. We’ll figure it out.’”

They did. Strapped for time, the team ditched the plan to ship the crate through the Panama Canal to Oakland, instead sending it to New York and then having it delivered by truck to California in time for the competition.

Gregorio Garcia Portero, an engineer from Colossun, flew to Santa Clara to help put the giant erector set together. A few days after his arrival, the house revolved for the first time. Two weeks later, it was in Sacramento collecting first prize at the SMUD competition.

CRACK THE CODE

To put it in Silicon Valley terms, small units think different. They don’t waste space—appliances are stacked, storage is built in, everything has multiple uses—and they put a premium on design. But will tiny houses hit the mainstream? Hight is uncertain for a variety of reasons, starting with building codes. While tiny houses are popular among engineers and amateur construction enthusiasts, the governing bodies for building codes on local, state, national, and international levels haven’t caught up yet.

“If you build or remodel a house, there are permits, there are inspections, there are fees. There’s a way to do it that’s well established,” Hight said. “What is needed is a way to modify those [processes] so a tiny house can be permitted, can be inspected, and so forth.”

Since tiny houses are under the minimum square footage for a dwelling in most municipalities, they won’t pass inspection. Further, many tiny houses have wheels, which obscures whether to categorize them as a permanent or temporary residence. These ordinances were even a bit of a problem for Operation Freedom Paws. To sidestep the issue, the nonprofit was able to get the home inspected as a temporary dwelling, since clients would cycle out.

At a statewide level, some progress is being made. On Sept. 27, just a couple weeks before the Tiny House Competition, Gov. **Jerry Brown ’59** signed Assembly Bill 2176, which suspends building, safety, and health codes for unconventional housing structures. Former Assemblywoman Nora Campos, D-San Jose, authored the law with the intent of fostering the construction of tiny homes for homeless people over the next five years, after which the law will expire.

While Hight agrees tiny houses can provide shelter for homeless people, seasonal workers, and victims of natural disasters, he says the structures are unlikely to go mainstream, as they simply don’t fit the lifestyles of families. But for single people, tiny houses could provide a good bridge before they can afford a full-size house, especially in the Bay Area. Hight envisions tiny house communities with shared resources like laundry and areas to entertain.

“That’s a matter of being more efficient with space

and energy and resources,” Hight said. “So people have proposed that would make for more community, more interaction—and it encourages living small in terms of your carbon footprint, your energy use.”

Tiny houses require about the same amount of electricity as small apartments. But with solar panels—which are common—a tiny house uses less energy from the grid. Plus, apartment buildings present problems that tiny houses don’t: They are not typically built by the operator, so energy and space efficiencies often aren’t at the top of the priority list. In tiny homes, both are.

Perhaps, that’s the greatest impact of the tiny house revolution: influencing how traditional units are designed. Not that every new unit will be a tiny house, but tiny house design techniques can make buildings more efficient in both their physical and carbon footprints.

CHIEF INSPIRATION OFFICER

One person missing from the celebration in October was Fr. Reites. Papa Reites, as students knew him, served as faculty advisor and unofficial chief inspiration officer until he passed away in April 2016. The team remembered him by placing his green hard hat on the top shelf of the rEvolv House kitchen and embroidering the message “In Loving Memory of Papa Reites” on every sweatshirt.

Reites was a fixture on solar decathlon teams in recent years, and his fingerprints were all over the rEvolv House. “The smiles are really where you see [him]—and the work ethic, too,” Galvin said. “How hard each of these people worked for this project, that’s where you see him.”

One good turn: the house and the base that lets SCU’s rEvolv House spin



“The commitment, the dedication [is where I see him],” Hight said. “They didn’t let anything slow them down or get in their way. Every obstacle, they just seemed to find a way around it.”

“Papa Reites encouraged us to do better than our best,” Giannos said. “He was not OK with mediocrity, and that was clear in everything we did. He was the first one there and he was the last one to leave every day.”

Giannos said the team knows Reites would be proud of its win. “He’d love to be here right now,” Giannos said the day of the competition. “He’d be the first one on stage and the last one here hugging the house before we left.”

MATT MORGAN is the assistant editor of *Santa Clara Magazine*.

PHOTOGRAPHY BY JOANNE LEE

PHOTOGRAPHY BY JOANNE LEE

\$100 MILLION GIFT

ESTABLISHES THE SOBRATO CAMPUS FOR DISCOVERY AND INNOVATION

The largest gift in the history of Santa Clara University and one of the biggest in the history of Catholic higher education. Thanks to **John A. '60** and **Susan Sobrato**, we'll begin to build a 300,000-square-foot state-of-the-art home for cross-disciplinary work in engineering, the hard sciences, and mathematics. It will be a place to develop skills and ways of thinking and solving problems that shape the next generation of leaders for Silicon Valley and beyond. **ILLUSTRATION BY TAVIS COBURN. WORDS BY STEVEN BOYD SAUM**

COME THE YEAR 2020, you'll see a Mission Campus transformed: by a "campus within a campus," designed to foster collaborative exploration to enhance undergraduate student learning and discovery across science, technology, engineering, and mathematics (STEM). That's a mouthful, yes. So let's put it so: There's no other university in the country doing this for undergraduate students in quite this way—built around ethics and Jesuit values. Though if we inspire others, that would be a fine thing indeed.

"The world today faces some really immense problems," John A. Sobrato assesses. "We're talking about climate change, global health, poverty, energy sustainability." Technical knowledge alone—particularly in one field—isn't enough to solve these. Hence a need for "really bright minds working across all disciplines to forge solutions together," in the words of Provost **Dennis Jacobs**. Enter a space built with that in mind: in teaching and research, and in areas like neuroscience, bioengineering, and environmental science.

The building will be big—"by far the largest on campus," Sobrato says. "Three distinct wings, all interconnected."

Take that sense of interconnection as a metaphor. And read more about the vision for the building on the next page. But since buildings and ideas start with people, here's a little about two people making this possible.

WORK AND FAMILY

A walk through campus and a tour through Silicon Valley will show that, for decades, the Sobratos have been building and shaping both this University and the wider environs that have housed engines of economic growth and world-changing innovation. "What [John] has done in Silicon Valley has really been incredible," says his classmate and former Secretary of Defense **Leon Panetta '60, J.D. '63**, "not only for the high-tech industry but also the construction that he's done at Santa Clara University."

John A. Sobrato has focused on commercial development for tech firms since 1974, developing and constructing more than 150 office and research and development facilities. He is the founder and principal of The Sobrato Organization, based in Cupertino, and he built the iconic Apple headquarters in Cupertino as well as campuses for Siebel, NVIDIA, Netflix, EMC, Verisign, and Yahoo!

John A. and Sue Sobrato wed 56 years ago, and Sue has been an active partner supporting the family's business and philanthropic pursuits. Raising a family came first for Sue. Giving back to the community where they live mattered deeply, too. This gift comes from the both of them.

Their family includes three children—**John Michael Sobrato '83**, Lisa Sobrato Sonsini, and **Sheri Sobrato Brisson M.A. '94**—and seven grandkids, including several more Santa Clara grads. Since 1997, John M. Sobrato



"In the new building, there'll be a whole new spirit of teaching ... and a new way to learn," says John A. Sobrato.

has served as CEO of The Sobrato Organization. The year before that, the family created the Sobrato Family Foundation. In the past 20 years, that foundation has given cash and real estate to support education, health care, human services, and other endeavors—to the tune of \$375 million.

BUILDING BLOCKS

Here on campus, along with the counsel and care that the Sobratos have given generously over the years (John A. is a longtime member of the Board of Trustees), gifts from the family made possible the Sobrato Residential Learning Community, Abby Sobrato Mall, and much, much more. They donated \$20 million to build the Harrington Learning Commons, Sobrato Technology Center, and Orradre Library, completed in 2008. The new Sobrato Campus for Discovery and Innovation will rise right next door to the library. The \$100 million gift that makes it possible is also the largest gift in the family's history.

But it's more than a gift. "This beautiful new building that John and Sue are contributing so generously to will be a landmark in the center of campus," observes President **Michael Engh, S.J.** "And they're setting a challenge for others to say, 'Come join us in this to make Santa Clara an even greater Jesuit Catholic institution.'"

NOW TRY THIS: 1. Turn the page to see the site of the new Sobrato Campus. 2. Unfold the futuristic vision of illustrator Tavis Coburn. 3. Read more about the Sobratos, their gift, and the new facility at scu.edu/STEM.

DISCOVER

A signature building. And a new way to learn.

WHERE IS IT? The Sobrato Campus for Discovery and Innovation (SCDI) will be near the heart of campus, between the Harrington Learning Commons, Sobrato Technology Center, and Orradre Library; and the Patricia A. and Stephen C. Schott Admission and Enrollment Services Building. SCDI replaces two engineering buildings as well as Bannan Hall, since law will have a new home.

2018

construction begins

300,000

square feet and 3 connected wings

DESCRIBE IT. Open and transparent, with lots of glass and natural light, with “some of the architectural details that everybody loves about Santa Clara,” John A. Sobrato says. “The same architectural vocabulary you recognize—but a modern version.”



Silicon Valley is not just a place.

It's also a state of mind. It's innovation that can improve the world, so you can't stand still. Your structures, your buildings, have to keep pace with that, too. If you're talking about a subject such as bioengineering, you have to have a grounding in biology and in engineering—together. This new facility is one more way we enable students to contribute to the good of the Valley, especially facing critical ethical issues.

**MICHAEL E. ENGH, S.J.,
PRESIDENT, SANTA CLARA UNIVERSITY**

DESIGN AND BUILD.

Portland-based ZGF Architects—*Architect Magazine's* Firm of the Year and top firm for sustainability in 2016—designed it. The company is working in partnership with lab-design experts Research Facilities Design of San Diego. Devcon Construction, headed by **Gary Filizetti '67, MBA '69**, will build it.

WHAT'S INSIDE?

Collaborative spaces in many flavors: from spaces designated for projects of all types—wet projects, dry projects, dirty projects, in the parlance of science and engineering. And also makerspaces in which students can pursue open-ended projects, plus flexible laboratory and classroom spaces. Transparent glass walls connect much of the building visually. Along with academic disciplines, you'll find the Frugal Innovation Hub and Miller Center for Social Entrepreneurship.

Geography and Destiny

Santa Clara won't just *be in* Silicon Valley. It will be central to it like never before.

BY MICHAEL S. MALONE '75, MBA '77

With the extraordinary \$100 million gift by **John A. and Susan Sobrato**, Santa Clara University is now poised at last to finish its rapprochement to Silicon Valley and find its true role in the 21st century.

As often noted, SCU has always been *in* Silicon Valley—indeed, a college on this campus precedes the name Silicon Valley by a century—but never has been truly *part of* it. It has played many roles over the years in relation to Silicon Valley—precursor, exemplar, contributor, educator, oasis, sanctuary—but few would claim that the University is an integral part of the surrounding technology community.

Sure, Santa Clara has provided the region with generations of computer scientists and electrical engineers, intellectual property attorneys and middle managers. But if it was still farmland and orchards on the far side of Bellomy Street, and if canneries still stood tall beyond The Alameda—if it was still the Valley of Heart's Delight—would Bronco life be that much different? Too often over the years, SCU has defined itself in contrast to the digital revolution beyond its gates, rather than as part of it.

That is about to change.

The new Sobrato Campus for Discovery and Innovation, symbolically located near the heart of the University campus, is more than a new facility for science, technology, engineering, and mathematics (STEM). It represents something important and profound for SCU: an unprecedented commitment to the community in which it makes its home.

Santa Clara University has always made a major contribution to the technology revolution. But that contribution has always been piecemeal: inventions that emerged from the School of Engineering, a key ruling by a graduate of the law school, a C-level job filled by a business school MBA. You'd be hard-pressed to find a successful company or hot start-up in the Valley that doesn't have its management ranks filled by SCU grads. And certainly the Valley has given back; just look at all of those noted Valley leaders who have filled the University's Board of Trustees and served as advisors.

The new facility for STEM represents something very different: Context. Integration.

It's there in the title. Santa Clara has always exhibited the well-rounded education expected from a great Jesuit institution. And that has been one of the University's greatest strengths: Where other local institutions of higher learning have grown increasingly specialized and one-dimensional, Santa Clara has wisely chosen to continue to educate the whole person—and worry about the soul as much as the CV. In an era in which great entrepreneurs are as

likely to hold humanities degrees as engineering degrees, it has proven to be a brilliant strategy.

But if SCU got right the beginning, it was still uncertain whether the University would successfully navigate the next step. As it has done so many times in the past, Silicon Valley is once again transforming itself. After having spent the opening years of this century devoted to software, code writing, and applications, the Valley is once again swinging back to a focus on hardware—on new platforms and devices.

Those new first-year students arriving on campus each fall now come from a world of robotics teams, drones, and Maker Faires. They build things. As such, they harken back to a much older Valley, of semi-conductors and minicomputers ... one that rewarded people who could integrate mathematics, applied science, mechanical engineering, and electronics. In other words, STEM, long before the term existed.

Santa Clara University, where those different disciplines remained siloed, operating (especially at the grad school level) almost as separate fiefdoms, had to change with the Valley—or be left behind. That's why the University has spent much of the last decade planning for just such a STEM facility to prepare that new generation of students for a technologically innovative Valley characterized by machine intelligence, deep learning, artificial intelligence, and the Internet of

The new campus represents something very different: Context. Integration.

Things. A Silicon Valley led by well-rounded makers, able to operate along the boundaries between hard science and applied engineering, commerce and culture, professionalism and ethical behavior. The question was: In the fastest-moving business community in history, could Santa Clara keep pace?

That question has now been answered. With the Sobrato gift, SCU can leapfrog what promised to be a long and unpredictable process ... and get to work building and staffing the new facility. It is appropriate that the Sobratos, who played such a crucial role in building the Silicon Valley we know, should now lead Santa Clara University out into the Silicon Valley that will soon be.

< Open and see: [The Sobrato Campus for Discovery and Innovation](#)



Cut & Paste Conservation

We can now replace a gene in any organism for a hundred bucks a pop. We can alter wild species to save them. So should we?

BY EMMA MARRIS
ILLUSTRATIONS BY JASON HOLLEY



IT IS THE year 2095, and everyone is celebrating the birth of the first black rhinoceros to be born with a horn for almost 70 years. It wasn't disease that kept the animals hornless for so long. It was an intentional modification introduced in the year 2025 using genetic engineering techniques discovered in 2012. Using these techniques, biologists were able to create genes that would delete the rhino's horn and spread them through the entire rhino population, thus ending the killing of these endangered animals for wealthy horn collectors in China and Vietnam. Once all the old poachers had hung up their guns for good, a new gene that turned the horns back on was simply released into the population, along with a so-called "gene drive" to make sure it would spread throughout the entire population. And presto-chango, the horns were back.

This story is no pipe dream. "We could do that in a totally seamless fashion, yes, absolutely," says Kevin Esvelt, a geneticist at the Massachusetts Institute of Technology and an expert on the new technologies. Esvelt worked in one of the two labs that nearly simultaneously discovered a newer, cheaper, and more precise way to genetically engineer plants and animals, called the CRISPR system. He went on to propose and test gene drives that would spread these engineered genes quickly throughout populations. These new tools are so cheap and effective that even those working with the paltry budgets of the average conservation project can suddenly consider using genetic engineering.

In a world where you can cut and paste any gene you want into any spot in an organism's genome for about a hundred bucks a pop, a whole smorgasbord of possibilities is suddenly on the table. Invasive predators could be eliminated from islands by spreading sterility genes or genes that ensure that all offspring are male. Species that are threatened by disease could be altered to naturally express antibodies to those pathogens from birth. Trees threatened by fungal infections could be made to ooze fungicide from their cells. And perhaps someday, completely new species could be created that would flourish in a warmer, weirder world. But should we alter wild species to save them? Is it right?

These technologies won't stay in the lab long—they are just too good to resist—so scientists, ethicists, and conservationists are scrambling to tackle the hard questions about the ethics of using advanced genetic engineering techniques. A flurry of papers, meetings, and conversations has begun among the pipette-wielders, deep-thinkers, and species-savers. Because ultimately, the question boils down to what conservation values. Is biodiversity the ultimate good, regardless of where it comes from or where it appears? Are conservationists saving individuals, species, or genes? Is "naturalness" so core to conservation that making organisms less natural to save them would also make them less valuable? The legacy of CRISPR on conservation may be as much about defining the values of the field as it is about expanding its methods.

Conservationists tend to be—well—conservative. So it is no surprise that there is a lot of skepticism about using CRISPR and gene drives in the field. Many reject the idea on its face. An open letter signed by such conservation legends as primatologist Jane Goodall and activist David Suzuki reads, "Given the obvious dangers of irretrievably releasing genocidal genes into the natural world, and the moral implications of taking such action, we call for a halt

Exotic cane toads were brought to Australia intentionally to control other pests. But their toxic skin makes them a menace to native fauna. What if we used CRISPR to remove the toxin from these Aussie imports?

to all proposals for the use of gene drive technologies, but especially in conservation."

But Esvelt also hears from the CRISPR-curious. "Many conservationists have been saying, 'We have been doing this for decades and it is just not working. We should at least take a look,'" he says.

The CRISPR system is based on an immune response that evolved in unicellular organisms to help them identify and destroy invading viruses. Snippets of viral DNA are stored in special spots in the organism's genome. These spots are marked by the "Clustered Regularly Interspaced Short Palindromic Repeats" of amino acids that give the technique its acronym. Enzymes are then loaded with RNA that matches those snippets of viral DNA. When the same kind of virus shows up again, the enzymes use that RNA to find the corresponding snippet in the live DNA and then mercilessly cut it out, crippling the virus.

This defensive system can be tweaked to become a kind of "cut and paste" for genes. Cas9 enzymes (short for CRISPR-associated protein 9) or similar enzymes are loaded with RNA corresponding to the sequence a researcher wants to change, and they do their thing and find the sequence and cut it out. The researcher also adds a "repair template"—the sequence of DNA that encodes the gene they want to insert. The cell's own repair machinery will use this template as a guide, and voilà: The genome has a new gene.

Ultimately, the question boils down to what conservation values. Is biodiversity the ultimate good, regardless of where it comes from or where it appears?

This system changes one organism. If the alteration is made in just one chromosome, then when the organism mates and reproduces, there is a 50 percent chance the new gene won't be passed on to the offspring, since each parent contributes only half its chromosomes to its children. Over time, any new gene might get swamped in the population. That's where the gene drive comes in. If instructions to make all the parts of the CRISPR/enzyme system were added to the organism's genome, then it would have the ability to alter the chromosome next to it—cutting out the gene of interest and inserting the new gene. When the organism reproduces, both of its chromosomes would have the altered gene and—crucially—the machinery to edit the gene from the un-engineered parent. So the offspring would also end up with two copies of the altered gene ... and so on forever. In essence, the process of genetic engineering that particular gene would be encoded into the genome such that it would become a normal cellular function.

Since the gene drive ensures that the altered gene rapidly spreads through any interbreeding population,





many find the prospect of unleashing it unnerving, to say the least. And no one is proposing doing so in the wild anytime soon. “Right now with CRISPR and gene drives, we have the power to do something, but we are not good enough to understand the effects in advance,” says Esvelt. “The system is just too complex. My model is: Start small, and small means no drive system at all, see what happens in the wild, and, if you are happy with those results, scale up a bit.”

CROSS THAT BRIDGE

If the thought of any genetic engineering of wild plants or animals makes you dubious, you are not alone. But the potential benefits could be enormous. Before any conservation projects get off the ground, the first applications are likely to be in the realm of human health.

Indeed, the U.S. Food and Drug Administration is considering an application by a company called Oxitec to test a genetic manipulation of mosquitoes in the Florida Keys after successful trials in the Cayman Islands, Panama, Brazil, and Malaysia. The company’s transgenic male *Aedes aegypti* mosquitoes mate with wild females; the offspring are programmed to die before adulthood. The company claims up to 90 percent reduction in the test populations—reductions that could presumably also greatly reduce deaths and birth defects due to diseases like dengue, Zika, chikungunya, and yellow fever—diseases that kill tens of thousands of people every year. Since *Aedes aegypti* make up a small percentage of the diet of their predators—there are lots of kinds of mosquitoes and most predators eat other insects, too—the effect on the ecosystem is predicted to be minimal.

The first conservation applications may well be similar: helping wild animals and plants fight off diseases that threaten them with extinction, from bats battling white-nose fungus to black-footed ferrets perishing of plague.

These potential benefits to humans are part of the reason why **Margaret McLean**, who serves as director of bioethics and associate director overall at the Markkula Center for Applied Ethics at Santa Clara University, feels the technology should be explored—carefully.

Many who have opposed the use of genetic engineering have cited the “precautionary principle,” the idea that actions have to be shown to be largely harmless before they are undertaken, and that the burden of proof is on those wanting to take the potentially harmful action. This approach can lead to paralysis, McLean says. “It is a bit akin to my mother’s admonition when I was learning to drive: You cannot drive across the Golden Gate Bridge until you have driven across the Golden Gate Bridge.”

Instead, McLean likes the concept of “prudent vigilance,” derived from the first report of the Presidential Commission for the Study of Bioethical Issues. For her, this means “acknowledging we don’t know everything we need to know, but we need to move ahead while paying a lot of attention to unintended risks of the path we have chosen.”

THE BIRDS AND THE TREES

Ronald Sandler, a philosopher at Northeastern University in Boston who has written a book on the ethics of emerging technologies, believes genetic engineering for conservation should be judged “on a case-by-case basis.”

Where the genetic techniques are clearly effective, and where they are remediating the primary threat to the species, he thinks they should perhaps be judged acceptable. “The model really is that you are undoing the primary, immediate, human-introduced threat.”

Esvelt agrees, and his favorite example is the case of Rapid ‘Ōhi‘a Death, a fungal infection attacking one of the most common native trees in Hawaii. ‘Ōhi‘a (*Metrosideros polymorpha*) are small trees with stiff leaves in geometric rosettes and an exuberant red pom-pom flower. They form the backbone of many Hawaiian ecosystems. Using bacteria as a messenger for the enzymes, RNA guide, and DNA template, the sapwood cells of these iconic trees could be altered to secrete a fungicide that could save whole ecosystems. The modification would not be inherited by the tree’s offspring, so it would be akin to a vaccine. “I think we should do it,” says Esvelt. “Yes, it is unnatural, but the fungus that is killing it is also unnatural. It is our responsibility.”

If the intervention works, ‘ōhi‘a will presumably also be resistant to other fungi, so the trees may survive in even higher numbers than normal. And this might have effects on the insect species that eat their leaves and even the predators of those insects, like the endangered ‘akeke‘e bird (*Loxops caeruleirostris*)—of which fewer than 1,000 remain.



If the thought of any genetic engineering of wild plants or animals makes you dubious, you are not alone. But the potential benefits could be enormous.

Predicting what effects a changed organism may have in complex ecosystems is arguably more challenging than making the genetic changes in the first place, according to Owain Edwards, who leads a research team on environmental biotechnology and genomics at Australia’s Commonwealth Scientific and Industrial Research Organisation (CSIRO). “We have learned from past mistakes to try to predict what could go wrong, but it’s equally hard to predict what happens if it goes right,” Edwards says. “The technology itself is not nearly so much an investment. Most of the investment is going to be in making sure it is going to be a safe and smart thing to do.”

Even a scientifically solid risk assessment may not be enough to convince everybody. Despite a long history—genetically modified organisms (GMOs) have been on our plates since the 1990s—the technology still seems frightening and unproven to many. It is fair to say that opposition to GMOs is fierce and even trendy in certain circles. And this opinion very well might automatically be transferred to any conservation projects employing gene modification.

The company Oxitec has bred its transgenic male mosquitoes with wild females. Offspring are programmed to die before adulthood. Could this reduce deaths and birth defects from disease with minimal impact to the ecosystem?



RETURN OF THE FOREST KING?

American Chestnuts were once the grandest of all trees in Eastern North America. They resembled huge buttressed castles with tops that emerged from the canopy and produced a reliable crop of tasty nuts that supported forest creatures. Early farmers even fed the nuts to their pigs and goats. Then, in the first half of the 20th century, a fungus from China raced through the forest, killing virtually all of them. The forest had lost its king.

In 1983, the American Chestnut Foundation (ACF) set up shop with the ambitious and optimistic goal of bringing the chestnut back. Chinese chestnut trees were very resistant to the fungus that they had co-evolved with. Long before CRISPR was developed, the ACF set to work importing this resistance to American chestnuts using the “back-cross method.” They hybridized American and Chinese chestnuts, and then they crossed the offspring with American chestnuts multiple times. In each generation, they kept only the seedlings that retained resistance to the blight. To cover the whole forest, the project continues at the ACF orchard in Virginia, and at 16 volunteer-led orchards that are breeding locally adapted blight-resistant trees from Alabama to Maine.

The ACF is also working with a group at the State University of New York College of Environmental Science and Forestry to explore the possibilities of a chestnut that expresses a resistance gene derived from wheat. Crossing these trees with the few surviving American chestnuts in the wild can “capture” the remaining genetic diversity before those old trees die.

Eventually, blight-resistant trees will be planted in the forest, and the king of the East can retake its throne. This effort is perhaps the oldest and furthest-along of all transgenic conservation projects. “If it can be done with the chestnut tree, then it should be possible to restore ash, hemlock, and other trees that are imperiled,” says Jared Westbrook, Director of Science at the ACF. “This is a proof of concept for something bigger.”

Once upon a time, up to four billion American Chestnuts grew on this continent. The tallest of them stood twelve stories high. Then came the fungus.

“I think the scientists in conservation could well be as surprised as the scientists in crop breeding were by the backlash,” says Bill Adams, a geographer at University of Cambridge who has written about this issue.

“Those of us who think these technologies have important potential for conservation need to learn from what happened with GMOs and try to avoid those mistakes,” says Kent Redford, a conservation veteran who has been investigating the options presented by high-tech biological tools for the past four years. “We don’t have a chance in conservation in using any of these technologies unless we are really smart about how to talk to people about the potential.”

A scan through the public comments filed to the FDA during the permitting process for the Oxitec mosquito make this very clear. Although many people wrote in to support the experiment, there were also dozens of comments like this one from Richard Pecha: “Is it not bad enough that we are consuming GMO’s...??? NOW you want to release Frankenstein blood suckers into the environment. May God forgive you for wanting to tamper with creation.... May you and yours to be the first to be a host for such a monster!” Or this one from Helene Atkins: “Messing with Mother Nature and the Eco system has proven disastrous in the past and we MUST NOT allow this!!!” But for some, the reasons for supporting are clear, as Brian James wrote: “When I compare mosquito elimination to the alternatives of fogging my family, this is a slam dunk. A perfect solution to an otherwise vexing situation.”

TOXIC TOADS

While the early uses of CRISPR in conservation may be to heal or prevent disease, another promising application is to use the technology to kill—to eradicate non-native species that are threatening native species. Worldwide, more than 700 species are threatened or already extinct thanks at least in part to exotic mammal predators. CRISPR alterations could make these predators infertile. It could be a more humane way to remove them than the current arsenal of traps, guns, and poisons used in such projects. “There simply aren’t any more generations,” geneticist Kevin Esvelt says.

And in Australia, the exotic cane toad—a huge, lumbering brown toad with a slightly menacing expression—poses a threat to native animals that try to eat the toad, then perish from its toxic skin. The toad is threatening such endangered and adorable creatures as the pointy-nosed Northern spotted quoll, a carnivorous marsupial. “What if we could build a drive system that could knock out the toxin?” asks Esvelt. “You are removing their unfair advantage. It is a neat idea.”

It is a neat idea, but also a fraught one. If altered cane toads made it back to their native range in South America, the gene drive could remove the toxin there, too, and make the toad vulnerable to extinction itself. “You are going to have to talk to all the South American nations and get their permission,” says Esvelt. “You have to assume that there is some human troll that is going to deliberately move them.” Esvelt also recommends readying a countervailing gene drive that could override or block the first. Toads with this genetic machinery would have to be kept in captivity, ready for instant release if the gene drive makes the hop across the ocean. It sounds elaborate,

but Esvelt thinks it might come to pass. “Australians really hate cane toads. They would pay for the monitoring system,” he says.

Interestingly, cane toads were brought to Australia intentionally. They were brought from Hawaii in 1935 to control two sugar cane pests: French’s cane beetle and the greyback cane beetle. No one predicted they would become a menace. But they have, and so they also stand today as an allegory of the hubris of intervening in ecological systems when the consequences may be impossible to predict. Could introducing a gene to stop the cane toad also have unforeseen negative consequences?

Beyond this kind of project lie even more extreme possibilities—from temporarily removing the rhino’s horn to making species more resistant to heat and drought as the climate changes. Some have even proposed “cognitively enhancing” Australian species at risk due to predation from non-native cats and foxes—making them smarter, so they could outwit their evolutionarily new predators.

But Bill Adams, the Cambridge geographer, isn’t so sanguine that scientists would always use the new technologies in the most careful and enlightened ways for the good of all. A self-confessed cynic where this is concerned, he says, “I look at high-tech centralized development with suspicion. I tend to assume that they will be myopic and self-interested and bought out.”

AU NATUREL

These kinds of projects begin to fundamentally alter the very species we are trying to save. And this prospect opens up a very large question: What do we mean when we say we want to save the planet? What are we trying to save? Individuals? Species? Genes? Does it matter if you have to alter 5 percent of a species’ genome to keep it around?

Or, as Adams asks: “Is what you are really seeing a leaky bag of genes floating around in the landscape? Or do we want to save the organism we can see and name and the cultural values of it?” In fact, we’ve been altering wild species for thousands of years.

“Even just by putting selective forces on species, we are changing their genetics: by changing their habitat, warming the planet, using pesticides,” says **Michelle Marvier ’90**, a professor of environmental studies and sciences at Santa Clara. “We are just doing it in a really mindless way.”

Are changes that we make directly, with intention, morally different?

Marvier points out that *naturalness*—in the sense of being unaltered by humans—is an unspoken value in conservation, along with the more visible values, like diversity and evolution.

And this may be why tinkering with species feels wrong—or at least like a compromise—to many. And it may explain why an even further-out idea—making completely new species on purpose—doesn’t seem like conservation, even though it would increase biodiversity.

“It is going to be a big challenge to the foundational principles of the field,” surmises Marvier.

“Naturally-evolved biodiversity” is the real goal of conservation, according to Ronald Sandler. “It is not biodiversity as such—the value of biodiversity has historically been tied to the source of the diversity.”

Sandler has argued that there is a difference between saving a species “as it is” and altering endangered species. Changing a wild species not only potentially lowers its value by lowering its naturalness, but also opens up a whole new kind of interaction between humans and wild species that needs to be more thoroughly ethically explored. “We start changing intelligences or engineering coral populations to make them resistant to higher temperatures, then we are on the avenue to substantially changing the natural world,” Sandler says. “There is potentially a qualitatively different way of thinking about our relationship with ecological systems. I am not making a value judgment on that right now.”

Esvelt doesn’t rule out the idea of creating new organisms—if not now, then someday far in the future. “Should we make new species to atone for the sixth great mass extinction? It is an open question,” he says. Some of these new species could even be designed for other planets.

Meanwhile, Margaret McLean pleads for a bit of pragmatism. “I think we ought to think carefully about genetic engineering and the opportunities it gives us but not let this shiny object draw our attention from some common sense approaches that are available now: mitigate against climate change, protect environments, look at pesticide use, look at the trade-offs that go into the



What do we mean when we say we want to save the planet? What are we trying to save? Individuals? Species? Genes? Does it matter if you have to alter 5 percent of a species’ genome to keep it around?

cup of coffee we have in the morning.” The discussions around genetic engineering for conservation are just getting started. They may help conservation define itself for the 21st century. They are questions with long-term consequences, which ask us to peer into an uncertain future and make ethical choices for ourselves, for other species, and for generations yet unborn.

Who’s to say that when the time comes to replace the rhino’s horn that a majority of Earth’s people won’t prefer a sterling silver or glow-in-the-dark horn? The values of future generations aren’t easy to predict.

As these conversations continue, “I would hope that ethicists have a place at the table,” says McLean. “I think that the stakes are of immense proportions and the more multidisciplinary these conversations are, the better the outcome of the conversation.”

EMMA MARRIS is a freelance environmental writer. She lives in Klamath Falls, Oregon.

Info Officer in Chief

Digitalizing the work of the federal government is both urgent and messy. But Tony Scott J.D. '92 knew that when he took the job as Chief Information Officer of the United States.

BY STEVEN BOYD SAUM. PHOTOGRAPHY BY ROBERT CLARK

TROUBLE CAME TO light the morning of tax day: April 15, 2015. At the federal government's Office of Personnel Management, a security engineer decrypting some digital traffic to check what kind of data was flowing in and out of the system found something strange: a signal being sent from inside the system by security software that OPM didn't use to a domain on the outside that OPM didn't own. Investigation led to revelation: Hackers may have exfiltrated more than 20 million personnel records of current or former government employees—Social Security numbers, addresses, birthdates, race, job and pay histories, and more.

The agency announced the trouble in June. "Massive Data Breach" read headlines. Chinese hackers were suspected. Fallout from the theft may not be known for years. But the cybersecurity failing highlighted serious problems with government IT infrastructure—problems that **Tony Scott J.D. '92** had been working on at a top level for a couple months. In February that year, he had been sworn in as the third Chief Information Officer of the United States.

One lesson Scott learned as a career IT man—holding high-level posts with GM, Disney, Microsoft, and cloud computing firm VMware—is: Don't waste a good crisis.

"You never want to have those things happen," Scott told me. "But shame on you if you don't leverage the learnings from that and scale it out to the larger enterprise."

After the OPM hack, Scott testified before a congressional committee. He began by noting that well-financed, highly motivated, and persistent attempts to breach systems were not going away. "We have to be as nimble, as aggressive, and as well-resourced as those who are trying to break into our systems," he said.

Nimble and *aggressive* are not terms often associated with most federal agencies. Nor is *well-resourced*, at least when it comes to IT modernization.

In summer 2015, Scott and the White House rolled out a 30-day Cybersecurity Sprint, getting agencies to work on "basic hygiene," as he called it: simple but effective upgrades to security, such as multifactor authentication. He developed a Cybersecurity National Action Plan for more comprehensive IT transformation. And he tried to roll the big stone up the hill to change the way government develops and invests in IT. That Herculean—or Sisyphian?—effort is one that Scott describes in terms both urgent and frustrating, in part because of funding mechanisms: 80 percent of the \$80 billion the federal government spends on IT annually goes to repairing and maintaining legacy systems, not upgrading and investing in new stuff. A lot of

government IT is old and wasn't designed with current security needs in mind. What's really needed are systems that have security designed into them from the outset—"not bubble wrapped after the fact."

Scott's analogy: "You can put air bags in a '65 Mustang. But it's not gonna be pretty, and it's not gonna work like the new Mustang that has it built-in as a part of the design."

SOMETHING WAS BROKEN

Tony Scott used to own a '65 Mustang—lime green. More history: He's a Chicagoland boy, Oak Park—west side. He grew up playing hockey in the winter; he's a big, amiable bear of a guy—looks like he could hold his own on the rink.

Back in high school, when springtime breathed new green hope into baseball in the Windy City, he and buddies would sneak out of class and catch the El to Wrigley and see Ron Santo and Willie Mays play. What choice did the boys have? There were no night games. As for the World Series, "That was pretty cool to see this year."

While Scott was in college in Illinois, a visit to California convinced him to stay; he finished a degree in information systems management at University of San Francisco. After some time in the field, he came to Santa Clara for law, with concentrations in intellectual property and international law. The J.D. made him an unusual candidate for CIO positions—and piqued the curiosity of recruiters. He served as chief technology officer of information systems with GM. At Disney, he helmed IT corporate-wide and had his share of crises there: five power outages at a pair of data centers. Then he served as CIO at Microsoft and VMware.

Scott also credits studying case law with teaching him a valuable approach to problem solving: "Distilling out the things that matter versus the distractions is a useful skill set to have in business, in government, and in life."

As for the *things that matter*, that figures into how Scott wound up in Washington. He delivered a talk in Detroit on diversity needs in tech. "Somebody from the White House who thought I had some interesting ideas invited me here to a brainstorming session," he said. He leveraged his Rolodex to bring fellow CIOs onto a federal task force to focus on tech policy in economic growth and expanding opportunities for veterans and women. "I thought I was all done, and on the way out somebody grabbed me on the sleeve and said, 'Hey, would you ever consider being a federal CIO?'"

He mulled it over—"I went from 'Never' to 'I think I can make a contribution.'" Why? "This is the very beginning stages of the digitalization of the federal government."

Look out any window: An \$80 billion budget, 24 agencies, and problems bigger than Y2K: U.S. CIO Tony Scott J.D. '92



Scott was no stranger to that process in the private sector. “These are hard journeys,” he said. “They’re bumpy and they’re messy and they’re disruptive.” And, while he was new to federal budgeting and governance, he could see that something was broken. He also had been spending more and more time on cybersecurity issues in the private sector. He knew *that* was a problem for the federal government.

LANDING THE PLANE

We met on a cold day in December in Scott’s office in the Eisenhower Executive Building, with a window overlooking the White House’s West Wing. He took this post in the Office of Management and Budget in February 2015. So what did he find was the problem with IT budgets? Everything the federal government does from a funding perspective—including IT strategy—is tightly locked into a model following the organizational chart. “In a digital world, that doesn’t work,” Scott said, “especially if systems haven’t been engineered to work together.”

Take email. It has occasionally been in the news. Now 65 percent of the government has moved to cloud email systems. But often each agency (or subagency) implemented cloud email in such a unique way as to make simple collaboration difficult. And 35 percent haven’t modernized at all. That means no instant messaging or simple collaboration on documents across silos.

“That’s a horrible way to work,” Scott said. “But if we modernize that, allowing anybody across government to easily collaborate with others that they need to in furtherance of the mission, that’s a huge productivity gain. It’s also a speed and response issue. We have agencies that show up to fight forest fires together that can’t easily collaborate.”

But five years from now, Scott has said in hopeful moments, we’re not going to be talking about *bureaucracy* and *slowness* in government—but rather *responsiveness* and *flexibility*. So how do we get there?

It’s a bigger challenge than Y2K was. But there’s no midnight moment.

In 2016, Scott advocated for passage of the Modernizing Government Technology Act to enable agencies to reprogram funds to upgrade tech. He stumped for the IT Modernization Fund to set aside \$3.1 billion geared toward modernization. Agencies would pitch proposals to a board and compete for funding—then pay back the money. Scott estimated that the fund would yield \$15 billion in improvements. “I guarantee you there is enough money in that inefficient, ineffective infrastructure and application space that paying back isn’t going to be the problem,” he said.

With bipartisan support—and strong backing from Rep. Will Hurd (R-Texas), a former CIA agent and chair of the House subcommittee on IT—both bills cleared the House. The modernizing technology act passed on unanimous consent. But the clock ran out in the Senate and neither bill got a hearing. Both bills may be back in 2017.

One testament to the bipartisan support for Scott is this: Last summer, a petition began circulating among govern-

ment employees to keep him on as CIO, no matter who was elected president.

“What we’re really talking about here is efficiency and effectiveness of core government capabilities,” Scott said. “The policy and political stuff rides on top.” Everyone wants more efficient and effective government. “They also want security, and often these go hand in hand.”

In the past, Scott surmised, the IT profession within the federal government didn’t do as good a job as it needed to of creating a picture of the scale of the problems. “We might have moped around and looked at our shoes and complained, but we didn’t dimensionalize it in terms of: ‘Here are the dollars, here’s the risk, here are the decisions that we think can be made.’ Early on I used the analogy of ‘Anybody can take a plane off. Landing the plane is hard. It requires a lot of practice and skill.’ Making actionable data and information available can drive the right decisions.”

Like with the Mustang, Scott comes to the flying analogy firsthand: He’s a pilot.

BETTER, STRONGER, FASTER

In the days of mainframes, government was a pioneer in automation. And it made sense to write custom software for an agency. Scott’s new paradigm: “Write as little software as possible. Use common cloud services and building blocks to assemble what you need to do for your agency.”

In August 2016, Scott took government-wide an IT idea that had been tested in a few agencies: making source code available for sharing and reuse across federal agencies. “By opening more of our code to the brightest minds inside and outside of government, we can enable them to work together to ensure that the code is reliable and effective,” stated the press release at the rollout. “This is, after all, the People’s Code. Explore it. Learn from it. Improve it. Use it to propel America’s next breakthrough in innovation.”

Here in Silicon Valley, Google was a pioneer in sharing application program interface (API)—the routines, protocols, and tools for building software applications—to enable developers to build on and improve services. “We don’t have the notion of government API widely instantiated yet, but I think it’s coming,” Scott told me. “It’ll free up the creative juices of our country to help us solve some of those harder challenges. You shouldn’t have to know anything about the org chart of the entity you’re interfacing with in order to do business with it. Today, you have to know way too much about how the federal government is organized to do business with us. That’s just not a modern concept. You should be able to do that with the same kind of ease as you book travel today, or even better.”

Another key: Think of IT in terms of continuous improvement. “The technology allows, if we do regular refresh and upgrade, to write a productivity curve that is phenomenal. Traditionally, we’ve put something in and then forgotten about it until it breaks. That’s why we have some systems that are 20 and 30 years old. We’re paying a lot of money to keep those things going, and they’re not secure.”

A number of clocks are ticking. Along with cybersecurity, there’s the fact that people who understand old systems are retiring. And old systems themselves will eventually break.

“All of those things are relevant,” Scott said. “I’ve called it a bigger challenge than Y2K. What’s hard to get people’s heads around is that, unlike Y2K, there’s no midnight moment when the world’s gonna blow up. This is a situation where things get just a little bit worse every day the longer

we don’t do something about it. What I fear is a point when you start to see massive failure at a bigger scale; the risk grows exponentially, not linearly, with time. It has to do with aging hardware, aging software, aging workforce. The risks are both physical—in that things just won’t work anymore—but also are to the mission: the very essential functions of government that will stop performing.”

The federal government doesn’t have to reinvent the wheel. But it does have to make that wheel bigger than any state or country has. Of the 24 federal agencies that were under Scott’s purview, the vast majority are bigger than any company in the Fortune 100.

As for examples of “the art of the possible,” Scott has cited Estonia, Great Britain, Australia. Last fall he appeared at a conference with a Danish government official talking about the digitalization of all government services there. In the United States, he mentions work done by the NYPD and the state of California. Though to be fair, he says, “In many of those cases, these were de novo kinds of things ... They weren’t replacements for something that already existed.”

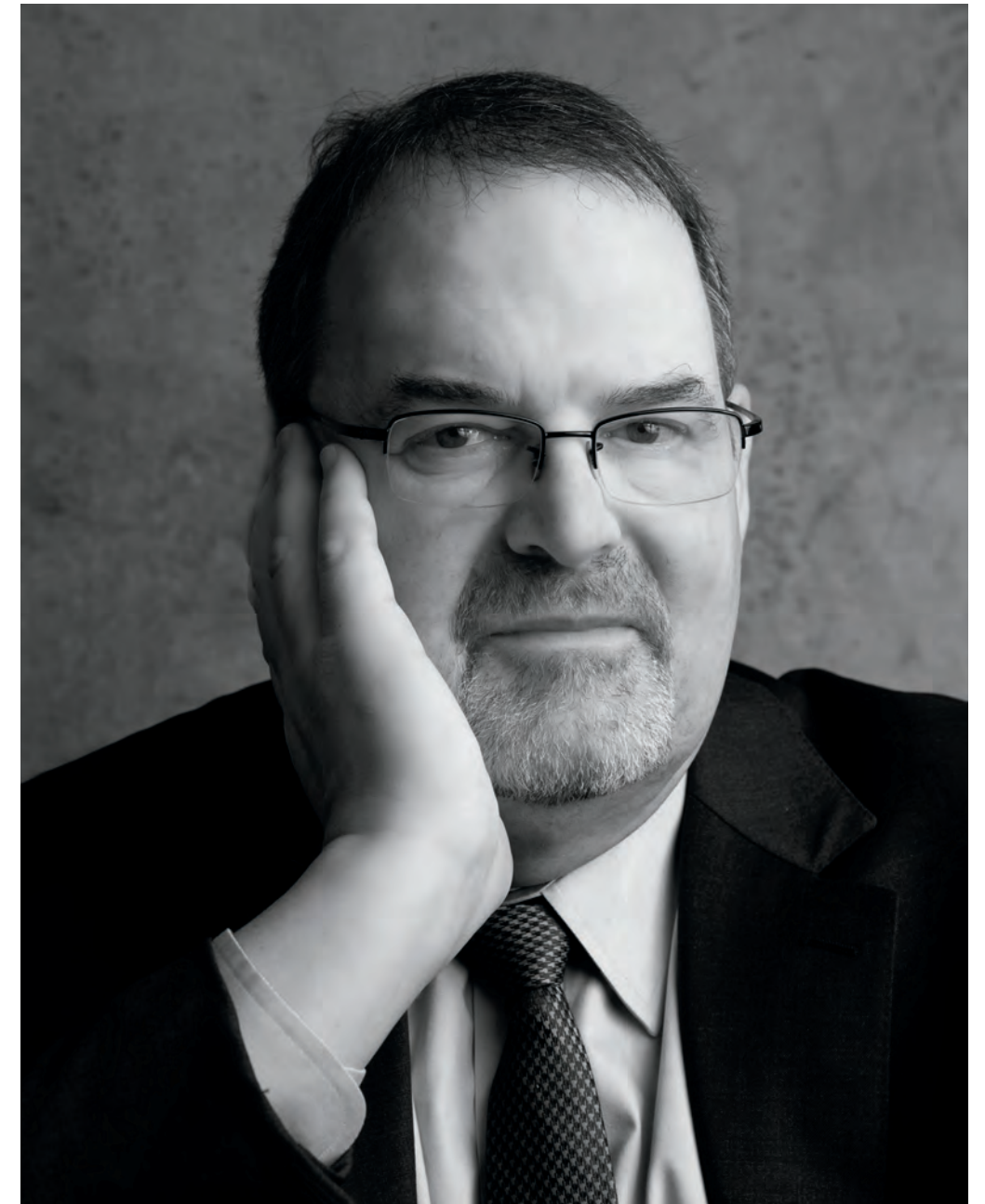
The old federal IT systems have to be kept running until new ones are developed, tested, and integrated. Social Security checks still need to be mailed. Air traffic still needs to be controlled. As Scott said at one conference, “You can’t just decide we’re going to turn it all off and wait until we figure out how to replace it.”

As for what he worries about beyond IT systems, there’s “misuse of information and data. I happen to know the owner of Comet Ping Pong Pizza,” he said. “The person with a gun went in and fired it in that establishment based on completely false, manufactured information.”

Tony Scott’s last day as U.S. CIO was January 17. His successor has yet to be named. What will be on that person’s plate? “We have to work on speed,” Scott said. Government culture necessarily relies on consensus, debate, and weighing of equities. “We need to find ways to preserve some of those benefits but do it a lot faster. There’s gonna be relentless pressure from the American people to have their government work better and more consistently with the way that they interact with other big important things in their lives. There’s no going back on that.”

Scott hopes that these past two years will be seen as an important beginning: “When we moved the needle on upgrading and replacing our infrastructure and applications that run the federal government, and when we introduced this notion of continuous upgrade.”

Changing the way government develops and invests in



IT “can certainly be frustrating at times,” Scott said. “But I do see clear paths to getting this work done. It’s mostly a matter of creating enough clear visibility of the issues and of viable paths forward. This is not a problem that is going to be solved by going small and under the radar.”

Another thing to work on: getting the right kind of people in place. “Both a government thing and a tech thing more broadly: It’s important that we get more people with what we’re calling ‘TQ’—technology knowledge and awareness.”

In law and in some fields of research, it’s not uncommon to serve for a stint in government and then return to the private sector—even multiple times. Scott would like to see that with tech. “We need to create that culture going forward. It’s rich, it’s rewarding, it’s intellectually stimulating. It doesn’t always pay all that well, but it’s worth it—to our country, and on an individual basis.”

Steven Boyd Saum is the editor of this magazine. Robert Clark is an award-winning photographer whose work has appeared in *National Geographic*, *Time*, *Sports Illustrated*, *Der Spiegel*, and many other publications.

What’s next? Tony Scott isn’t sure, yet. But, he plans on remaining a voice in the work he began in government, “no matter what role I’m in—in terms of keeping on the case.”

For the Record

Love Canal. The Exxon *Valdez*. Deepwater Horizon. Volkswagen. Blockbuster cases, yes. But they're only part of the story for **John C. Cruden J.D. '74**, a civil servant for decades and defender of the environment.

BY JUSTIN GERDES. PHOTOGRAPHY BY ROBERT CLARK

ON DECEMBER 15, 2016, Assistant Attorney General **John C. Cruden J.D. '74** joined Virginia Governor Terry McAuliffe in Richmond, Virginia, to announce terms of a proposed settlement with DuPont. Under the deal, DuPont agreed to pay \$50 million to settle claims stemming from the release of mercury by a DuPont rayon plant in the 1930s and '40s, which polluted more than 100 miles of river and floodplain in the South Fork Shenandoah River watershed. Mercury persists in the watershed to this day, harming fish, migratory songbirds, reptiles, amphibians, and mammals—and limiting recreational fishing. The deal is the largest natural resource damage settlement in Virginia's history. The case demonstrates the power of environmental law to redress even decades-old pollution. But it also reminds us that the arc of history, if it does bend toward justice, justice can take a long time indeed.

America's 2.7 million civilian federal employees serve the country, largely with distinction and noble purpose, and, regrettably, often in relative obscurity. Among those most deserving of wider recognition for this public service was the lawyer representing the United States in Richmond that day, John Cruden. Cruden worked first as a career attorney in the U.S. Army and, later, for nearly 25 years, served in senior positions at the Department of Justice's Environment and Natural Resources Division (ENRD), leading attorneys engaged in offense and defense, charged both with bringing cases against polluters and defending the federal government against lawsuits brought by companies or individuals. The division is, in practice, the largest environmental law firm in the United States.

Cruden's career has overlapped with the emergence of environmental law in the United States, decades during which this new area of the law became an increasingly effective enforcement tool. Indeed, some of the most important environmental cases ever litigated in this country bear his fingerprints. As chief of environmental enforcement for the United States, Cruden supervised the end of the litigation, and approved the final settlements, in response to the Exxon *Valdez* oil spill and the industrial pollution disaster at the Love Canal neighborhood in Niagara Falls, New York. In recent years, Cruden personally led the negotiations and signed and approved the three consent decrees resulting from the Deepwater Horizon oil spill in the Gulf of Mexico and the Volkswagen vehicle emissions cheating scandal.

From 1995 to 2011, Cruden served as the deputy assistant attorney general, ENRD's top career official,

across Republican and Democratic administrations. He led the division twice on an acting basis during previous presidential transitions. In December 2014, Cruden was unanimously confirmed to ENRD's top job by the U.S. Senate. In doing so, the Senate entrusted Cruden, one of the most experienced and respected environmental litigators in the United States, with managing a team of 450 attorneys.

Then-U.S. Attorney General Eric Holder had persuaded Cruden to leave what Cruden thought would be his last job, president of the Washington, D.C. based nonprofit Environmental Law Institute, to return to the Department of Justice for the final two years of President Obama's second term. By all accounts, Holder could not have found a better person for the job. "He's the most well-respected attorney in the history of the environment division and perhaps the entire environmental bar. That's no exaggeration," former DOJ environmental attorney Justin Savage told *Greenwire* in 2015. "People respect John, they admire him even if you disagree with him. He has integrity that exceeds any normal person's expectations."

On the morning after the DuPont announcement, I sat down with Cruden for an interview in his second-floor conference room at the Robert F. Kennedy Department of Justice Building, just off the National Mall, in Washington, D.C. At a time of considerable uncertainty, with the inauguration of President-Elect Donald J. Trump then a little more than a month away, Cruden himself projected steadiness, stressing the resilience of the rule of law, no matter the administration in power. His faith in that system is about to be tested.

FROM SAIGON TO SANTA CLARA

It's unlikely that in the more-than-century-long history of the Santa Clara University School of Law another graduate has followed a path quite like the one Cruden took to the Mission campus. In early 1970, Cruden, a West Point graduate, arrived in Vietnam. He would have extensive exposure to combat, first as a senior advisor to a Ranger unit and later with the Special Forces. For his valor, Cruden was awarded a Bronze Star and the Vietnamese Cross of Gallantry with Silver Star. But the infantry was not his calling. At West Point he was inspired by Pete Dawkins, a Rhodes Scholar and Heisman Trophy winner, who taught courses in national security and social science. Cruden set course to become a lawyer. He learned the LSAT was to be offered in the spring of 1971, in Saigon. Cruden recalls checking his gun at the door and being handed a pencil.

Grizzly man: At the Environment and Natural Resources Division of the Department of Justice, John Cruden J.D. '74 kept this Alaskan grizzly there as a reminder. The bear was shot illegally in 1986.



When he and the other would-be lawyers finished, a helicopter was waiting to take the soldiers back to their units.

By the time his LSAT results arrived, only the law schools at Santa Clara and Georgetown were still accepting applications. Cruden applied and was accepted to both schools. Santa Clara accepted him first, aware he was in Vietnam. Based on recommendations from military legal staff in Saigon, as well as the reputation of the law school's clinic program, Cruden chose Santa Clara.

He moved to Santa Clara to enroll. "I've always been grateful of it, because they were taking a risk," Cruden said, still sounding a bit surprised the law school was so accommodating of his unusual circumstances. "My applications were handwritten. It wasn't extremely sophisticated," he told *Washington Lawyer* a few years ago.

At Santa Clara, he said, "I had a bevy of really good professors." He names law school dean **George Alexander** ("a great constitutional scholar"), **Jerry Kasner**, and **Kenneth Manaster**—who arrived in 1972 and established himself as one of the leading environmental lawyers in California. One scholar he sees any time he is in California or his former mentor is in the capital: Fr. **Paul Goda**, "someone I deeply admire." He also counts as a friend former DOJ colleague and former EPA deputy general counsel **Tseming Yang**.

With the benefit of hindsight, it's apparent just how much the Jesuit social justice tradition influenced Cruden's path to public service. "They gave you a sense of the higher calling of the legal profession. They instilled in us responsibility to the disadvantaged and the poor, to do more for

leave from the Army was unpaid, he and his wife, who was herself busy attending graduate school at San Jose State University and later teaching at De Anza College, managed a large apartment complex in exchange for free rent.

Even though Cruden was granted leave to attend law school, during summer breaks he reverted to active military duty. He commuted daily to Fort Ord on Monterey Bay and served in the military legal group. After graduation, Cruden served as a career Army lawyer in the United States and abroad. He was a criminal prosecutor in Germany and civil trial lawyer at the Pentagon. He taught administrative and civil law at the Army Judge Advocate General's School in Charlottesville, Virginia. During a one-year posting to the Department of Justice, the first military lawyer assigned as a special counsel to the assistant attorney general of the Civil Division, Cruden met and briefed President Reagan on drug testing protocols.

By 1988, Cruden was the Army's chief legislative counsel. The job involved extensive interaction with Congress and was an immersion in Capitol Hill politics; that would prove valuable in the second act of Cruden's government career. The job also made him part of an unusual and dangerous legal drama. Cruden's office learned that a U.S. Special Forces major had information that could help bring to justice the ringleader of the Salvadoran army unit responsible for the murder of six Jesuit priests and two women at the University of Central America in San Salvador in November 1989. Cruden traveled to El Salvador to represent the major in a grand jury investigation. Because of risk to the informant, a U.S. Special Forces team met Cruden and the major at the airport to escort them to the U.S. ambassador's residence, where the grand jury convened.

This was to be Cruden's last job as a military lawyer. Cruden had handled some environmental cases as an Army lawyer. He had also lectured on environmental law and authored part of a casebook on the topic. In 1991, senior officials at the Department of Justice, connections Cruden made during his posting to the department during the Reagan administration, "made [him] an offer he could not refuse." He was offered the job of Chief of the Environmental Enforcement Section in the Environment and Natural Resources Division, charged with leading the largest litigation section at the Department of Justice, with 250 people and 150 lawyers.

"I was ecstatic," he said. "I loved the jobs I had in the military, but this was a chance to put together something I personally was extremely interested in, and it was a growing area of the law." He accepted the job and served in the role for four years.

He would indeed be joining a growing area of the law. When Cruden attended the Santa Clara School of Law, no courses were offered in environmental law. Many of America's landmark environmental laws—the National Environmental Policy Act (1969), Clean Air Act (1970), Clean Water Act (1972), Endangered Species Act (1973), co-authored by former Santa Clara University lecturer and longtime California Congressman **Pete McCloskey Jr.**, and the Safe Drinking Water Act (1974)—had just taken effect or were being written during Cruden's three years at Santa Clara. Cruden's eventual rise to lead ENRD mirrors the rise of environmental law as a mature area of specialization of the law. Today, courses on environmental law are offered at dozens of law schools nationwide. Cruden's generation of lawyers deserves much of the credit for gifting environmental law to the world.

CAPTAIN OF AN AIRCRAFT CARRIER

In our conversation at his office, Cruden described the two tracks of work undertaken by his division: Attorneys follow the evidence and bring cases under America's bedrock environmental statutes such as the Clean Air Act and Clean Water Act, or they defend client federal agencies against lawsuits. It's a heavy caseload. In his final end-of-year letter to ENRD staff, Cruden said his team had successfully litigated nearly 800 cases and handled nearly 5,400 cases, matters, and appeals in 2016.

I asked Cruden if he was concerned about the direction the division may go under his successor, and with a fossil fuel friendly, antiregulation administration about to take office. Cruden stressed the momentum of the daily churn at ENRD. "We get sued every day; *every single day* we're getting sued. We also bring our own actions almost every day."

"It's not like you sit in this chair and go, 'Well, I have 450 lawyers, they have nothing to do, and I'm going to give them stuff to do.' It's not that way; it's just the opposite. They're *already* working endless hours. They already have a huge docket of cases. Half of what we do is people suing us, which you can't control. It's not like I would come in here and say, 'Stop doing Clean Water Act enforcement, and I only want you to do something on public lands.' These are cases that are going to happen and that you have to work; you have almost no choice."

He went on, "Now I can move some. I can say, 'All right, I want to stress environmental justice. I want to stress wildlife enforcement. I want to integrate the principle in enforcement that we're going to take the profit out of polluting activity.' What I can't do is say, 'Let's stop doing a thousand cases and just go in another direction.' I can't do it—and nor could any of my predecessors. Remember, I served as a career person under Republican administrations as well as Democratic administrations. You can move a bit, but it's not what people think. People think it's going to be a wholesale change; it doesn't work that way.

"I get asked countless times, 'So a new administration comes in, are they going to change all their litigating positions?' I say, 'It doesn't work that way; it just doesn't.' What we said about the law during the George W. Bush administration, we say the same thing about the law during [the Obama] administration, because if we don't then somebody is going to file a brief and say, 'Which time were you lying? Were you lying the first time you filed the brief or the second time you filed the brief?' Our opponents know all this. All of our briefs are public. So if we in fact say different things about the law, the courts will be irate."

So how would change come about? Look to the agencies with policy responsibilities that write regulations, said Cruden. "We are defending their policies, which come through guidance documents, or regulations, or the president through executive orders. Some of that you can change, and if you do change, assuming that the new process is in accordance with the law, we would defend that.

"And if you *do* change your position," Cruden continued, "you're going to litigate it and sometimes lose—because if you change your position, you actually have to have a reason, a thoughtful process by which you go through that's guided by the Administrative Procedure Act. You have to have a defensible reason why you changed your mind. It doesn't happen that all of a sudden a new attorney general comes in and says, 'Change your positions on all the laws. I don't like what you did.' What really happens is that federal agencies, going through a process, review what

they've done and see what they've agreed with and what they don't. Then that causes us not to change our position on the law, but to defend another policy.

"I describe my job sometimes like I'm the captain of some big aircraft carrier," he said. "You can move it, but it moves slowly."

RUNNING THROUGH THE TAPE

It is fitting that 2016 likely will serve as the capstone to John Cruden's career as a government attorney and public servant. In a year-end staff memo, Cruden highlighted three "extraordinary events" that marked 2016: the settlement with BP for the Deepwater Horizon oil spill disaster; prosecuting Volkswagen for cheating vehicle emissions tests and deceiving customers; and defending President Obama's Clean Power Plan, regulations intended to reduce carbon emissions from coal-fired power plants. In February 2016, the U.S. Supreme Court voted to issue a stay preventing the Environmental Protection Agency from implementing the plan. Justice Antonin Scalia's vote in support of the stay was the last he cast before his death.

Cruden described 2016 as the "most successful in the Division's history in virtually every category." The April 2016 consent decree that resolved the civil claims of the United States and five Gulf Coast states against BP for the Deepwater Horizon oil spill requires BP to pay more than \$20 billion. According to Cruden, the agreement represents the largest settlement with a single entity in the history of federal law enforcement, the largest-ever Clean Water Act civil penalty, and the largest-ever recovery of damages for injuries to natural resources.

On January 11, 2017, nine days before the end of Cruden's tenure, the Department of Justice announced Volkswagen agreed to plead guilty to three federal criminal counts and to pay \$4.3 billion in criminal and civil penalties. Six VW executives and employees were indicted for conspiring to cheat on emissions tests. In all, VW will pay at least \$20 billion in the United States alone to settle claims connected to the scandal.

And while Cruden described the moment he learned of the Supreme Court stay of the Clean Power Plan as "the worst moment on the job," he said the subsequent defense of the rule by ENRD attorneys before U.S. Court of Appeals for the D.C. Circuit, in September of 2016, made him "as proud as I've ever been at the Department of Justice by the advocacy and the sheer good lawyering by our team of lawyers." As of this writing, the D.C. Circuit had not released its ruling on the Clean Power Plan.

Love Canal. Exxon *Valdez*. Deepwater Horizon. Volkswagen. Cruden's role in bringing these blockbuster cases, as well as hundreds more now long forgotten, to resolution



1. The Exxon Valdez struck a reef on March 24, 1989, and released 11 million gallons of oil into Alaska's Prince William Sound, fouling 1,300 miles of coastline.
2. An explosion on the Deepwater Horizon oil drilling platform on April 20, 2010, killed 11 workers and started the largest marine oil spill in U.S. history.
3. In September 2015, the Environmental Protection Agency found that Volkswagen was selling cars in the United States equipped with a "defeat device" to cheat on emissions tests.

If the DOJ changes what it says about a law from one administration to the next, somebody is going to file a brief and say, "Were you lying the first time you filed the brief or the second time you filed the brief?"

others than our daily practice, and to make sure that the rule of law was advanced in every aspect of our professional life. Law school made me really proud of the profession and gave me a heightened sense of responsibility to public and private service," he said.

Cruden made the most of the opportunities earned and offered at Santa Clara. He was on the Law Review. He participated in a special program with the Public Defender Clinic in Stanford Law School, where his supervising attorney was Rose Bird, who later became the chief justice of the California Supreme Court and a family friend. During his third year, he clerked for California Supreme Court Justice Stanley Mosk. Over this entire period, because Cruden's

EXXON VALDEZ PHOTO BY ASSOCIATED PRESS; DEEPWATER HORIZON PHOTO COURTESY U.S. COAST GUARD/THE NEW YORK TIMES; VOLKSWAGEN PHOTO BY GETTY IMAGES

helps to explain why he has been in government so long. An attorney with Cruden's experience, track record, and connections will always be an exceedingly desirable commodity for law firms and lobbying shops that represent corporate clients.

Asked why he decided to stay in government service for so many years, Cruden said: "I've said that not every day, and not in every case, but in a lot of days and a lot of cases I can drive back home at night and say, 'I think I made a difference today,' and that is such a wonderful feeling. I think all of us have that here. There's something extraordinary about being able to stand up in court and say, 'If you please, I'm about to present the position of the United States.' That is such an honor to be able to do that. It's a great responsibility, but it's also exhilarating." The same sense of purpose and duty helps to explain why Cruden's colleagues often choose to make the division their home. For many staff attorneys, he said, ENRD was their dream job coming out of law school. With immense pride, Cruden paused during our interview to show off a certificate displayed on the conference room table proclaiming ENRD the No. 2 place to work in the federal government.

Like President Obama, Cruden's last day was January 20, 2017. He said that he met with Obama and the president told him, "Run through the tape. Right to the very

Recent analysis shows that the most common offenses committed by corporations, partnerships, and trusts are environmental crimes.

end, right to your last day, be doing good things for the American people.' I like that analogy, and I passed it on to all of my staff. I told everybody, 'That's what we're going to do, we're going to run through the tape.'"

Cruden did as promised. He ran through the tape until January 20 and scored big wins for public health and the environment until his final days on the job. Cruden, at 70 years old, still very much the vigorous bull of a man who decades before had completed 30 parachute jumps in an airborne battalion in Germany and a Ranger unit in Vietnam, wasn't sure of his long-term plans. As we concluded our interview at his office, Cruden said he was preparing for a weeklong Road Scholar educational trip to Costa Rica with the entire family. He'd been promised he'd be zip-lining in the jungle on Christmas Day. In the days immediately after Trump's inauguration was a long-planned, monthlong vacation with his wife and more time with his two grandchildren.

Cruden was recently selected as president-elect of the American College of Environmental Lawyers. As this issue went to press, the Trump administration had not named Cruden's permanent successor at DOJ. On Inauguration Day, Jeffrey H. Wood was named the acting assistant attorney general of the Environment and Natural Resources

Division. Wood, who, until a week before the appointment was a lobbyist for the Southern Company, one of America's largest gas and electric utility holding companies, served for more than three years as a legal counsel to former U.S. Senator Jeff Sessions, now attorney general of the United States. Wood participated in suits seeking to block President Obama's Clean Power Plan.

It is not clear if Wood will be nominated to lead the division on a permanent basis, nor is it clear how many attorneys will work under him or another ENRD chief. On January 19, *The Hill* reported that in meetings with career staff at the White House, Trump's transition team presented plans to slash the federal budget and workforce. At the Department of Justice, the proposed cuts would eliminate the Office of Community Oriented Policing Services and Violence Against Women Grants, and the Civil Rights and Environment and Natural Resources divisions were targeted for funding cuts. If the Trump budget blueprint is adopted by the Republican-controlled Congress, staff reductions could be coming to the Environment and Natural Resources Division.

Such an outcome would not just endanger the public, it would be counterproductive as a cost-savings measure. Cruden noted in his 2016 year-end letter to staff that ENRD actually saved taxpayers money by successfully avoiding claims against the federal government worth more than \$12.3 billion. Penalties assessed against BP and VW alone last year will direct tens of billions of dollars toward projects that protect public health or ensure remediation of environmental harm. According to the U.S. Sentencing Commission, in fiscal year 2015, the most common offenses committed by organizations—that is, corporations, partnerships, and trusts—were environmental crimes. These cases, largely violations of the Clean Water Act and wildlife trafficking laws, were prosecuted by Cruden and his team of lawyers at ENRD.

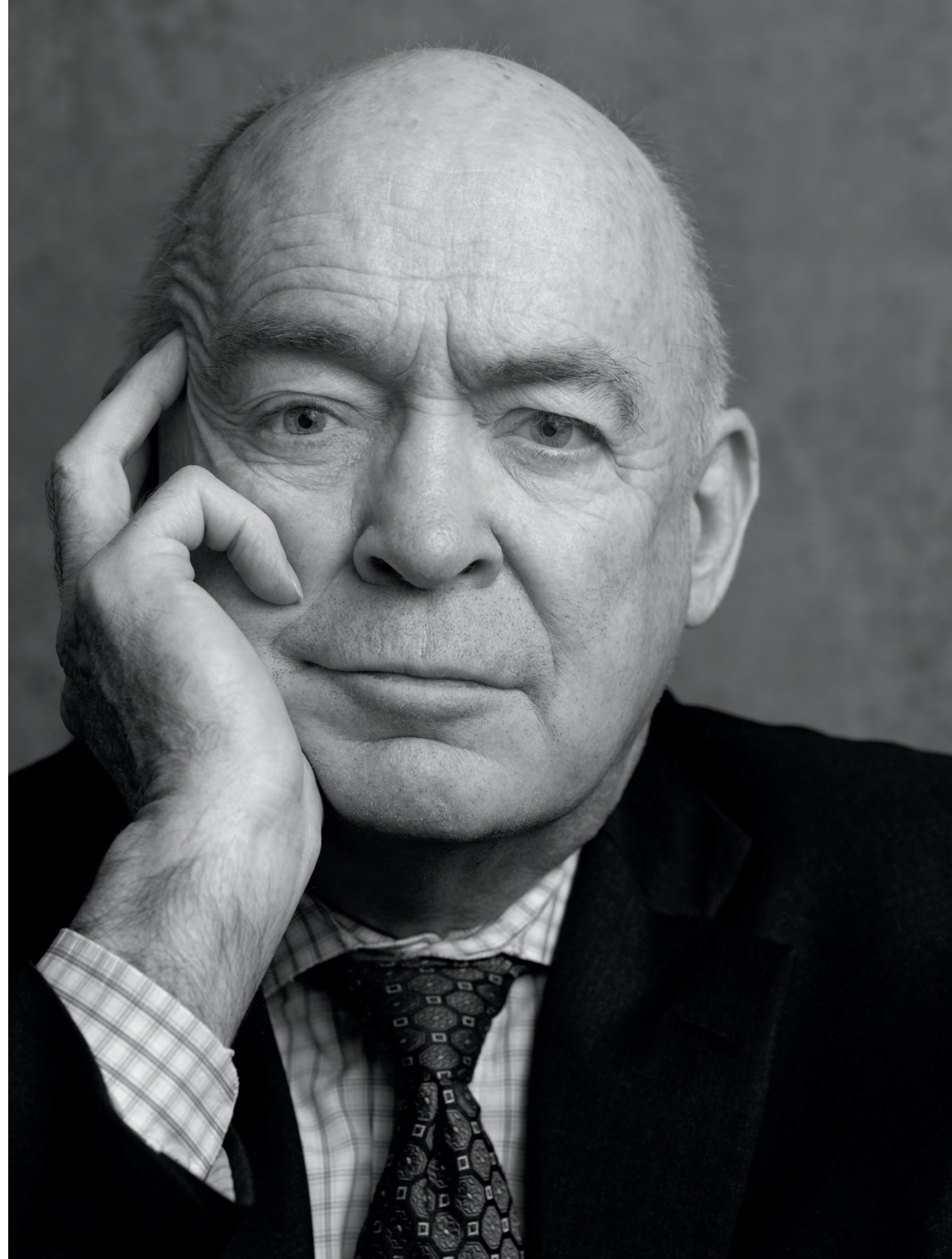
"We are a nation of laws, not of men," John Adams is to have said. The guardrails of the law, imperfect but perfectible, restrain human vices and market failures alike. Public-minded lawyers like John Cruden, and hundreds more still serving at ENRD today, are the bulwark against these excesses, holding even the largest polluters accountable. Justice may take decades, but, more often than not, the guardrails remain fixed, the law prevails, and even multinationals like BP and VW are compelled to atone for their crimes. With fewer lawyers on the job, hard-won, long-standing environmental and public health gains are at risk.

I checked in with Cruden via email in late January, after press accounts had appeared about rumored budget cuts at ENRD and the appointment of Jeffrey Wood to lead the division on acting basis. Cruden said it was too early to comment on the prospective tenure of Wood, but he was adamant that funding for ENRD should be preserved.

"I feel strongly that the Environment and Natural Resource Division I led should receive more, not less, funding," he said. "Our air, water, and land resources are invaluable, and are the cornerstone of a healthy and economically progressive nation. Our environmental laws were passed by overwhelmingly bipartisan votes, and those laws should be vigorously enforced. I am confident that is exactly what the American public expects from the Department of Justice."

JUSTIN GERDES has written on energy, the environment, and politics for the *Guardian*, *Yale Environment 360*, *Forbes.com*, *Motherjones.com*, *Smithsonian.com*, *Ensi*, and *Earth Island Journal*, among others. Follow him on Twitter @JustinGerdes.

Kansas-born and raised in Michigan by adopted parents—a father who operated a crane for Ford Motor Co., and a mother who worked in the defense industry during WWII. Camping and hiking taught young Cruden a love of nature early on.



WHERE THERE'S SMOKE

... there might just be mirrors. On “fake news,” the Internet, and everyday ethics.

BY IRINA RAICU

ILLUSTRATIONS BY LINCOLN AGNEW

AN ARMED MAN walks into a pizzeria. Terrified customers gather their children and rush out. But the man is there hoping to protect children.

That is a true story. However, the armed man was in the pizza place, in early December, because of a fake news story—or, to put it more accurately, because of misinformation about a supposed child slavery ring: a story that was widely spread on the Internet—easily, quickly, and with little or no cost.

Analyses of the proliferation of misinformation and its impact on the presidential election and democracy itself are now widespread on the Internet, as well. As such stories show, there are multiple ingredients in this noxious concoction—this stew of intentional deceit, profit-driven indifference, and individual biases or carelessness.

FOLLOW THE MONEY

One ingredient consists of individuals who generate and publish absolutely false stories, posting their creations on websites that try to mimic as closely as possible those of the traditional media that still strive for accuracy. Those creators of fake news fully intend to make their lies hard to distinguish from truthful stories. Some simply do it for money: Fake news draws views, which draw advertising dollars.

Another ingredient is the growing number of people who carelessly post falsehoods on their public social media accounts and then express surprise when their posts spread and are amplified through other media channels. For example, in a case study titled “How Fake News Goes Viral,” *The New York Times* quotes a man whose tweet about outside protesters supposedly being bused into Austin, Texas, became the basis of a widely spread fake news story: “I don’t have time to fact-check everything that I put out there, especially when I don’t think it’s going out there for wide consumption.” He only had a handful of followers. But the media report tweets now. For wide consumption.

There are also those media organizations whose business models rely on monetizing exaggerations and conspiracy mongering. Then there are social media platforms whose algorithms are designed to give people what they want, thus separating users into echo chambers in which they only hear their own views, constantly reinforced by a stream of sometimes inaccurate information.

Over the past several years, governments have also taken a hand in the creation and amplification of misinformation. Back in 2015, in an article called “The Agency,” Adrian Chen detailed his extensive investigation of “paid trolls” working in Russia: “By working every day to spread Kremlin propaganda,” he wrote, they “made it impossible for the normal Internet user to separate truth from fiction.” As early as 2014, the workers of the St. Petersburg-based “Internet Research Agency” appeared to be connected to hoaxes set in the United States, as well. As Chen put it, “Russia’s information war might be thought of as the biggest trolling operation in history, and its target is nothing less than the utility of the Internet as a democratic space.”

In the last press conference of his tenure, in December 2016, President Obama spoke of lessons learned “about how Internet propaganda from foreign countries can be released into the political bloodstream.”

And what lessons might we draw, all of us, the consumers of news, who sometimes share links to stories—often in anger or dismay—without doing even a simple check on what we distribute to our network of friends, amplifying and magnifying the reach of falsehoods?

FOLLOW THE COMPASS

To journalists, the story of fake news is one of professional ethics. To media organizations and social media platforms (and primarily Facebook, on which, according to the Pew Research Trust, 44 percent of Americans access news—far more than on any other social network), fake news is a business ethics issue. To some politicians, fake news is

“Fake news can change the conversation, not just by misinforming people, but by focusing attention on something that may not be the issue,” notes Sally Lehrman, director of The Trust Project at SCU’s Markkula Center for Applied Ethics.





TRUST PROJECT STORY BY STEVEN BOYD SAUM

a question of campaign ethics. To most of us who share links online, it's an "everyday ethics" issue. As explained by the former executive director of the Markkula Center for Applied Ethics, **Thomas Shanks, S.J.**, "Despite our many differences, we share [commonplace moral] everyday questions; this is the common 'stuff' of human living and interacting." These days, one such commonplace question is, "What can I do to combat the spread of fake information?"

The satire website *The Onion* recently ran an article titled "Facebook User Verifies Truth of Article By Carefully Checking It Against Own Preconceived Opinions." Don't be that user.

We need "extreme vetting" for news stories—and in recent weeks, plenty of experts have offered excellent suggestions on how to spot fake news. Realistically, though, especially in the lazy-river-ride feel of scrolling through the Facebook News Feed, most of us won't take the time to look closely at bylines, the "About" sections of various sites, or URLs that hint at something other than legitimate news sources. But the truth is—at least for now—that even a modest level of effort will help reduce the proliferation of misinformation:

- › **Don't share news stories based on the headline alone** (without actually reading the linked article).
- › **Don't share in anger.** The few seconds you take to vet a story will also serve as a cooling-off period.
- › **Before sharing a link**, especially if it comes from a source you don't recognize, go to Snopes.com, Factcheck.org, or Politifact, and use those services to check on the accuracy of the linked story.
- › **If those sites don't address the story**, Google the headline (or use your favorite other search engine instead). If the story is fake, it's likely that other articles debunking or questioning it will appear in the search for it, too.
- › **If, after those steps (which shouldn't take very long)**, you're still not sure whether a story is true or not, don't share it. Your family and friends aren't likely to be permanently deprived of key information by your choice, but the ecosystem may well be improved. This is especially true in light of the phenomenon of "availability cascade," which, as Wikipedia notes, is a "self-reinforcing process in which a collective belief gains more and more plausibility through its increasing repetition in public discourse." Even false stories start to gain an aura of credibility if repeated or shared often enough ("I think I heard that before, didn't I? There must be something to it ..."). But, on the Internet, the presence of smoke doesn't always signal the presence of fire. Sometimes, it's just smoke and mirrors.

Will your actions have an effect on the misinformation maelstrom? Our individual decisions impact the common good. Consider your effort to combat the spread of misinformation as akin to participation in beach clean-ups: part of a great communal effort to remove some of the trash from the online ecosystem.

And, of course, to amplify its impact, please share this on your favorite social media.

IRINA RAICU directs the Internet Ethics program for the Markkula Center for Applied Ethics—which just celebrated its 30th anniversary. Find out more, follow its blogs, and support its work: scu.edu/ethics.

THE TRUST PROJECT

A global effort to reinforce good reporting

The basic pledge of journalism is this: Serve society with a truthful, intelligent, and comprehensive account of ideas and events, and function as "the immune system of democracy." How's it going? Not well—as far as health and reputation are concerned.

So in 2014, SCU's Markkula Center for Applied Ethics launched The Trust Project. An international cooperative effort, the project aspires to harness Silicon Valley tech and imagination to bake the evidence of trustworthy reporting—accuracy, transparency, and inclusion—plainly into news practices, tools, and platforms. "Trust in journalism has been declining for several decades," says veteran journalist **Sally Lehrman**, who founded the project. They started with some basic questions: "How can we think about ways to make technology a support for quality journalism instead of it being seen as a barrier? How can we flip this picture?"

Funding from philanthropist Craig Newmark got the project off the ground. Nearly 70 media organizations are involved. Google was there from the beginning. That was critical, Lehrman says, because now when people are looking for news, it's often divorced from the brand. "You don't necessarily know where this piece of information is coming from—whether it's a piece of news from a trusted news brand or it's actually advertising or propaganda, or just poorly reported news."

The Trust Project started by consulting with the public in one-on-one interviews. Through workshops to apply the resulting insights, news executives developed 38 "indicators of trust." These show practices behind the story: the organization's ethics and corrections policies, its commitment to diversity, and sources of funding, plus author information, where a story's facts came from, and where it was originally reported, among others. Late last year, international teams of news organizations participated in a hackathon in London—the "Trust Project Development Challenge"—to produce open-source technology that will display these to readers and create signals to help news platforms like Google and Facebook give factual, ethical news priority. A few results:

The Economist: a validator to automate indicator tags and to display a score.

Washington Post/BuzzFeed: a tool that scans news stories for author information, sources, and links, then makes these visible to readers and platforms.

Ex-BBC News Labs: checks the similarity of articles to see whether they are recycled "churnalism" or original reporting.

The Guardian: a tool to pop filter bubbles—allows users to suggest articles with an opposing view from the one they originally chose.

La Stampa: an author database and tool that displays expertise based on previous coverage of a topic.

Mirror Group: a tool that displays an author profile and warns users when an organization is not following Trust Project guidelines, also suggesting stories with alternate viewpoints.

"Now we've got both Facebook and Twitter engaged," Lehrman says. "They can help us think about how a trust system would work within their particular environment. If you think about the platforms, they really are creating information environments."

There's a design element to this effort: creating a set of icons that news organizations use to vouch for the practices behind individual stories. And there's an interesting dynamic at work in this phase of the project, using lessons from people who aggressively seek news and information from a broad array of sources. The project aims to use this knowledge to reach a middle ground—those people who are honestly looking for quality news but aren't necessarily going to put a lot of effort into it.

Another way to think of smoke and mirrors is this, notes James Martin, S.J., an editor for America magazine and occasional contributor to these pages: "Lying is a sin. It's the Ninth Commandment."

Bronco News

SCU ALUMNI NEAR AND FAR



Represent!

THERE'S A NEW class of legislators in Washington. Sworn in Jan. 3, 2017, the 115th Congress counts 55 California representatives in the House—a few with Santa Clara ties.

ZOE KNOWS IMMIGRATION

Zoe Lofgren J.D. '75 has represented Silicon Valley's 19th District since 1995 and earned respect for her work on patent reform, copyright, and net neutrality. Unlike nearly every other member of Congress, Lofgren has in fact practiced and taught immigration law—as well as legislated it. One lesson she learned from Santa Clara Law connected to immigration: "If you are going to give dignity to the individual, you actually have to meet with those individuals ... see them personally, hear their stories—so it's not just an intellectual exercise, it's a visceral understanding of your obligation to help bring justice." In 2011 she was declared a "Hero of the Internet" for her role in preventing the passage of the Stop Online Privacy Act.

FRESHMAN WITH A BRONZE STAR

Jimmy Panetta J.D. '96 is a first-term representative from California's 20th District on the Central Coast, a seat held until last year by **Sam Farr**, who attended SCU law and announced in 2015 that he would not be seeking re-election. Jimmy, age 47, is the son of Sylvia Panetta and **Leon Panetta '60, J.D. '63**, whose most recent government service included director of the CIA and secretary

In January, Congressman Ro Khanna said he was willing to go to jail to defend the rights of immigrant families. Jail time is something Khanna learned about from his grandfather—who was locked up for four years for supporting Gandhi's struggle for India's independence.



of defense for President Obama. Along with earning his stripes as a prosecutor and deputy D.A. in Alameda and Monterey counties, Jimmy Panetta served eight years in the U.S. Navy Reserve. In 2007, he volunteered for active duty and was deployed to Afghanistan, working with Special Forces units. For his service in a combat zone, Panetta was awarded the Bronze Star. He has been appointed to House committees on agriculture and natural resources.

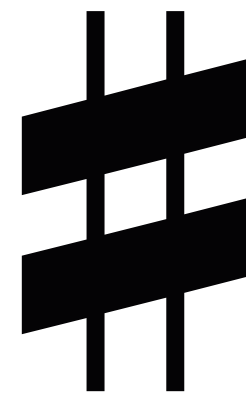
A PHILADELPHIA STORY

Ro Khanna, another newcomer, represents California's 17th District, which cuts a swath through Silicon Valley from Santa Clara (including the Mission Campus) up to Fremont (where Khanna lives). Proportionally, this is the highest Asian-majority district in the country. Khanna previously taught law at SCU as adjunct faculty. He's no stranger to D.C.; he served 2009–11 as deputy assistant secretary at the U.S. Department of Commerce. Son of immigrants from India, he was born in the City of Brotherly Love in 1976; a practicing Hindu, he took his oath of office on a bicentennial edition of the U.S. Constitution. His first speech in the House went after political action committees and lobbyists.

FATHER PAT

Jesuit School of Theology grad **Pat Conroy, S.J., M.Div. '83** returns to service as chaplain of the House of Representatives. He delivers the opening prayer of each day. The February 2 prayer included: "May all they do be done in humility and charity, knowing that we are all earthen vessels through whom Your Spirit might shine forth." *Amen.*

WORDS BY STEVEN BOYD SAUM. ILLUSTRATION BY SEAN MCCABE



STEM and Her. Tech firms invest billions in education but miss the mark helping minorities and women enter tech. **Janice Zdankus MBA '93**, VP of Quality at Hewlett Packard Enterprises, has a solution. HPE, the YWCA, and Santa Clara jointly created Curated Pathways to Innovation (CPI), an app that incentivizes tech training, analyzes outcomes, and doubles down on methods that work.



\$3.1 BILLION

Donated to STEM education by Bay Area tech companies in 2009

1 in 20

Employed women who work in computing

74

Percent of students at Ocala Middle School who are Latino. Ocala is home to the first CPI pilot program, launched January 2017.

37% vs. 18%

Computer science majors who were women in 1984 vs. 2016

10

Number of students from SCU's College of Arts and Sciences who will work on Curated Pathways to Innovation for the next three years. Three to four will work on coding for the website and developing an Android app. The rest will administer surveys and provide programming workshops for middle schoolers.

PHOTOGRAPHY BY GETTY IMAGES. WORDS BY MATT MORGAN



Yesterday & Tomorrow. Broncos from across the years came together at Grand Reunion to honor their heroes and celebrate their passions. And with two \$100,000 endowments, alumni ensured that the generosity of the lives of **Francisco '66** and **Laura Jiménez '67**, as well as **Jim Reites, S.J., MST '71**, would be felt by future generations of Santa Clara students.



A Grand Reunion silent auction supporting the Francisco and Laura Jiménez Breaking Through Scholarship featured a vintage SCU letterman's jacket, pins, and belt buckle.

Lorenzo Gamboa '03 didn't need to read Francisco Jiménez's books to know his story. He lived it himself: immigrant parents, field work, college ambitions. But studying his writing and taking classes with Jiménez offered a blueprint: "To this day, I want to be a Francisco," Gamboa says. "I want to open the opportunities for others to be him."

Gamboa, now senior associate director of Undergraduate Admission and co-chair of the Latino group of the Alumni Association, helped create the endowed Francisco and Laura Jiménez Breaking Through Scholarship for first-generation college students. At Grand Reunion, \$60,000 was raised for the program. And a celebratory luncheon brought together people whose lives the couple influenced: former classmates like **Margaret Stewart**

'66, who made special accommodations to attend her first reunion despite using a walker; alumni who had taken his classes; friends of SCU; local third-graders who had learned of Jiménez just this year.

Others came to remember Papa Reites. **John Spieth '06** was one of them. His first year at SCU, Spieth's room was right across the hall from religious studies professor Jim Reites. Spieth quickly bonded with the spry Jesuit over life, sports, even Eminem and Tupac Shakur. He ultimately joined Fr. Reites on immersion trips to Mexico to build houses and later to Germany.

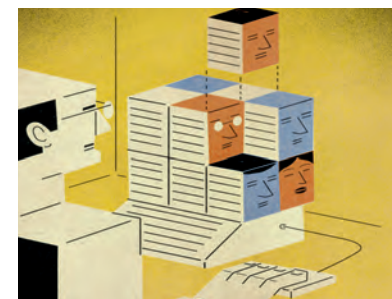
When Fr. Reites passed away in April 2016, Spieth wanted to set up an endowed fund in his honor. He wasn't alone. A small group of alumni crafted the endowment, which they announced at a

memorial service during Grand Reunion. **Dede Melone '06**, a community facilitator in McLaughlin-Walsh Residence Hall under Fr. Reites, marveled at the array of stories shared at the memorial. A man she thought she knew so well—as a boss (of sorts), an educator, mentor, world traveler, philanthropist, biker (pedals, road)—had even more grooves. "You realize how many facets he had," Melone says. "Everyone had a different experience with him."

The Jim Reites, S.J. "Building Hope" Award Fund and Endowment raised \$20,000 at Grand Reunion. By December, it eclipsed \$100,000, including \$50,000 from the School of Engineering. The fund will support immersion trips as well as engineering projects like the solar decathlon and Tiny House—hands-on projects in honor of a hands-on educator.

WORDS BY MATT MORGAN. PHOTOGRAPHY BY JOANNE LEE

PLUG IN Looking for a job? Have an extra ticket to a show or need a place to stay during a road trip? Switchboard (and your SCU family) has you covered. Switchboard is a place where Broncos ask for what they need and offer what they have. It's like Craigslist, only better. Check it out: scu.switchboardhq.com



SERVICE! On April 29, the SCU Alumni Association, along with the Ignatian Center for Jesuit Education and the SCU Staff Senate, will host a Community Day of Service focused on the Thriving Neighbors Initiative, which actively promotes strategic ties between SCU and the Greater Washington Community of San Jose. Sort food at Sacred Heart Community Services, garden with BUG, read to children at Washington school, or work on beautification projects at the Alma Center. Questions? Email **Mary Modeste Smoker '81** at msmoker@scu.edu.

DON'T MISS OUT The only way to keep up with alumni news, engagement and networking opportunities, and upcoming programs is to keep your address info up to date. It's easy: scu.edu/addressupdate

The signed dollar bills and business cards pinned to the ceiling of The Hut have been taken down, but memories of all the good times remain at scu.edu/alumni.



HERE'S TO THE HUT!

CHEERS TO YOU, old friend. Students and grads came together to say goodbye to one of Santa Clara's oldest unofficial institutions when just-off-campus landmark The Hut closed its doors mid-December. The news came after the bar's owner decided to not renew his lease. More than a watering hole, The Hut linked generations of Broncos since its opening in the 1940s. It berthed some of SCU's most beloved traditions: pinning signed \$1 bills to the ceiling; Two for Tuesdays; and, on commencement day, Dads & Grads. The Hut was dark, dank, loud,

and lovable with sticky floors and walls that could talk. It was a dive bar worthy of the title and the place to be for Grand Reunion (standing room only, fire code be damned). It unofficially hosted a handful of classes each semester. Do you have memories or photos you'd like to share? Check out the Alumni Association's tribute page at scu.edu/alumni/TheHut or email them to scmagazine@scu.edu. And watch for more in this mag. Rumor has it that the storied bar may reopen under new management this year. We'll keep you posted.

The vino in this year's Mission Wine Collection features custom-designed labels with iconic views of the Mission Church.



THE HUT PHOTO BY JIM GENSHEIMER. WINE BOTTLES COURTESY SCU ALUMNI ASSOCIATION. ILLUSTRATION BY DAVID PLUNKERT

A Tantalizing Trio

THREE NEW BOTTLES were introduced to the SCU Mission Wine Collection in fall 2016. Each wine hails from a different regional winery, each run by a different SCU graduate. First, the Mission Reserve: GiaDomella Wines' 2008 Cabernet Sauvignon, a full-bodied red known for great tannic structure. Next, the Perrucci Family Vineyard's 2013 Red Blend featuring pronounced flavors of ripe plum and black cherry. The final entry was originally the Testarossa 2014 Chardonnay, but when it sold out, Guglielmo Winery's 2012 Cabernet Sauvignon was added to the mix. (How many schools have that kind of winery depth?) This cab has dark fruit notes and baking spices, making it the perfect addition to the 2016 offerings. The collection has its rootstock in one of SCU's signature alumni events: Vintage Santa Clara. The annual food and wine festival celebrated its 33rd year in September 2016, raising \$63,220 for the Alumni Family Scholarship fund. Now that's worth toasting. This year's collection is available for order at vinoshipper.com/scu. But move quickly, these things sell fast.

Class Notes

At magazine.scu.edu/classnotes see the latest, post an update, share a photo—especially if it's your reunion year. For Broncos who have joined the *Gianera Society*—that's 50+ years since graduation—every year is reunion year!

1956 **Duncan Fife** functions productively in Foster City. His five virtually perfect children, two perfect grandchildren, and wife Robin celebrate the publication of his second book, *Giving the Gift of Giggles: Incredibly True Confessions of a Singing Telegram Entertainer*.

1966 **Jim Sheehan** worked for more than 20 years as a public defender until 1999, when he founded the Center for Justice, a nonprofit law firm dedicated to protecting human rights, alleviating poverty, preserving the Earth, and holding the government accountable to the principles of democracy. Jim feels most lucky to have a healthy, supportive family.

1967 REUNION YEAR **John U. Fry MBA** was appointed by the Superior Court of Santa Cruz for one year of service (2016–17) on the Santa Cruz County Civil Grand Jury. Investigative assignments include governmental operations of the Metro Transportation System, school districts, county library, fire districts, county health programs, jail operations, and citizen complaints about management of governmental agencies. Fry is also chair of the Cities and Counties Committee and member of the Special Districts Committee. ¶ **Gary T. Shara J.D. '70** is a business and corporate attorney in San Jose. He is a professor of law at Lincoln Law School and for 18 years, an adjunct professor in the College of Business at California State University, Monterey Bay. He and wife Kay are actively involved in the Rotary Club of San Jose for which Gary will serve as president 2018–19. They enjoy spending time with their seven grandchildren.

1968 “I’ve retired from my dental practice after 44 years,” writes **Michael Antonini**. “I’ve also completed 14 years as a planning commissioner for the city and county of San Francisco. Linda and I are happy to have our two children and three grandchild-

dren living near us.” ¶ For more than 30 years, **Edwin Forrest** has been leading historic building restoration in Northern California. In retirement, Ed found another passion: oil painting. He refers to his style as “hard edge obsession.” He thanks Lenny Bruce and his favorite band (Lee Bob and the Truth) for continued inspiration.

1969 Considered one of the most successful traders of the last 40 years, **Blair Hull**



Duncan Fife '56 was a creative director at an ad agency before he traded in his tie for a Viking helm. He and wife Robin have run a singing telegram business for three decades.

BEST FRIENDS FOREVER **Julie Burns '70** says traveling to national parks with a group of fellow SCU grads has shown that friendships that started in dorms and classes freshman year can last into the future.

MBA devised the Hull Tactical US ETF (exchange-traded fund), which has defied market crashes based on its algorithm. Blair says his “sleep well at night” financial product can outperform stock indices while insulating investors from inherent volatility. ¶ An alumna going by the pen name **Natalie Wyler** recently published *Labor Intensive*, a true-to-life journal of her early nursing career spent working in a high-risk obstetrics unit serving poor and immigrant women and their infants. Natalie is a 30-year veteran nurse and midwife.

1970 **Elizabeth Cara** is a faculty member of the Department of Occupational Therapy at San Jose State University. Her clinical experience is primarily in mental health, infant mental health, and geriatric physical and mental health. She is the co-editor and co-author of *Psychosocial Occupational Therapy: A Clinical Practice*. A San Francisco native, she's also a fervent follower of the Giants and 49ers. ¶ **Mary (Cleese) Roybal**; **Kathy (Roney)** and **Lee Schegg**; **Sue (Drake)** and **Tom Walsh**; **Bob Peterson** and wife Henneke; and **Julie Burns** and husband John Christensen have had a ball visiting national parks each year. So far the group has visited Yosemite, Kings Canyon, and Sequoia in California; Bryce, Zion, and Grand Staircase

Escalante in Utah; North Rim of Grand Canyon in Arizona; Glacier in Montana; the Columbia River Gorge & Mount Hood (not yet a national park) in Oregon; and most recently Banff, Jasper, Kootenay, Yoho, and Glacier in Canada.

1971 **Lynda Morrison-Rader** served as the Nevada state regent for the Daughters of the American Revolution 2014–16.

1972 REUNION YEAR **Tony Estremera** is director of the District 6 board of the Santa Clara County Water District, where he started in 1996. He's also directing attorney for the Legal Aid Society of Santa Clara County. ¶ **Philip Penny-packer J.D.** received the Silicon Valley Innovator Award from the Pro Bono Project Silicon Valley. ¶ **Daniel Selmi J.D. '75** was appointed by Gov. **Jerry Brown '59** to the Santa Ana Regional Water Quality Board. Selmi has been a professor of law at Loyola Law School since 1983. He served as a deputy attorney general for California's Department of Justice 1976–83.

1973 **Steve Laveroni** works for the alumni office of his high school alma mater, St. Ignatius College Prep. He is married to Patricia O'Neill. Their son, Joe, attends Arizona State. ¶ **Tony Nisich** is the director of building services for MNS Engineers Inc., in Buellton, California. He and his wife, Terri, and their sons, A.J. and Erick, live in Santa Barbara.

1974 **Charles D. Osborne II MBA** is chairman of the board of Osborne Partners Capital Management LLC, which manages customized multiasset class portfolios for individuals and institutions. Charley has been with the investment management firm since 1980. ¶ Retired Utah Court of Appeals Judge **William A. Thorne Jr.** received the Distinguished Service Award from the National Center for State Courts. The first American Indian to serve on Utah's bench, Thorne was recognized for his work in helping to establish improved guidelines for judges across the country for children in foster care. He encouraged judges to focus on relationships surrounding the foster child.

1975 **Tony Caldwell** is the director of Operations for the Society for Information Display, a nonprofit association of scientists and engineers focused on the interactive



How Do They Do It? How can social innovators help poor communities with big problems—like lack of HIV/AIDS awareness, or electricity, or even rain? This year the Tech Awards, launched with SCU's support in 2001, set out to answer that by honoring the best-of-the-best Tech Award recipients from the previous 15 years and highlighting their enduring impact on the lives of the poor.



Not every startup succeeds. That's true when it comes to social benefit startups as well. So for the 2016 awards, the judging committee reviewed its honorees since the Tech Awards' founding—granting \$50,000 to those most successful.

The awards are presented by the Tech Museum of Innovation in San Jose. Among the 2016 winners are three alumni of the Global Social Benefit Institute (GSBI), run by Miller Center for Social Entrepreneurship at SCU. They are: Equal Access International, Angaza, and International Development Enterprises-India (IDE-India). These orgs have expanded their work over the years by thinking big but beginning small, and never losing sight of how to serve the most people.

GSBI pairs up Silicon Valley mentors with social entrepreneurs who are harnessing technology to help people sustainably

release themselves from extreme poverty. There's also a cool kind of leveraging of the network: Miller Center's Global Social Benefit Fellows program sends SCU students to work with GSBI partners worldwide.

In 2003, Equal Access won the Tech Award for educating 10,400 remote Nepalese on female empowerment and HIV/AIDS prevention through the radio show “Chatting with My Best Friend.” This time around, the company was recognized for serving 67 million households in nine nations through its expanded news and educational programming.

Angaza puts solar power within reach of poor villagers in sub-Saharan Africa. Embedded in affordable solar lamps, panels, and batteries is pay-as-you-go technology, so customers can pay off the solar devices in small increments. Since its first award in 2012, the company has provided 250,000

off-grid consumers with solar power.

“It's a neat model,” says **Craig Stephens**, a biology professor at SCU who helped judge the awards. “Their pay-as-you-go platform was the really innovative part.”

In India, poor farmers without access to water sources have been at the mercy of the monsoon season. But thanks to IDE-India, 1.3 million households are now using its irrigation products, like a foot-powered pump with bamboo handles, to get the irrigation job done.

“The ripple effect from increasing farm yields is far reaching,” says the Tech Museum. “Families now can feed themselves. Men no longer have to leave their homes to find low-paying jobs in the cities. Children can attend school instead of working to earn extra income.” All told, the standard of living—thanks to IDE-India technology—rises by about \$400 a year.

Keep walking: As part of the Tech Awards, IDE-India was recognized with the Sobrato Organization Economic Development Award, presented by John M. Sobrato '83.



Pilgrimage with Fr. Coz: Paul Blanke '76 in Rome for the canonization of Saint Teresa of Kolkata—or, as we've known her for years, Mother Teresa

display industry. ¶ **Janet Portman J.D.** is executive editor for Nolo Press. She oversees editorial work on all Nolo books, articles, and websites.

1976 Paul Blanke was inspired by the cover of the Summer 2016 *SCM* (featuring Mother Teresa) to share this story of his travels to Italy: “My religious pilgrimage began in Rome for the canonization of Mother Teresa. I then journeyed to Assisi (St. Francis and St. Clare), Siena (St. Catherine), and Padua (St. Anthony). Accompanying me in spirit were my dad (my hero) and Richard Coz, S.J. (my economics professor, mentor, and friend). I had my picture taken holding a photo of Father Coz at the canonization. Also joining me was my bride of twenty years, Wendy. We renewed our wedding vows in Venice at St. Mark’s Basilica.” ¶ **Chris Hasney’s** book *Expert American Bidding System* was published in e-book format at lybrary.com. ¶ Retired attorney **Betsy (Aulik) McBride** is a marriage and family therapist in the Los Angeles area. She and her husband, Kevin, are proud to have two of their children attend SCU’s Leavy School of Business: **Connor '09** and **Claire '17**.

1977 REUNION YEAR “I recently launched my (own) photography business,” writes **Thomas Osborne M.S.**, “which specializes in weddings and portraits. I’ve always been involved in photography—outside of my engineering job, mainly in imaging/optics.” See tomosbornephotography.com.

1978 In San Leandro, **Mike Cramer** is an attorney at Cramer & Cramer, focusing on probate, estate planning, and family law. Mike has periodically served as judge pro

tem in Alameda County Superior Court. ¶ **Patrick McVeigh** is president and chief investment officer of Reynders, McVeigh Capital Management, a leader within the socially responsible investing realm. He is married with four children and lives in the oldest house in Waltham, Massachusetts (300 years old). As a cross-country runner, Patrick was named the West Coast Athletic Conference’s Scholar Athlete of the Year when at SCU. He also produced a documentary on the Grand Canyon narrated by Robert Redford. [Read more about it in our Fall 2009 edition. —Ed.] ¶ **Larry Nally** is approaching 10 years as CFO of Full Turn Partners, an apparel company selling custom-branded product for golf courses, specialty retailers, sports teams, and colleges throughout the United States and abroad. He has also served as CFO of Chevys and Gordon Biersch.

1980 T.L. Brink MBA was selected as a peer online course reviewer for the California Open Education Initiative. ¶ **Joseph V. Capurro J.D.** received the State Bar of California’s 2016 Steve Jimenez Memorial Special Recognition Award as Applicants’ Attorney in the field of Workers’ Compensation. He and his wife, Jackie, have three sons, one granddaughter, and one grandson-to-be. ¶ **Peter Dolan** is in his seventh year as a trustee for Regis University in Denver and is a founding partner of Plaza Advisory Group, a wealth management firm in St. Louis, Missouri. In 2014, he published *The Integrated Investor: The Art and Science of Financial Achievement*. He and his wife, Anne, have two sons. ¶ **George Montanari** is an award-winning Realtor with Alain Pinel Realtors. He lives in Los Gatos with his wife, Jill, and their two children, Kristin and Massimo. ¶ **Hans Schwarz** is Qorvo’s corporate VP of busi-

ness development and strategy, responsible for facilitating company-level strategy development and mergers and acquisitions. Prior to the merger of TriQuint and RFMD to form Qorvo, Schwarz was RFMD’s corporate VP of business development, a position held since 2011. ¶ Maj. Gen. **Nickolas Tooliatos J.D. '83** retired from the Army Reserve after 36 years and proudly accepted the Distinguished Service Medal. He still practices probate, estate planning, and trust law in Pleasanton. He plans to take his wife on some well-deserved trips, play golf, and hunt with his two sons.

1981 **Judith Maxwell Greig** M.A. has been appointed to the California Student Aid Commission by Gov. **Jerry Brown '59**. Greig is president at Notre Dame de Namur University, where she has been since 1988—previously as provost, dean of the School of Education and Leadership, and senior advisor to the president. [Check the Winter 2009 issue of *SCM* for Sam Scott’s article on Greig, “Our Lady at Notre Dame.” —Ed.] ¶ **Thomas S. Templeman** joined Graybug Vision as chief operating officer. The company is a venture-stage pharmaceutical company committed to developing potentially transformative therapies for ocular diseases including wet age-related macular degeneration (AMD) and glaucoma. A seasoned executive with more than 25 years of cross-functional experience, Templeman joins Graybug Vision from Medivation (acquired by Pfizer in late 2016), where he was senior VP Pharmaceutical Operations and Quality.

SOLDIER FOR LIFE

“I owe my life to my wife, **Joni (Chiesa) '80, MBA '82, who has stood by me through everything,”** said **Nickolas Tooliatos J.D. '83** upon accepting the **Army Reserve’s Distinguished Service Medal.** “My poor kids had to endure me coaching baseball games in my old Battle Dress Uniform back in the day.”

1982 REUNION YEAR **Mary Baden H. Haughey**, senior vice president of operations for the YMCA of Silicon Valley, has co-authored the second edition of *Working with School-Age Children*. Mary also teaches child development courses at Gavilan College. She lives in Morgan Hill with her husband, Norman. You can find her every Saturday riding her horse. ¶ The University of Hawai’i at Hilo has a new dean for the Daniel K. Inouye School of Pharmacy: **Carolyn Ma**. She has an extensive background in clinical pharmacy practice, pharmacy, and hospital administration. She has also been reappointed as director for O’ahu on the Hawai’i State Board of Pharmacy. ¶ **Andy Miller** joined the board of directors of iRobot Corp. He is EVP and CFO of software company PTC. He and his wife, **Joyce (Valadez) Miller**, reside in the Back Bay of Boston, enjoying life as empty nesters, while their two children pursue BFA degrees in the perform-

ing arts. ¶ In June, **Peter Coe Verbica J.D. '99** published *Left at the Gate and Other Poems*. Peter continues to work in the wealth management group of an investment bank, providing credit facilities as well as portfolio advisory services. He serves as president of the South Peninsula Area Republican Coalition and vice president of the Pine Ridge Association at Henry W. Coe State Park. He has taught Principles of Investments in the econ department of SJSU this past year. He is also helping with the 1982 year reunion committee for Santa Clara University.

1983 **Tom Murphy** is VP of Customer Success at LiquidPlanner. He has spent the past 10 years in various customer-facing leadership roles at companies including Apptio, Mercury Interactive, and Chef Software. ¶ In Santa Clara County, attorney **Denis G. O’Neal J.D.** is a member of the Personnel Board, a hearing officer for the Department of Planning and Development, and a commissioner on the board of the Housing Authority. Denis is married, with one son and two grandchildren. ¶ Rocket EMS, a high-value manufacturer of complex boards, appointed **Marla Sanchez MBA** as its new CEO and executive director. She has worked in business processes and operational finance at companies including Motorola, AMD, VLSI, and SDL.

1984 **Kevin Dowling** started a new job in January 2017 as a major gift officer for Habitat for Humanity East Bay/Silicon Valley ¶ **Timothy J. O’Hanlon** has been elected a fellow of the American Bar Foundation, an honorary organization of lawyers, judges, and legal scholars who have demonstrated outstanding dedication to the welfare of their communities and to the highest principles of the legal profession. Membership in the fellows is limited to 1 percent of lawyers. ¶ **David Thornley** is principal of Cabrillo Elementary in Fremont Unified School District. He has been a teacher, trainer, coordinator, and administrator for many years. David and his wife, Stephanie, have three children.

1986 **John P. Bianco** was appointed to the Tulare County Superior Court in June 2016. Bianco has been a private practitioner at the Bianco Law Firm since 1994. ¶ **Judy Bruner MBA** has been appointed to the Varian board of directors. She served as the CFO for SanDisk 2004–2016. Bruner is also a member of the board of directors of Brocade Communications Inc. and

Applied Materials. ¶ After spending the last 20 years as a CFO/COO for Silicon Valley-based venture-backed companies, **Kenton Chow MBA '96** joined Financial Leadership Group Partners. He and his wife, Teri, live in Almaden Valley and have three daughters: Mikaela (Babson College), Kendra (University of Virginia), and Kianna (Archbishop Mitty High School). ¶ **Simona Hodek Martin** is the COO for Altos Investments Inc., a registered investment advisory firm opened with her husband, Bill Martin, in Los Altos, where they live with their two boys. Simona is also the co-founder of Martin+Mo, an online lifestyle brand.

1987 REUNION YEAR Since 2012, **Carolyn Becic** has been president at St. Andrew Nativity School, a tuition-free, Jesuit middle school for underserved youth in Portland, Oregon. ¶ **Peter C. Califano J.D.** is president of the Commercial Law League of America. In 2011, Califano testified in Congress and has since organized the CLLA’s effort for bankruptcy venue reform. He has more than 30 years’ experience representing parties in all aspects of insolvency-related matters, including bankruptcy and state law insolvency proceedings, litigation, and related business transactions. ¶ **Steve Clinton J.D. '97** is with the law firm Womble Carlyle. He mentors law student participants in the Entrepreneurs Law Clinic and participates in the Bronco Network, which connects mentors to Santa Clara student-athletes to provide guidance, information, and career counseling. He writes, “It’s very rewarding to be able to connect with students and provide perspective and hopefully some helpful suggestions about the path ahead.” As the dad of a child with special needs, he’s proud to be a board member of Hope Services—the leading provider of services to people with



PHOTOGRAPHY COURTESY PETER COE VERBICA '82, J.D. '99

PHOTOGRAPHY COURTESY PAUL BLANKE '76

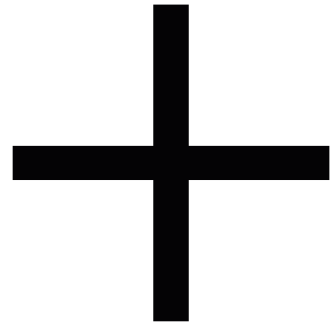
LIGHTS, CAMERA, SALE **Betsy Ferguson '87** approaches real estate redesign like a movie director builds a set. She thinks about lighting and how a room might look on camera. “My background is in theater arts,” she told the *L.A. Times*, “and so staging is very much like a production and being ready for opening night.”

developmental disabilities in the region. ¶ **Betsy Ferguson** was named among the 2016 Top 10 Redesigners for United States and Canada by the Real Estate Staging Association. As the owner of The Home Artisan, Betsy provides home staging and redesign services. She received the 2016 Houzz Service award and was recently featured in *Forbes*. She lives in Montrose, California, with her two boys, ages 14 and 10.

1988 **Mary J. Novak J.D.** is Georgetown University Law Center’s associate director for Ignatian Formation. Mary is also chair of the board of the Catholic Mobilizing Network to end the use of the death penalty and promote restorative justice. ¶ **Brendan Riley** is an ATA-certified translator of Spanish to English specializing in literary translation. He has been a full-time high school teacher since 1994 and teaches 10th grade humanities, AP English language and composition, and journalism at San Diego Jewish Academy.

1989 **Nelson C. Chan MBA** serves as an independent director on several public companies, including Synaptics, Adesto Technologies, and Decker Brands. Chan is new to the board of directors for Socket Mobile. ¶ A dentist with his own practice in Gilroy since 2000, **Nick Chiotellis** says, “There is no greater reward than seeing someone’s entire outlook change when their confidence is restored through a great smile!” ¶ **Gayle M. Haworth MBA** is the chief business officer for biotechnology company Symphogen A/S. She lives in Santa Fe, New Mexico, with her husband. Gayle also volunteers to help non-English speakers improve their language skills and achieve academic success. ¶ **San Mai, S.J., MBA '94** is a Jesuit scholar completing his second year of regency as a math and science teacher at St. Andrew Nativity School in Portland, Oregon. ¶ **Alex Potts** is president and CEO of Loring Ward Group Inc. and SA Funds—Investment Trust. Loring Ward serves and supports select financial advisors across the United States. Previously, he was COO of LWI Financial Inc. ¶ Since October 2011, **Stephen A. Richardson MBA** has served as COO and regional market director, San Francisco, of Alexandria Real Estate Equities.

1990 **Marianne Koepf** was promoted to partner at Carothers DiSante & Freudenberger LLP, an award-winning California employment, labor and immigration law firm. Koepf manages class action



Linus and Lucy were roles that **Michael Dessel '11** and **Kayla Berghoff '11** played in the campus production of *You're a Good Man, Charlie Brown*. The two began dating at play's end, eventually relocating to NYC to start their lives together, tying the knot during a candlelit ceremony in the Mission on July 23, 2016—with their beloved theatre professor Fr. **Michael Zampelli** presiding.

She was a theatre major, he a theatre minor. The proposal: When Kayla stopped in San Jose to celebrate the couple's fourth anniversary together (she had recently moved to New York to pursue her MFA in acting from The New School), Mike suggested they stroll through campus, where he popped the question by the Sacred Heart statue in the Mission Gardens. "We knew instantly we really wanted to get married in the Mission," Kayla said.

In attendance: Kayla's parents, **Eric Berghoff '86** and **Madeline Berghoff '87**, siblings **Garrett Berghoff '16** and **Tessie Berghoff '18**, and Mike's mother, **Annette Naughten-Dessel '80**—in addition to nearly 40 fellow Broncos. "Santa Clara has become a family place, which made our wedding so much more meaningful," she says. "It's truly a special place for both our families."

Now living in Astoria, Queens, Mike is working as a physical therapist in Manhattan, and Kayla is in her final year of school. With 45 primetime TV shows filming in the city—in addition to commercial work and theatrical productions—she's eager to pursue various acting opportunities upon graduation. Mike has kept busy playing rugby for a local team—he played all four years at SCU, serving as team captain as a senior—recently representing the Broncos in the rugby sevens tournament USA Touch Nationals.

When it came time for college, Kayla originally headed to USC. "I wanted something different from my parents, but that school felt too big, and I felt a little lost." So she decided to check out Santa Clara, snagging a tour of the theatre and dance department from professor **Aldo Billingslea**.

"Everyone was so nice and personable," she recalls. "I knew right then, this is where I wanted to be." Once back in Southern California, Kayla emailed Billingslea, asking: "Do you ever take anyone in the middle of the year? I want to transfer now!" He said he'd see what he could do. "Ultimately, SCU let me come winter quarter. It was the best thing to ever happen. Because I only missed one quarter, I like to say that for all four years I was still a Bronco."

Home again: Michael and Kayla traveled from Queens to get married at the Mission.



PHOTOGRAPHY BY CARMEN SALAZAR

Lives Joined

Mark O'Brien '94 and John Cordaro were married in Kenwood, California, on May 21, 2016.

Francisca "Kika" Jonsson '01 married Brian Yeung on Sept. 15, 2016 at the New York City Marriage Bureau in Manhattan. Immediate family in attendance included **Erik Jonsson '01**. Kika is a fine artist and Brian works as a director of service experience at Blacklane, a transportation startup. The couple lives in Berlin, Germany.

Patricia Ball Alberts '98, J.D. '03 married Erik Alberts on Feb. 20, 2016, in Santa Monica, California. SCU Broncos who helped them celebrate included "bridesman" **Jarvis Murray J.D. '03**, **Erica Gomes '98**, **Jennifer Pitts '98**, **Joe Delucchi '98**, **Erik Johnson '98**, **Steven Armstead '98**, **Daniel Womac '98**, **Nikki Womac '00**, **Carolyn (Lees) Metnick J.D. '03**, and **Amanda Fornwalt J.D. '03**. Patricia and Erik both practice law in Los Angeles and reside in Santa Monica.

Nicole (Adamski) Cuevas '05 married Robert Cuevas at the Mission Church on July 30, 2016. The couple honeymooned in the Mediterranean and was honored to meet with Pope Francis and receive a marriage blessing at the Vatican. Robert is an electrician foreman and staff sergeant in the U.S. Army Reserves, and Nicole works in finance. They reside in San Jose.

Natalie E. (Evans) Nunnally '06 married Charles Nunnally on July 23, 2016, in Lake Tahoe, officiated by **Paul Jockisch '06**. Best man and brother of the groom was **Jonathan Nunnally '05**, and classmate **Carolina (Garcia) Wagner '06** was matron of honor.

Pat Byrnes '07 married **Allie (Paver) Byrnes '10** on April 2, 2016, at Mission Santa Clara, presided over by **Mario Prietto S.J. '73**, **John Mossi S.J. '73**, and **Tony Sauer '56, S.J. '71**. More than 40 Broncos were in attendance.

Patricia (McGlynn) Reiss '07 got married at Concannon Winery on Aug. 11, 2016, to Eric Reiss.

Taylor Thorn '08, MBA '15 and **Kaitlyn (Bailey-Findley) Findley-Thorn '09** wed in a public ceremony on

Sept. 3, 2016, in Orange County, California, following a private ceremony at the Mission Church the week before.

Meredith Decker '10 married **Ryan Truettner '09** on Aug. 29, 2015, in Los Gatos. Wedding attendants included **Natassia Kozlowski '10**, **Allison Kerns '10**, **Sarah Chorey '10**, **Mary Higgins '10**, **Michael Truettner '08**, **Will Truettner '13**, **Brian Bradley '09**, **Andrew Scanlan '10**, and **Michael Bonner '09**.

After spending her last quarter at SCU as the only engaged student in her Theology of Marriage class, **Abby (Hazelitt) Deetjen '16** and Marc Deetjen tied the knot on July 16, 2016. Marc is pursuing his Ph.D. in mechanical engineering. After work, Abby returns to SCU to lead a small group with an on-campus ministry. They reside in Palo Alto.

Births & Adoptions

Abby (Fake) Hammel '99 and **Mike Hammel '99** welcomed son Luke James on Jan. 16, 2016. Big sisters Ainsley and Kiley are thrilled to add a brother to the family.

Renee (Osborne) Benedict '02 writes, "My daughter, Sophia Marie, was born July 2015 ... the first grandchild for **Connie Osborne '75**."

Daniel Figoni '03, MBA '07 and **Elizabeth Figoni '06** welcomed their first, Rose Cecelia Figoni, on July 11, 2016.

Kim (Lay) Twombly '03 and **Daniel Twombly '04** greeted their first child, Lily, on May 27, 2016. The family lives in San Diego.

Michelle (Donecho) Duchesne '05, M.A. '10 and **Chris Duchesne '06** welcomed their first, Elizabeth "Betsy" Lee Duchesne, on March 23, 2016.

Amy (Whelan) Green '06 and Bryan Green welcomed Jackson Matthew Green on April 8, 2015.

Matthew Reardon '06 and **Katrina Welch-Reardon '06** joyfully welcomed the birth of their first son, Liam Jack Reardon, on June 10, 2016.

and single plaintiff litigation. ¶ **Mike Prym M.A.** was appointed director of development at The Abbey of Our Lady of New Clairvaux, in Vina, California, in August 2016.

1991 **Jon Berthelot** is director of admissions at Episcopal School of Acadiana, a pre-K-12 independent day school in southwest Louisiana. He and wife Sarah live in Youngsville, Louisiana, with their two children, Dominic and Isabelle. ¶ **Scott Middlemist** is among the English department faculty at Brophy College Preparatory in Phoenix, Arizona. He has been a member of the Brophy faculty since 1994 and is a freshman football coach. ¶ **Kathleen Roberts J.D.** is a shareholder at Stander Reubens Thomas Kinsey. Prior to joining the firm, Roberts was associated with a successful Northern California defense firm, specializing in workers' compensation, subrogation, and fraud. ¶ **Mario Montana MBA** is vice president and chief sales officer of IDT. Montana has held several positions during his more than 15 years with the company, including most recent as the vice president and general manager for the IDT Enterprise Computing Division.

TRAINING DAY Washington is the only state in the nation requiring commissioned law enforcement officers to receive crisis intervention training that educates about common mental illnesses and emphasizes and teaches verbal de-escalation tactics. **Renee Balodis-Cox '92** is at the forefront.

1992 **Renee Balodis-Cox** is a licensed mental health counselor and has been working with the state of Washington's criminal justice training commission for several years, providing required crisis intervention training to law enforcement officers. ¶ SurveyGizmo, industry leader in online data collection services and survey software, has a new COO: **Nicole Craine**. Craine brings years of operations, startup, and leadership experience. Her main focuses will be speed, efficiency, and scalability. Craine is an active member of both Women in Technology International and Women in Wireless. ¶ **Bob Downey** is the assistant director of Clinical Laboratory Applications at Sysmex America. He continues his volunteer work running medical clinics in southwestern Haiti and serving on the Seattle-King County Disaster Team board. He lives in San Diego with his husband, Karl, and their dog, Alvin. ¶ As Bechtel's treasurer, **Kevin Leader MBA** has global responsibility for all cash operations, short-term investments, foreign currency, and relationships with banks and other financial institutions. Kevin also oversees the coordination of project-specific banking matters for Bechtel entities, operations, projects, and joint ventures around the world.

1993 **Kate Hart** is the land use and permitting counsel to Richland Investments Inc., a real estate development firm based in Irvine, California. Previously, she was a land use attorney with Abbott & Kindermann LLP. ¶ **Timothy Shih Ph.D.** was a keynote speaker at the 19th International Conference on Computer and Information Technology in Dhaka, Bangladesh, Dec. 18–20. His topic was “Motion Interpretation Via Human-Computer Interaction.” ¶ **Rock Zierman** is CEO of the California Independent Petroleum Association, where he has worked since 2002. Rock recommends and implements policy for the association’s 50-member board of directors and coordinates all of its state and national legislative activities.

1994 **Rob Lathrop M.S. ’01** is the new president of Lathrop Engineering, a company that designs and develops medical device and life science instrumentation. Rob has served on SCU’s Mechanical Engineering Industry Advisory Board for 10 years and contributes his time, mentoring, and training to young engineers. ¶ Attorney **Juan Lopez J.D.** was one of nine recipients of the 2016 California Peace Award for the 30th Assembly District. In 2014, Juan founded We the People, an organization that defends the civil rights of Morgan Hill residents and promotes multicultural events in the community. He has worked in the Santa Clara County Public Defender’s Office since 1996. ¶ **Lawrence Rosen J.D.** is a founding partner of Rosenlaw & Einschlag, a technology law firm that specializes in intellectual property protection, licensing, and business transactions for technology companies. Larry also served for many years as general counsel and secretary of the nonprofit Open Source Initiative.

1995 **Marilyn Abplanalp M.A.** has been president of the Alliance for Assemblies of God Colleges and Universities since 2008. She has been married to Bob since 1971, and they have two daughters and five astonishing grandchildren. ¶ U.C. Santa Cruz Associate Professor **Sylvanna Falcón** is the author of *Power Interrupted: Antiracist and Feminist Activists Inside the United Nations*, the winner of the 2016 Gloria E. Anzaldúa Book Prize from the National Women’s Studies Association. Falcón is also the co-editor of *New Directions in Feminism and Human Rights*. ¶ **Kelly Gibson** runs North America Strategic Alliances at PFS, a leading global eCommerce solutions provider. Kelly has spent most of her 20-plus-year career in Silicon

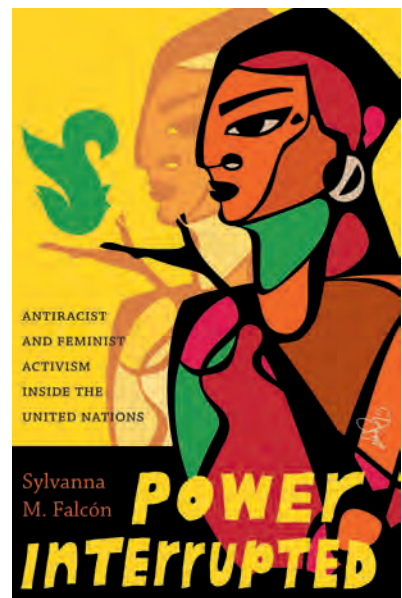
NOT SUPERMAN, BUT CLOSE
At the presentation of the 2016 California Peace Awards, **Juan Lopez J.D.’94** and eight other winners were praised by assemblymember **Luis Alejo (D-Salinas)**: “The commitment and dedication they have demonstrated for their communities exemplify what this award is all about. It’s everyday heroes like these who help keep our neighborhoods safe.”

In her book *Power Interrupted*, **Sylvanna Falcón ’95** discusses United Nations-based feminist activism and how the intersection of race and gender affects organizing on a global scale.

Valley, responsible for business development and market penetration for early-stage software firms in big data, commerce, and analytics markets. ¶ **Avery Lu**, co-founder and chief marketing officer of Palo Alto Scientific Inc., a sports science analytics and wearable technology startup, received the Silicon Valley Innovation & Entrepreneurship Forum’s Top 30 Most Innovative Startups Award for 2016. ¶ **Amy Rapp** has moved to Taiwan with her husband and three children to continue her work with Nike and Product Creation Operations. They are looking forward to the adventures ahead. ¶ **Alex Shubat Ph.D.** is CEO of Espresa, which recently launched an app to help companies manage workplace extras: onsite massages, dry cleaning service, yoga, car repair, and more. Shubat holds more than 20 patents and has contributed to more than 25 publications. He also serves on the School of Engineering Advisory Board.

1996 **Carol McCandless M.A.** has enthusiastically served as an adjunct associate professor teaching religion at San Joaquin Delta College, in Stockton, California, since 2000.

1997 REUNION YEAR **Jeffrey Baier M.A.** is serving as superintendent of schools in the Los Altos School District. ¶ **Damian Gerard Barnes** enjoys teaching English at Bishop O’Dowd High School, in Oakland. Recently married with quite a few Bronco alumni in attendance, Damian also enjoys writing, travel, friends, and family. ¶ **John Snedigar** celebrates 10 years at the helm of his Silicon Valley tech PR firm Faultline Communications in May 2017. He and wife **Nicole Snedigar ’98** reside in Los Altos



with son Brayden (age 12) and daughter Finley (age 4). ¶ **Daniel Wilson** is a dentist with Cascade Dental, in Vancouver, Washington. He’s practiced in the Northwest since graduating from OHSU School of Dentistry in 2001. After struggling with four head and neck surgeries for a highly aggressive tumor in the base of his tongue, Wilson underwent chemotherapy and radiation in June 2014 and sold his half of his practice, Nutter & Wilson PLLC. He joined Cascade Dental in November 2014. Wilson is a mentor for CEREC Doctors and has a passion for utilizing technology in dentistry. He and his wife, Kristine Aadland, travel extensively teaching and sharing their passion and knowledge with other dentists.

1998 Attorney **David J. Chun J.D.** practices workers’ compensation defense. He’s a shareholder and manager of the Fresno office of Stander Reubens Thomas Kinsey as well as the COO and VP of the firm. Chun lectures on related topics and enjoys spending time with his family and playing golf. ¶ **Kyle Daniels** joined Teles Properties in residential real estate sales after a 22-year career with the L.A. County Fire Department Lifeguard Division. He resides in Palos Verdes Estates, California, with his wife, Colleen, and two children, Riley (5) and Isla (2). ¶ **Alisa Garni** has been part of the faculty at Kansas State University since 2008. Currently, she is researching Mexican/Central American immigration, changing land-use patterns, and immigration policy. She has taught courses on international development, qualitative methods, racial and ethnic relations, and sociology. ¶ **Andrew C. Kim J.D.** has been appointed a judgeship in the L.A. County Superior Court by Gov. **Jerry Brown ’59**. Kim has served as a deputy district attorney at the county’s District Attorney’s Office since 1999. ¶ *The Silicon Valley Business Journal* named **Nellie Peshkov** to its 2016 list of Women of Influence. Peshkov leads Talent Acquisition at Netflix and works to increase the number of female and minority executives and employees.

1999 Since 2013 in Fresno, **Tina R. Griffin J.D.** has been the supervising deputy city attorney for the Litigation Unit, specializing in employment litigation, personnel, and labor relations. Tina enjoys reading and traveling, and has three very active young children. ¶ **Ryan Jones J.D.** is an associate at the Long Beach, California, office of Singer & Benjumea. Since graduating, he has solely practiced in the field of workers’ compensation law. ¶ **Debbie Vander**

Zwaag MBA ’06 is a project manager at Driscoll’s Strawberry Associates in Watsonville. She and husband Bill Johanson have lived in Gilroy for more than 10 years. They have two dogs, two cats, and two turtles. Debbie volunteers with Furry Friends Pet Assisted Therapy and the Red Cross Disaster Relief.

2000 **Ricardo Benavidez** was named to the *Silicon Valley Business Journal*’s 40 Under 40 list for 2016. At Cisco, he granted millions in cash and product donations to Bay Area nonprofits. Now at Google, Ricardo helps design and build workplaces. He also mentors at-risk and underserved students. ¶ **Rory Byrne MBA** has joined the executive team of Billtrust, a leader in payment cycle management, as executive VP of Business Development. He’s held leadership roles at Kofax, Yahoo!, and Kapow. ¶ **Katie DeLeuw** works at EnviroIssues, an agency dedicated to tackling some of the thorniest public policy and environmental issues. Katie has 11 years of experience in Washington and California. ¶ The 2012 recipient of SCU’s Ignatian Award, **Dori Rose Inda J.D.** is CEO of Salud Para la Gente, a network of clinics providing low-cost, high-quality health care in Santa Cruz and Monterey counties. She also founded the Watsonville Law Center and developed the Agricultural Workers Access to Health Care Project.

2001 **Jeremy Armstrong** has started a tenure track position in the department of physics at the University of Nebraska at Kearney. ¶ **Christine N. Epres** is an in-house attorney with Robert Half International Inc. in Menlo Park. She handles a variety of commercial transactions, as well as corporate and compliance matters for the company. She and husband Phil Yeager reside in Santa Clara. ¶ Former Bronco basketball **Kim Faust** is among the *Puget Sound Business Journal*’s 40 Under 40 lineup for 2016. When she’s not coordinating multi-million-dollar construction projects across greater Seattle, Kim coaches youth softball, basketball, and soccer. She lives with husband Mark and their two daughters. ¶ **Ram Fletcher J.D. ’05** and **Rob Bohn ’91, J.D. ’94** moved their law practice, Bohn & Fletcher LLP, to West Santa Clara Street in San Jose. They continue their civil litigation practice pursuing justice for people seriously injured or killed as a result of the wrongdoing of others. ¶ **Tracy Nicoletti M.A. ’12** is privileged to be teaching seventh grade at Queen of Apostles School in San Jose. In her free time, she competes in

triathlons and completed training for her first Ironman in 2016. ¶ In her 11th year teaching at Kitteredge School in San Francisco, **Louise Pon-Barry** enjoys working with kindergarteners and first-graders for their fresh and unique outlook on life. Visit her at msonbarry.weebly.com. ¶ In May, **Dana K.C. Wolfe** earned an MBA from the University of San Francisco but remains a loyal Bronco. He and wife Erin Brigham welcomed a son, Xavier, in December 2014.



2002 REUNION YEAR A self-described wife, mother, dog lover, and food enthusiast, **Andrea Fujii J.D.** is a CBS2/KCAL9 reporter in Los Angeles. She is married to Whit Johnson, who anchors at NBC4. She says, “We love being in L.A.: the weather, being close to family and friends, and the endless amounts of things to do and see.” ¶ **Kristina Daniel Lawson J.D.** was appointed to the Medical Board of California by Gov. **Jerry Brown ’59**. She is a partner at Manatt Phelps and Phillips LLP in San Francisco, where she practices land use and environmental law. Lawson served as Walnut Creek’s mayor in 2014. ¶ **Chris Muldoon** is currently working as a physician assistant at Amundsen-Scott Station, South Pole, Antarctica, providing medical care (and evacuations as necessary) and facilitating a NASA project that is a very small part of the program aimed at putting a man on Mars. He recently finished a winter at McMurdo Station, Antarctica. He is also a member of a global disaster response team and has been a member of all-volunteer mountain rescue teams in the Pacific Northwest for the last 10 years.

Tim Rahall ’03 hosts Rylie’s Angels Golf Tournament for A-T research in honor of his daughter Rylie. “She gets on the mic and says thanks for coming to my tournament. She loves being the star of the show.”

2003 Former SCU resident Jesuit **Matthew Carnes, S.J., M.Div.** was appointed director of the Center for Latin American Studies at Georgetown University. He also serves as an associate professor in the Department of Government and the School of Foreign Service. ¶ **Rhianna Henry Casesa** is a tenure-track assistant professor at Sonoma State University. Her research interests include dual-language education, literacy, and biliteracy. She lives in Sonoma County with her husband, Marco, and their 4-year-old daughter, Giovanna. ¶ **Dori Yob Kilmer J.D.** was named to *Silicon Valley Business Journal*’s 40 Under 40 list for 2016, after being named one of Silicon Valley’s Women of Influence the year before. She is the youngest shareholder at Hopkins & Carley, where she represents clients in complex real estate, land use, business, and commercial litigation matters. ¶ Librarian **Angela Ocana** is a recent winner of the California Library Association’s Young Adult Services Award. Angela has led numerous programs for teens and adults for city of Santa Clara libraries. ¶ CPA **Tim Rahall** was promoted to partner at Ernst & Young. A board member with A-T Children’s Project, Tim has also raised more than \$600,000 in the past five years to find a cure for ataxia-telangiectasia, a rare neurodegenerative disease. ¶ **Chantal Rodriguez** is the new assistant dean at the Yale School of Drama. For the last seven years she was programming director for the Latino Theater Company, while teaching at various universities and engaging in scholarly research and publication.

2004 **Meghan Cress** has joined SCU’s Career Center as the assistant director for business and engineering. Meghan returns to campus after seeing the dynamic employment landscape and industry trends firsthand through recruiting and human resources at a top consulting firm and Bay Area startups. ¶ **Jennifer Ferrari** is the new associate director for SCU’s Career Center. She’s worked on campus since 2005, previously as the business manager in Auxiliary Services. She loves helping SCU students explore the intersection among their passions, talents, and the needs of the world to discover meaningful opportunities. ¶ **Karolyn Hill M.A.** is a fourth-grade teacher at Queen of Apostles elementary and middle school. Karolyn has taught junior kindergarteners through adults in various subjects and curriculums. Her husband, Jimmy, and three daughters have a rule to travel outside the United States once a year. ¶ **Stefanie Hirano-Ali**

is a dermatologist and dermatopathologist serving patients in Joliet and Downers Grove, Illinois. She also specializes in medical, surgical, and cosmetic dermatology. Stefani and her radiologist husband are excited to be in the Chicago area with their daughters. ¶ **Aila Malik J.D.** is a founder of Venture Leadership Consulting. Among many accolades, Aila was a recipient of the ABA Child Advocate of the Year Award in 2011. Her ultimate dream is to eliminate gaps of disparity so that all children have opportunities to live a healthy and fulfilling life. She also authored a children's book titled *Pocket Mommy*, available at pocketmommy.org. ¶ **Veronika Olah, Lauren Lopez Pratt '11**, and **Angelica Salinas '13** made an uncanny discovery that they make up three of only about a hundred Disney Adventure Guides in the world. As travel guides, they ensure travelers feel a connection to the people, culture, and traditions of each destination visited. ¶ **Sarah Snyder** is the dietitian for the Detroit Lions football team. She worked as a sports dietitian for the University of Florida and the University of Michigan athletic departments prior to joining the Lions. ¶ **Katherine (Quevedo) Stokke** has been published in the fantasy anthology *Myriad Lands: Volume 2: Beyond the Edge*. In addition to writing speculative fiction, she works as an analyst in Beaverton, Oregon, where she lives with her husband and two sons.

2005 **Robert F. Delgadillo M.Div.** recently received a Ph.D. in theology and church history from Fuller Theological Seminary in Pasadena, California. His dissertation examines *El Censor*, the essay periodical published in Madrid 1781-1787. ¶ An avid hiker and reader, **Jennifer Field** is a host for Kore Asian Media, Ideate TV, and CarHub. She also acts on Dish Network's *Sangre Negra* and co-stars on *Chance*, a psychological thriller on Hulu. Jennifer has visited nearly

MAGIC KINGDOM
The next time you hit the road, consider a Disney Adventure with a spirited, storytelling, fellow Bronco tour guide: **Veronika Olah '04** at Prague Castle in the Czech Republic (left), **Lauren Lopez Pratt '11** in Hollywood (middle), and **Angelica Salinas '13** in Wyoming (right).

every national park and monument in the western United States. ¶ In July, **Tessa Miller** took part in an art and design exhibition at a University of Nevada, Reno, gallery. Tessa owns The Nest, a boutique in Reno, for which she purchases, repairs, and merchandises vintage clothing and furniture, and consults with clients on interior designs. "The message I wanted to portray is that art is accessible, and it doesn't necessarily belong only in galleries." ¶ **Erin Pearson** released a new how-to book: *10 Reasons Your Kids Don't Practice Their Music: And What Parents Can Do About It*. Drawing on concepts from neuroscience, parenting, behavioral psychology, and other educational learning theories, it helps parents develop a plan for music practicing so kids can achieve their goals. ¶ **Allison Pitigoi J.D.** joined Newmark Cornish & Carey's Santa Clara office in 2016 as a managing director. Pitigoi leverages her strong client service and negotiation skills to obtain favorable results for her clients in commercial real estate transactions. Previously, Pitigoi had practiced employment law at some of the largest and most reputable law firms in the world. ¶ In Portland, Oregon, **John Robertson** is an investor relations manager at CrowdStreet, a crowdfunding marketplace that connects individual and professional investors with institutional-quality real estate investments. ¶ **Anthony Soldato J.D. '08** is an associate attorney in the Seattle office of Klinedinst PC. He handles litigation and pre-litigation claims regarding personal injury, civil rights violations, real estate issues, and business torts on behalf of cities, counties, and business entities.

2006 **Sheeva J. Ghassemi-Vanni J.D.** was named to *Silicon Valley Business Journal's* 40 Under 40 list for 2016. The 33-year-old is a senior associate in Fenwick & West's Mountain View office, ad-

vising on a multitude of labor and employment issues. ¶ Engineering firm L2F, co-founded by **Shawn Lange M.S.**, was named No. 237 on the *Inc. 500* list, an annual ranking of America's fastest-growing private companies. L2F drives innovation in manufacturing from laboratory stage to full-scale fabrication (Lab2Fab) by designing and building custom robotic-based production systems. More good news: L2F is the School of Engineering's KEEN industry partner for the quarter. ¶ Months after drafting her first class note, **Mayka Mei** moved to L.A. and changed work industries, thus negating everything mentioned in her previous update. She lives with her husband and dog. ¶ The "Voice of the San Jose Giants," **Joe Ritzo** began his 11th season with the team (a Minor League affiliate of the San Francisco Giants). He also handles the play-by-play of their television broadcasts and co-hosts the "Inside the San Jose Giants" podcast. Ritzo began his career with the franchise as a first-year student at Santa Clara. He enters the 2017 season having called more than 1,500 games. You may have even heard him calling games for SCU soccer and volleyball. ¶ **Kyle Stanhouse M.S.** and **Ignacio Mas Ph.D. '11**, along with mechanical engineering professor **Christopher Kitts**, published "Time-Energy Optimal Cluster Space Motion Planning for Mobile Robot Formations" in the book *Recent Advances in Robotic Systems*. ¶ **Kiran Sreenivasamurthy MBA** is now leading Maxta Inc.'s product management team as a vice president. Kiran, who joined Maxta in 2013, was previously a lead software product manager for Hewlett-Packard 3PAR storage and product manager for Mendocino Software.

2007 **REUNION YEAR**
Rose Hacking worked in the Obama Administration as deputy assistant secretary for legislation, United States Department of Health and Human Services. "And yes," she writes, "I'm only 30. SCU helped me to grow my understanding of social justice, and now I work on refugee, unaccompanied children, welfare, and other programs that help vulnerable populations." ¶ "The summer after I completed my M.A. in pastoral ministry, I went to Vietnam to teach English for the Diocese of Phat Diem," writes **Gary Meegan M.A.** "This is my 10th summer there. I blog about my experience at garyinvietnam.blogspot.com. I do it to help people understand what the Catholics in the north of the country go through. They are very poor but proud." ¶ After spending nine years with the San

Jose Sharks, **Zach Plaza** is now serving as an assistant director for chapters and groups with the SCU Alumni Association. He works with LGBTQ alumni and SCU Bronco Builders Association (SCUBBA), as well as regional groups from Las Vegas to India, San Diego to New York. He also has a newborn son. ¶ **Leta Sanchez J.D.** practices immigration law in Mount Vernon, Washington. She previously worked for a San Jose-based immigration law firm and participated in Santa Clara's immigration law clinic, assisting low income clients. Sanchez is a member of the American Immigration Lawyers Association (AILA). She is an active member of the Skagit County Bar Association and helps organize pro bono immigration clinics and outreach programs in the Skagit Valley.

2008 In June, **Elena Marie Ebrahimian** received her Doctorate of Dental Surgery from the University of the Pacific, Arthur A. Dugoni School of Dentistry. Elena is the daughter of **Max Ebrahimian '75** and is excited to begin work in private practice in the Bay Area. ¶ After years of collaborating in theatre, **Chad Eschman** and **Matthew Johns '09** are making a short film. The trailer for *Never Stop* debuted in July and a fundraising campaign is under way. Chad wrote the script and is co-producing and co-starring in the film, and Matthew is the production designer. ¶ **Julia (Eisenmeyers) Ford** is the development director at St. Andrew Nativity School, the only tuition-free private school exclusively serving low-income students in Portland, Oregon. Julia also does catering and wedding/personal event management for private entities through sole-proprietorship of Cocoa N' Lola LLC. ¶ **Jeremy Herb** is a defense reporter for POLITICO. Previously, he covered defense and national security for *The Hill* and covered the Minnesota congressional delegation and 2012 Republican presidential primary as a Washington correspondent for the *Minneapolis Star Tribune*. ¶ **Rosanna Moreno J.D.** received the State Bar of California's Wiley W. Manuel Certificate for Pro Bono Legal Services for her pro bono efforts on behalf of Orange County's low-income residents. She is a volunteer attorney with the county PLC's "Operation Veterans Re-Entry" program. ¶ After moving to Germany with her family in August 2015, **Mandy Pearson** started working as a project manager for ichhelfe. jetzt (which translates to "I help now"), an online platform that connects help orga-



Goooal! **Aly Wagner '10** scored the winning goal in the 2001 NCAA championship final, giving SCU its first national title.

nizations with volunteers to improve the care of refugees. Mandy recently represented ichhelfe.jetzt during the European Social Innovation Competition in Berlin and Brussels, where the project became one of 10 finalists from more than 1,000 applicants.

2009 **Amit Patel M.S. '11** is a certified LEED green associate and engineer in training. He works at SunPower Corporation and in the Drafting Department at A1 Solar Power. On campus in November, he and **Angelica Escruceria M.S. '13** gave a talk to the Energy Club about their work designing residential and agricultural solar projects. ¶ The co-founder of the Santa Clara University men's ice hockey team, **Justin Perna** currently manages the brokerage operations at TradeStation Securities and is building a team in Chicago. ¶ **Daniella Vallurupalli (Klopocki)**, **Aneal Vallurupalli**, **Paul Ceconi**, **Summer Lynn McCormick '08**, and **Nicole Qaundah '07** raised more than \$100,000 for children and families of San Francisco's Tenderloin community with their nautical-themed fundraiser: The 8th Annual White Caps & Night Caps. Put on by their young professionals nonprofit group, The Saint Francis Foundation Associates, the October event attracted more than 250 people. The Associates have raised \$216,000 in the last two years, and five of its 11 board members are proud Broncos.

2010 **Jose Arreola** was featured in *Palo Alto Weekly*, discussing the challenges of grow-

ing up undocumented. Jose works for the San Francisco nonprofit Educators for Fair Consideration (E4FC), which focuses on the well-being of undocumented young people, seeking to empower them in their pursuit of college, career, and citizenship. Arreola arrived in the United States at age 4 and grew up in Mountain View and attended Santa Clara University on a full scholarship. He was an outspoken campus leader on issues of racism, inequality, and oppression. He is now E4FC's training and community relations manager. ¶ **Andrea Borgen** was named a 2016 Young Gun by *Eater* magazine for being a trailblazer in the food and restaurant industry. Her L.A. restaurant, Barcito, made headlines for having a business model of slightly higher a la carte prices, no tipping allowed, and health care for everyone. ¶ **Patrick "Pat" Glenn**, son of **John F. Glenn MBA '91**, graduated from the Anderson School of Management at UCLA with an MBA. ¶ **Yudong Kim J.D.** has joined Holland & Hart's Boise, Idaho, office. Kim is a patent attorney and engineer who focuses on IP protection for clients with complex technology and processes. He has experience in the semiconductor technology industry, having worked for more than two decades at Intel. ¶ Soccer star **Aly Wagner** was inducted into the San Jose Sports Hall of Fame in November. She was the first woman selected in the 2003 women's professional soccer draft, she played for the U.S. Women's National Team for 10 years, she won two Olympic gold medals, and she played in two Women's World Cups. Aly resides in the Bay Area with her husband, **Adam Eyre '04**, and their four children.

2011 **Marisa Plescia** is currently living in France and Italy, completing her graduate studies in cosmetic and fragrance chemistry. She has learned formulation of skin care products, color cosmetics, and perfumery. Marisa hopes to work in R&D. ¶ **Jason Maples J.D., LLM '12** is a legal data expert for legal analytics and patent data science company Lex Machina. He previously served as a paralegal in the U.S. Army during the 2003 invasion of Iraq, where he handled military, criminal, administrative, and humanitarian law issues and managed journalists embedded with combat units. ¶ **Britten Sessions J.D.** was listed among the Top 40 Under 40 in the Silicon Valley by the *Silicon Valley Business Journal*. Britten is the director of the only intellectual property pro-bono clinic in the Valley, manages the IP department at Lincoln Law School, and is a patent attorney with Zilka-Kotab.





The John Muir Trail is a place of wonder but nothing to trifle with. **Rita Beamish '74** knew that when she began a 220-mile trek last August, from Yosemite to Mt. Whitney. “At age 64, I’d be carrying a fully-laden backpack, at altitude, unsupported, over some of the highest passes and the highest peak in the Lower 48. Would my back hold up, my vegetarian strength hold out?”



Trailhead: from Yosemite and the back of Half Dome heading south to Mt. Whitney—on the 211-mile John Muir Trail, plus a little extra

The raindrops started abruptly, then turned into sleet, dropping faster and harder as I panted up 12,100-foot Mather Pass. Completely exposed, I needed to get up and over. Wet, biting wind would blast me at the top. I dropped my backpack to the ground, carefully tipping it away from the rocky drop-off, and hauled out my rain jacket. I willed my aching legs up the remaining switchbacks. Up top, I crossed the pass in a few strides.

The view, a phenomenal forever of treeless moonscape dribbled with glassy lakes, suddenly darkened. Hail fell. No one was visible below—although my hiking partner was ahead somewhere. I began lurching quickly, too fast for safety in the sleet, down the rocky switchbacks. My hands numbed. I cursed myself for not having fished out my gloves and hat. This

was one of those scenarios that could go wrong with the tiniest slip of a boot. No one would know.

Wilderness was our master here. Chains of lakes and streams so clear you could see every fish and pebble; miles of trail winding through high, granite-sprinkled meadows; piney forests that gave way to boulder-strewn slopes; sawtooth ridges etched against the bluest of skies—all this was the trail’s gift. But this was a place to be taken seriously, and carefully.

The daily routine of the trail offered a respite from the horror show that was the 2016 presidential campaign. The resentment-based, hate-stirring appeal of Donald Trump, while captivating more and more Americans, assaulted my values and upended my journalistic assumptions—I’d covered past presidential

campaigns—about people’s willingness to accept proven falsehoods and shrug off revelations and behavior that would have sunk any other candidate. Up on the JMT, these horrors couldn’t reach me.

We had nothing to do except pack up our tents each morning and take one step after another through a scenic wonderland. How fortunate that politicians of the past had appreciated this place and protected it as wilderness and national park lands, and that a California governor, Ronald Reagan, fought off a highway that would have changed it forever.

As I dropped to the bottom of Mather’s switchbacks, the sky cleared. The air warmed. A tension-releasing sob escaped from somewhere inside me. It felt good to look up and see what I’d done. I gulped some water, checked my map.

2012 REUNION YEAR

Matt Blanco M.S. '15, MBA '19 was invited to speak at the XXIV Annual Pacific Voice Conference, U.S. Edition, held at the San Francisco Conservatory of Music in October. He also represented Santa Clara at the EU Edition of the XXIV PVC in Warsaw and Lublin, Poland, the same month. ¶ **Giordano M. Capovilla** is enjoying his career at Deloitte in San Francisco, focusing on the growth of local technology companies. Having graduated a member of the Pi Kappa Alpha fraternity, he lives with brothers **Henry Eder '12** and **William Rush '12**, continuing to give back to the Iota Omicron chapter. He frequents the South Bay, where he can be found front row at Bronco basketball games supporting the new era of coach **Herb Sendek**. ¶ **Ben Clarin M.S.** is a project manager at Electrical Power Research Institute, an independent, nonprofit organization that conducts research and development relating to the generation, delivery, and use of electricity for the benefit of the public. ¶ **Mike DeMaria** recently launched a consumer mobile application on the iOS App Store, Grow Invest. ¶ **Abby Longcor M.A.** was named to the *Silicon Valley Business Journal*’s 40 Under 40 list for 2016. She is the senior director of The Tech Museum of Innovation’s signature program, The Tech Challenge. She also assisted in developing The Tech Academies program, which provides professional development to educators. ¶ After graduation, **Greg Method** and **Joe Burke '12** set out to improve on an existing antiquated medical device and completely redesigned the Continuous Passive Motion device for use in postsurgical knee rehab. Connections with orthopedic surgeon and five-time Olympic speed skating gold medalist Eric Heiden, along with customer Kinex Connect, led to success. They sold their startup but continue to work on the product. ¶ **Nathan Rogers** is the construction manager on the Google Fiber project in Raleigh, North Carolina, but his real mission is to help others through his own NGO, Well Constructed, which provides clean drinking water to Ghana’s poorest rural regions. In fact, seven wells serve about 7,000 people, all within 20 miles of the library built by SCU students.

2013 Former SCU valedictorian **Ashley Armstrong** is VP of Operations and Strategy at Flirtey, the world’s leading commercial drone delivery service. Last year, Flirtey made the first drone delivery in United

PROFS

KNOW BEST Associate professors **Christopher Kitts** and **Philip Kesten** helped instill an entrepreneurial mindset in **Greg Method '12** and **Joe Burke '12**. “Offering advice or just acting as a sounding board, they were a tremendous help in getting started,” the pair says. “The mentorships and support systems you find through Santa Clara are crucial. When someone believes you can do it, it helps you believe too.”

States history and is expanding operations with 7-Eleven in the U.S. and Domino’s in New Zealand. ¶ **Angela Choy MBA** is the co-founder and CEO of Edmission, which enables affordable, high-quality, and personalized college admission advice. She loves entrepreneurship, startups, and women leadership. A mother of two, Angela lives in the Bay Area and tweets at @angelachoy. ¶ **Guy Marzorati** is the AM producer for *The California Report* and KQED News. He also works on KQED’s California Politics and Government Desk. Guy joined KQED as an intern in 2013. He grew up in New York. ¶ **Sheldon P. McFarland MBA** is VP of Portfolio Strategy & Research at Loring Ward, a company that serves and supports financial advisors in the United States. ¶ **Briana Mitchell** starred as Major Barbara, the titular character in George Bernard Shaw’s *Major Barbara* at Mountain View’s Pear Theatre. Originally from Portland, Oregon, Mitchell now lives in Mountain View. ¶ After earning her master’s in English composition at San Francisco State University, **Gabriela Estephania Solis '13** accepted a two-year full scholarship to attend the University of Notre Dame’s Master of Sacred Music Program. Gabriela has performed throughout the Bay Area both as a soloist and with various groups. ¶ **Dewey Tieu MBA** is an associate relationship manager in Atlantic Trust’s San Francisco office. He helps implement investment solutions and provide wealth-counseling services to individuals, families, and foundations.

2014 **Scott Hanson**’s volunteer experiences in Rwanda and Nepal sparked a desire to use engineering knowledge to improve the lives of people around the globe. He works on construction projects using natural and sustainable materials, and writes about his work and studies at buildgoodthings.wordpress.com. ¶ **Lillian C. Kautz**, winner of the Anna Halprin choreography award at SCU and the SCU Quinn Martin scholarship for dance and theatre, is the new choreographer for StarStrucktheatre.org in Fremont. She recently choreographed *Joseph and the Amazing Technicolor Dreamcoat* for a cast of 60. ¶ **Diane Keng** is the CEO and co-founder of Breinify, the first personalization engine to suggest meaningful products to online shoppers based on time-sensitive data collection. She launched her startup’s innovation at TechCrunch Disrupt SF 2016. And it probably won’t be her last. When she was profiled by *Santa Clara Magazine* in July 2011, she was already a veteran entrepreneur at age 19. ¶ **Seher Siddiquee** is a chaplain-in-residence

at Georgetown University and a student at Hartford Seminary, where she is finishing her M.A. in Islamic Studies with an emphasis in Muslim-Christian relations and a graduate certificate in Islamic Chaplaincy.

2015 **Liz Connelly** is an assistant director for Chapters & Groups with the SCU Alumni Association. She works with groups for African American, Asian Pacific Islander, and Chicano and Latino alumni, as well as a host of cities—from Austin to Chicago, Seattle to Washington, D.C. Liz spent last year in Scranton, Pennsylvania, with the Jesuit Volunteer Corps. ¶ **Daniel Hunt** has finished his year as a Jesuit Volunteer through JVC and will continue working in education in Milwaukee, Wisconsin. ¶ **Sara Seligmann M.A.** is a chaplain-in-residence at Georgetown University and the director of Youth Ministry at Holy Trinity Catholic Church.

2016 **Camille Bates M.A.** is the newest resource specialist/special education professional at James Monroe Middle School in Ridgecrest, California. Her background in social justice work also informs everything she does. “I believe in the capacity for change and people’s ability to be better than they have been,” she says. ¶ **Candace Guthmiller** taught geometry at Christian Brothers High School during the summer. She is attending U.C. Davis School of Law. ¶ **Colleen Henn** is a coastal defender and a Blue Water Task Force intern at Surfrider Foundation, where she organizes community workshops and weekly beach clean-ups and creates information sheets about toxic algae blooms and clean beaches. She says, “My morals just align with Surfrider, and I am eager to see how I will continue to be engaged in days to come!” ¶ For a senior design project last spring, **Nicholas Supan** designed educational lantern kits with a solar charging system and lesson plans for assembly to teach high school students in Ghana how to bring lights into their homes.

2017 REUNION YEAR Are you graduating from SCU this spring? Let us know where you’re headed. Post a class note with your plans at magazine.scu.edu/classnotes. While there, be sure to update your address information so you’ll continue to receive the magazine. ¶ If you’re the parent of a Class of 2017 student, let us know if you’d like to keep receiving the magazine after graduation. Otherwise, your subscription will end.

Obituaries

We publish news of the passing of Broncos as we learn of it. Find obituaries published in their entirety at magazine.scu.edu/classnotes. Family members may also submit obituaries and photos for publication online and in print.

1938 **John Filippi** was born in Hanford, California, in 1915. He fell in love with Santa Clara University the first time he set foot on campus in 1933. After graduating from SCU, he attended Golden Gate University Law School. He served in the United States Army 1943–46. After his discharge, he practiced law in Palo Alto. John is predeceased by his wife, Elna, of 70 years, and he is survived by three children: **Judy Bishop '69**, **Dana Filippi '72** (**Sharon Kniffin Filippi '73**), and **Lynn Mombousse '79** (**Mike Mombousse '79**); six grandchildren, three of whom are Santa Clara graduates: **Ellie Bishop Dexheimer '07**, **Robin Mombousse '07**, and **Richard Mombousse '10** (**Melissa Heinrich Mombousse '10**); and two great-grandchildren. John passed away Dec. 19, 2016, in Modesto at the age of 101. His 101st birthday was commemorated in the Summer 2016 issue of *Santa Clara Magazine*.

1941 **Guido A. Marengo Jr.**, age 96, a native of Stockton, passed away on Aug. 29, 2016, after a brief illness. He was the son of Guido Marengo Sr. and Beatrice Campodónico Marengo. Guido graduated from Stockton High School before attending Santa Clara. He entered the U.S. Marine Corps and served as a captain in the Fourth Marine Division. Guido made four landings in the Pacific during World War II, and for action on Iwo Jima he was awarded the Silver Star. Following the war, Guido married Patricia Yardley. He managed the department store Katten & Marengo and the Credit Bureau of Stockton. Guido was very active in the community during his business career and a long-time contributor to the Leavey School of Business and Bronco Bench Foundation. He enjoyed playing tennis, swimming, gardening, and traveling. He was married to his wife, Patricia, for 69 years and was the loving father of Julie Biagi (George), Dina Dimalanta (**John H. Dimalanta '66**), and Barbie Burke (**Mathew Burke '75**); and was the proud grandfather of nine grandchildren, including **Gia M. Biagi '93** and

Alicia A. Biagi '97, and nine great grandchildren. We always enjoyed hearing from him here at the magazine.

1944 **Francis L. Detert** passed away peacefully Aug. 19, 2016, in his San Leandro home at 93. Francis graduated from SCU and went on to earn a Ph.D. in chemistry from Stanford in 1950. Francis commanded an LCI rocket firing gunboat in the U.S. Navy in World War II and participated in the Battle of Iwo Jima. Following the war, he worked for Chevron Research in Richmond, California. His expertise was finding uses for oil byproducts. He was an active volunteer at senior housing centers and San Quentin State Prison, where he



taught inmates business skills. Cheers to Francis with an ice-cold Heineken!

Edward Hermann Hulbert was 93 when cancer took him on July 2, 2016, in Olympia, Washington. Born in Aberdeen, Washington, he served in the Air Force during World War II and married Beverly Hooker. He was self-employed in the lumber, oil, and real estate industries. He was compassionate, caring, creative, detailed, and full of humor. He enjoyed woodworking, boating, fishing, gardening, and raising oysters and clams. He leaves behind his second wife, Trina Ruiz, five children, and five grandchildren.

1948 Born in 1923, **Eugene S. Campi** was a second-generation Oaklander, World War II veteran, home builder, and general contractor in the East Bay. Friends knew him as Cheech. He laid the foundation for his family—his greatest love—teaching by example: hard work, time for fun, and letting each family member discover his or her own path to happiness. On July 4, 2016, he joined wife Mary Lou. They

Michael J. Virga '53 once said baseball taught you about life, "not to get discouraged on a bad day and not to get conceited on a good day."

raised eight children, among them **Chris Taylor '72** and **Mike Campi '78**. Their 17 grandchildren include **Adam Campi '11**.

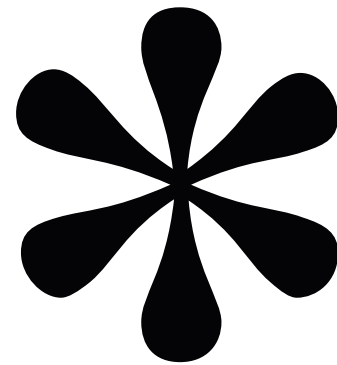
1950 **Daniel Gilbert Kraemer** will be remembered for big hugs, memorable stories, and fresh-squeezed oranges. His 21 grandchildren (among them **Margaux Gonyea '12** and **Madeline Gonyea '13**) knew him as Pop. He was born in Anaheim, California, and after serving in the Korean War, farmed in Pauma Valley, then in Corona to raise citrus. Dan and Mary Musante welcomed eight children (including **Janine Gonyea '86**, who married **Joe Gonyea '84**) and raised them with love, patience, and faith. Dan passed in his home in Solana Beach on Dec. 27, 2015, at age 87.

1953 An avid model builder, active gardener, talented home chef, and father of two, **Frank Brandon Maus Jr.** passed away on March 8, 2016, the day before his 86th birthday. Born in Petaluma, California, Brandon worked on and designed first passenger airplanes, and later, the initial Boeing space shuttle carrier. He enjoyed traveling around the world with his wife, Patricia. His cousin was **Catherine A. Johnstone '76**.

Charismatic **Michael J. Virga J.D. '58** enjoyed life's simple pleasures: a hot dog with lots of mustard, Sinatra on the stereo, dancing cheek-to-cheek with his true love, Betsey Gillis. Mike was a fair and open-minded judge whose home was the hub of the neighborhood. He relished the success and happiness of his four children, among them **Michael G. Virga '78**, **J.D. '81**, and grandchildren, including **Natalie Panagotacos '08**. He was 84 when he drew his last breath on July 9, 2016.

1957 **Donald Baumann**, 30-year resident of Carmel, passed away on Aug. 3, 2016. Don was born in Shanghai, China, and attended SCU on an athletic scholarship. While taking part in a musical production, he met his future wife, Dorothy. Commissioned a second lieutenant in the U.S. Army at graduation, he spent four years on active duty before starting a career in the semiconductor industry and opening business ventures in Asia and Europe. In retirement, the father of four was a substitute teacher, emergency response volunteer, and a lector and Eucharistic minister.

A Redding business leader, philanthropist, car enthusiast, and family man, **John C. Fitzpatrick** died on July 10, 2016, four days short of his 81st birthday. He owned



A Founder of the Field of spirituality and business leadership, **André L. Delbecq** applied his understanding and practice of prayer, meditation, and reflection to organizational leadership. His counsel and teaching deeply influenced business leaders, colleagues, and students around the world. Santa Clara was his home for nearly 40 years. He passed on Oct. 12, 2016.



Only connect: André L. Delbecq and the flag of Normandy, celebrating the launch of an exchange of French and Silicon Valley high-tech and government leaders in 1991

André Delbecq was born in Toledo, Ohio, and received his B.A. from the University of Toledo and graduate degrees from the University of Indiana. He taught management at the University of Wisconsin before coming to Santa Clara, where his long and distinguished career began with service as dean of Leavey School of Business (1979–89). He served as director of the Institute for Spirituality of Organization Leadership, Faculty Senate president, Thomas J. and Kathleen L. McCarthy University Professor, and senior fellow of the Ignatian Center for Jesuit Education.

Santa Clara recognized him with numerous awards for teaching, scholarship, and leadership, including President's Recognition Awards, Dean's Awards for Exceptional Teaching, Faculty Senate Professor of the Year, and most recent,

the Award for Sustained Excellence in Scholarship.

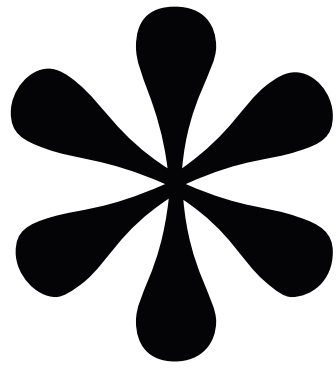
He consulted and lectured from Australia to Norway, South Africa to New Zealand. And he earned international recognition for executive programs delivered to high-technology industries as well as health, human services, and government organizations.

True to the Ignatian charism that animated him, he applied his understanding and practice of prayer, meditation, and reflection to organizational leadership. He played a foundational role in developing and shaping the field of spirituality and business leadership.

At Santa Clara, he founded the Ignatian Faculty Forum in 2002, and for almost 15 years he led the Forum in helping to engage faculty in reflective discernment and to discover Ignatian

spirituality as it is lived by faculty. In 2013, he founded and designed the Senior Leadership Forum, a program that invites those in senior leadership at the University to explore Jesuit higher education and to reflect on their own calling as leaders in higher education.

Near to his heart: his English mastiff dogs; his Harley Davidson; his boat; cooking gourmet meals with **Mili**, his beloved wife and partner for 27 years (who also earned an MBA from SCU in 1978); his children, grandchildren, and brother. He also loved his students and colleagues and held them in his prayers whether they knew it or not. André is survived by Mili, daughter Adrienne Delbecq-Backos, brother Jean Pierre Delbecq, and three grandchildren, Max, Mireille, and Jean-Luc. He was preceded in death by his son, Jean-Marc Delbecq.



He Built It Beautiful. For nearly two decades, **Joseph P. Sugg** served Santa Clara and was a champion of so much of what makes this place lovely and unique. When he retired in 2014 as associate vice president for University Operations, he had overseen unprecedented construction and renovation of the Mission Campus. He and his staff kept the campus lovely and made it more so.



Joe Sugg in his element, showing off the new library. See our map of many contributions he made to Santa Clara at magazine.scu.edu.

He was a quiet force behind transformation. With his guidance and support, Santa Clara became a leader in sustainability. (Joe was born in Arkansas in 1944 and credited sensibilities he learned growing up on a farm; his parents were educators.) "One part of it is running a sustainable campus. We are also attempting to give students a culture of sustainability so that they will run a sustainable life or business for the next 60 years."

Unbeknownst to many here: He was a retired Air Force colonel. He flew jets in Vietnam, and at the end of the Cold War, as a base commander in Arizona, he oversaw demolition of missiles for which he'd helped develop control systems years before; they were no longer needed. It meant a great deal to him to see the dedication of SCU Veterans Plaza in November 2014.

Joe adored the Wall of Climbing Roses

that runs for half a mile on the edge of campus: 200 heritage roses, some quite rare. His wife, Marianne, was the force behind that. When it came to roses, "I'm what my wife refers to as the under gardener," he said. "I dig the hole wherever she wants it."

After his retirement in 2014, in this magazine we paid tribute to Joe Sugg with an illustrated map marking some of the significant buildings and projects he had overseen. Count among them: the Music and Dance Facility; Victor B. and Julia Botto Vari Hall, home to the College of Arts and Sciences; Pat Malley Fitness and Recreation Center; Sobrato Residence Hall; Casa Italiana Residence Hall; the landmark Harrington Learning Commons, Sobrato Technology Center, and Orradre Library; Lucas Hall, home to the Leavey School of Business; University Vil-

las; the experimental Commons on Kennedy Mall; Paul L. Locatelli, S.J. Student Activity Center; Stephen Schott Stadium; Sullivan Aquatic Center; the Patricia A. & Stephen C. Schott Admission and Enrollment Services building; the new Graham Hall; Stevens Soccer Training Center; and the Edward M. Dowd Art & Art History Building, which just opened in fall 2016.

It is no secret that students who are admitted to Santa Clara and come here for a visit tend to be smitten with the beauty of this place, and that alumni from across the years who return marvel at the dedication and care that are manifest in ways big and small. Joe Sugg is one important reason why that is so.

We lost Joe on July 25, 2016. A celebration of his life was held here on the Mission Campus, and he was buried at the Air Force Academy in Colorado.

PHOTOGRAPHY BY CHARLES BARRY

and operated McColl's Dairy and Pepsi Cola Bottling of Northern California and was an active and award-winning member of the community. He felt that a life well lived meant being challenged, contributing to society, and improving whatever you worked on. He was married to Betty (Ahern) and had four children.

Vincent West Reagor J.D. was born in 1929 in Reno, Nevada, and died on May 3, 2016, in Washington state. Vince was an Army veteran, a police officer, and a prosecuting attorney. Throughout his legal career, he practiced and taught other prosecuting attorneys their responsibility under the case *Berger v. U.S.*, which holds prosecutors to a higher standard than other attorneys. Vince is survived by Kati, his wife of 45 years, a daughter, two grandsons, and a great-grandson.

1958 Seventy-nine-year-old **Harold John Kopp**, of Harrison City, Pennsylvania, died at home surrounded by his family on Feb. 11, 2016. Hal was born in San Francisco in 1936. He was an Army veteran, a member of St. Barbara Catholic Church, and the loving father of four children, among them **Alvin B. Kopp '87**. Hal also had 13 grandchildren.

1960 **John Thomas Casey**, a 56-year resident of Nevada City, California, died June 22, 2016, at 78 years old. Born in Burns, Oregon, John developed juvenile rheumatoid arthritis, and although the effects of this disease changed his life dramatically, he didn't let it define him. At SCU, John was active in the male chorus and served as vice president of the student body. This is also where he met, Claire, a San Jose State nursing student, after seeing a photograph of her on his roommate's desk. They married in 1960, and the rest is history. He had a long career in the lumber business and raised four children: **Kathleen Gianotti '83 (Jerry Gianotti '83)**, Kevin (Sara), Mark (**Kirsten Casey '89**), and **Julie Fraser '90 (Brent Fraser '90)**. He loved birthday gatherings, toasting at weddings, strong hugs, barbecues, coaching, and being active at church.

1962 **Samuel Palmer Eastman III** passed away peacefully Sept. 24, 2016, at age 76, following a brief illness. Born in Woodside, California, Sam was known for his work ethic as owner of Monterey County Petroleum. There wasn't a hand he wouldn't shake, dollar he wouldn't give to someone in need, or person he would look down on.

WITH AN ASTERISK* **Alan A. Parker J.D. '64** had just one gap in his legal résumé. He never graduated from college. In high school, Parker preferred reading in the library to class and ultimately took advantage of a policy that allowed credit for life experience to start his law career. Parker studied for a year at San Francisco College of Law and completed a full three-year legal course at Santa Clara.

BRAVING THE COLD (WAR) Working for USAID in the early 1990s, **Larry Henninger '64** traveled to Russia to share his enthusiasm for entrepreneurship as the country transitioned from communism. It was a disappointment to see Russia revert to old ways of operating. Nevertheless, he retained lasting friendships with his Russian contacts.

He gave every spare moment to his family, community, friends and beloved Fiddleback Ranch. Sam joined the California Rodeo Committee in 1964, serving as chair of the Announcing Committee, chair of the Nomination Committee, director, and as president 1990-91. He was known to wear a silver felt cowboy hat and director's shirt.

1964 **Alan A. Parker J.D.** practiced law on a national stage, working for U.S. Rep. Don Edwards and serving as general counsel for the U.S. House Judiciary Committee during the impeachment effort against Richard Nixon. He was also assistant attorney general under President Jimmy Carter. Parker was instrumental in forming the California Democratic Council, a network of Democratic clubs that became the organizational backbone of the party, and in 1960 he was part of a movement to draft Adlai Stevenson for a third presidential run. He also participated in an expansion of the Voting Rights Act and the investigation into the Kent State shootings. "Alan never lost his fidelity to truth and the Constitution, and he never lost his marvelous sense of humor and dedication to his family," said U.S. Rep. **Zoe Lofgren J.D. '75**. He died Sept. 2, 2016, at the age of 88 in Lincoln, California.

What business consultant **Larry Henninger MBA** enjoyed most was helping people—clients, friends, or family—find how they might be all that they could be. After completing his MBA, Henninger served on the Business School Advisory Board and started the CEO Forum, a group of small-company CEOs who met monthly. Whether in long conversations over dinner, formal meetings, or phone calls in times of difficulties, Larry was there to listen. He was born in Roseburg, Oregon, and was married to **Amber M.A. '71, MBA '80**. Larry died in Palo Alto on April 11, at age 83.

1966 **George Drazic M.S.** passed away Nov. 2, 2016, at his home. He lived in Capitola, California, after he retired from a career working in the aerospace industry, including for Convair and Lockheed Missiles and Space Co. He spent the last 25 years of his career working on top-secret "black programs." Partly because of his respect for secrecy, and partly because of his personal integrity, his family did not know what he did all those years. It has been 29 years since he retired from Lockheed and the best guess was that he was an expert "structures" engineer on the 50-foot-diameter parabolic radio antennas for spy satellites.

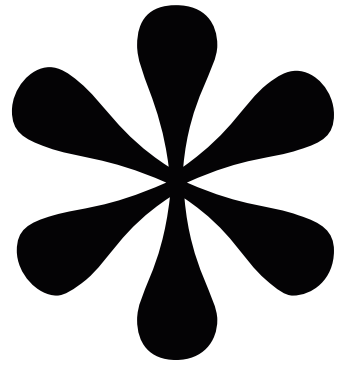
A lifelong runner and gym rat, **Steve Pasecky** was one of the original members of Santa Clara crew; he was inducted into the Santa Clara Athletic Hall of Fame, along with the rest of the initial crew, for the 50th reunion in 2016. Steve served in the Air Force flying F-4s. He was on active duty for 13 years and spent another 13 years in the reserves. He traveled the world as a United Airlines captain. He died on his birthday, July 11, 2016, at age 72. His wife, Ellen, and three children survive him.

Margaret "Peggy" Elizabeth (Enright) Wicker, resident of Anaheim Hills, California, passed away at her home in July 2016 after a long struggle with cancer. Peggy was born in San Diego in 1944. She was an elementary-school teacher in Orange County for 35 years and was a published author. She enjoyed cruising around the world and was always excited to share her plans for her next great adventure. Peggy is survived by her son and brothers, among them **William Enright '63**.

Donald Clendenning M.S. began his life in 1931 in Gananoque, Ontario. For 50 years, he lived in Willow Glen while working at Lockheed Missiles and Space designing flight control systems for missiles, followed by managing teams of engineers in the guidance and control division. Don had many interests—camping, tennis, hockey games, bird watching, traveling—but foremost was his love of family (wife of 62 years, Carolyn King, three children, and seven grandchildren). Don passed away on Aug. 9, 2016, in Lake Oswego, Oregon.

1967 **John McInerney** passed away on Aug. 8, 2016, surrounded by his wife of 39 years, Evelyn McInerney, and their two children. Born in Los Angeles in 1945, John grew up in Temple City, California. At SCU, he played on the baseball team. A proud Vietnam War veteran, John enjoyed a successful, 40-year career as a commercial insurance broker. Of his many achievements, John was most proud of his family and leaves behind a legacy of love, laughter, and an exemplary life.

1969 Former secretary of the California Senate and CEO of the California Senate Rules Committee for 18 years, **Gregory Palmer Schmidt** passed away Aug. 24, 2016, at age 69. He was a leader, a counselor, a classics scholar, a humorist, and a visionary. The Oakland native was always an advocate for others. His wit and kindness were legendary. His family—among them daughter **Korina Tanner '93** and



Faith and Justice, simplicity and moderation, serenity and savvy: **Peter-Hans Kolvenbach, S.J.**, 29th Superior General of the Society of Jesus. Born in the Netherlands in 1928, he led the Jesuits for a quarter century, beginning in 1983. In October 2000, he delivered a landmark address on the Mission Campus that called for a new way of defining Jesuit education.

Here at Santa Clara, President Paul Locatelli, S.J. '60 took that to heart in broadening the educational mission of the University. Fr. Kolvenbach died in November in Beirut, Lebanon, where he had served as a Jesuit since retiring as Superior General in 2008. Here we offer excerpts of his Santa Clara address, "The Service of Faith and the Promotion of Justice in American Jesuit Higher Education."

Thanks to science and technology, human society is able to solve problems such as feeding the hungry, sheltering the homeless, or developing more just conditions of life, but remains stubbornly unable to accomplish this. How can a booming economy, the most prosperous and global ever, still leave over half of humanity in poverty?

Injustice is rooted in a spiritual problem, and its solution requires a spiritual conversion of each one's heart and a cultural conversion of our global society so that humankind, with all the powerful means at its disposal, might exercise the will to change the sinful structures afflicting our world.

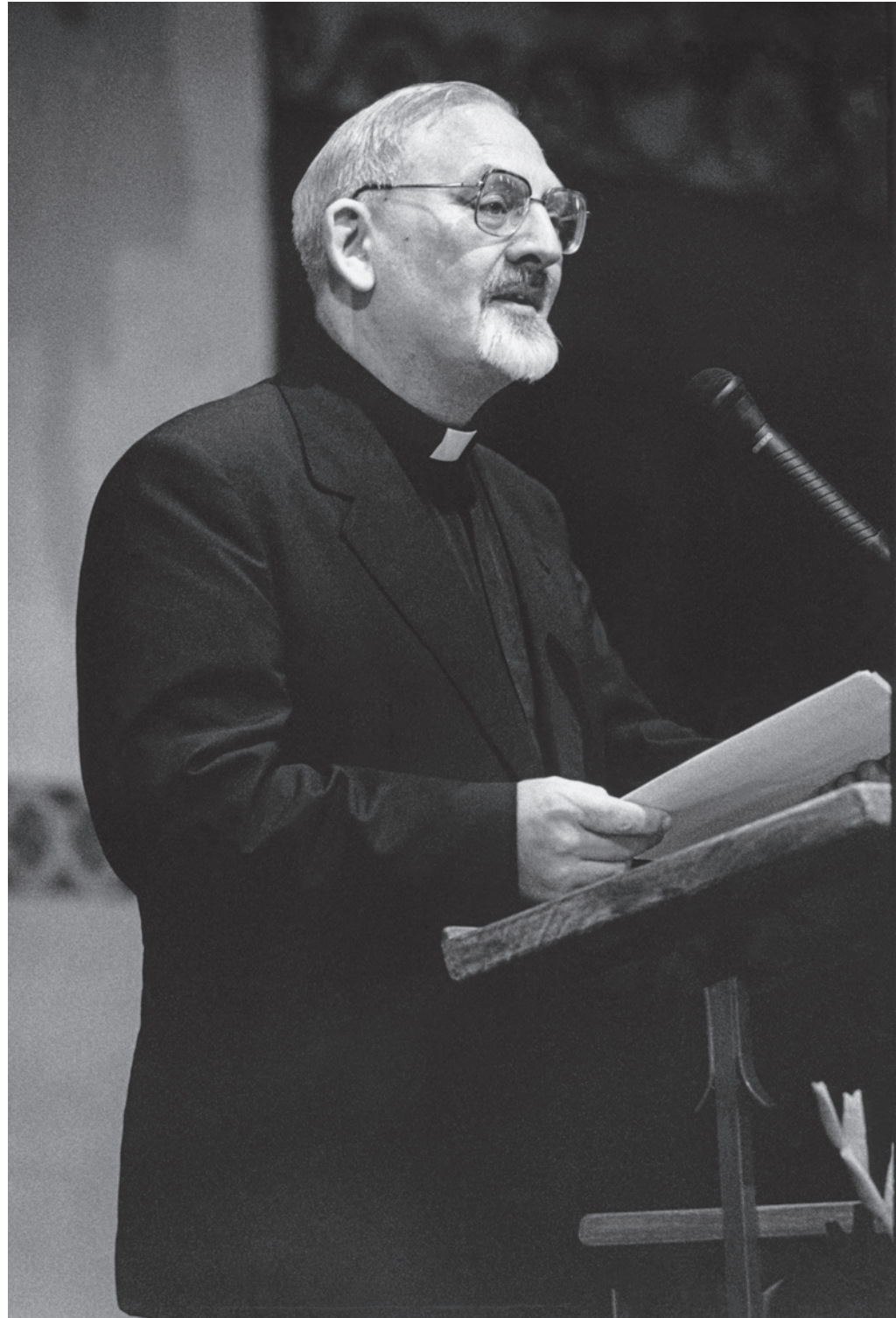
Such is the world in all its complexity, with great global promises and countless tragic betrayals. Such is the world in which Jesuit institutions of higher education are called to serve faith and promote justice.

Today's predominant ideology reduces the human world to a global jungle whose primordial law is the survival of the fittest. Students who subscribe to this view want to be equipped with well-honed professional and technical skills in order to compete in the market and secure one of the relatively scarce fulfilling and lucrative jobs available. This is the success which many students (and parents!) expect.

All American universities, ours included, are under tremendous pressure to opt entirely for success in this sense. But what our students want—and deserve—includes but transcends this "worldly success" based on marketable skills. The real measure of our Jesuit universities lies in who our students become.

Read and listen to the address in its entirety: magazine.scu.edu

Fr. Kolvenbach first visited SCU in November 1989 (shown here), to stand in solidarity with the Jesuits murdered in El Salvador.



PHOTOGRAPHY BY CHARLES BARRY

brother **Paul Schmidt '72**—meant the world to him.

1970 As president of his company, **Lawrence Wisne** built Progressive Tool and Die (PICO) from a business that started in his father's garage into an international powerhouse and one of the largest private companies in America. He also became a premier restaurateur in the Midwest, advancing fine dining in the Detroit area. He had a deep love for athletics, photography, nature, cooking, his faith, and his family. Larry was born in Detroit and passed away in Florida on Sept. 19, 2016, at age 68. His daughter-in-law is **Allison Wisne M.A. '08**.

1975 **Terry Kane** joked that he spent more than 20 years practicing law in different offices in downtown San Jose, all within a 9-iron shot of Almaden Blvd. and Santa Clara St. Terry was born and raised in Merced, California, and was an expert in trusts and estates law—he authored *The Wise Planner*—and later moved on to banking. The father of two was also a piano player, scuba diver, and camera-bag Sherpa for his wife, Judy. He died on May 2, 2016. Survivors include his brother, **Thomas J. Kane III '73**.

1978 **Rebecca Louise Vacura Lessley** died in Tucson, Arizona, on Aug. 8, 2016. Becky was born and raised in Fairbanks, Alaska, with nine siblings, among them **Patty Vacura Hollands '79** and **Julie Vacura '81**. She was a teacher, with kindergarten being her favorite class, and was later named British Petroleum Teacher of Excellence. Becky's ready smile, infectious laughter, generosity, and open door made everyone feel welcome and special. She leaves behind husband Mike, three children, and two grandchildren. She was 60 years old.

1986 **Linda (Kalcic) Hanson** of San Jose passed away at home on May 3, 2016, after a difficult struggle with pancreatic cancer. She was born in 1964 in Mountain View, California, and had fond memories of childhood summers cutting some of the last apricots grown in Santa Clara County. She grew up trying numerous hobbies, including needlepoint, guitar, and gymnastics, but she found her true passion in cooking. She enjoyed hunting down recipes and hosting wine tasting and dinner parties, where she gladly and easily prepared the whole meal. After graduat-

ing college, Linda worked in the field of marketing at various technology companies, including Apple, Sky Pilot, Echelon, and Citrix. In 2007, Linda married Brad Hanson, and they welcomed their daughter, Nicole, into their family just over six years ago. She was happiest spending time with her family making wine, enjoying Sunday dinners, camping, and making the family's traditional holiday Kiflin cookies.

1989 **Robert Pursel MBA** of Fremont passed away suddenly June 19, 2016. He studied at U.C. Berkeley and earned an MBA from Santa Clara University. He served as a lieutenant in the U.S. Navy and was an Eagle Scout. His passions were his family, flying his airplane, and spending time in Maui. Robert is survived by his wife Toni, four children, one granddaughter, and his brother.

2008 **Phil Cullen MBA** passed away on May 3, 2015. He was a senior consultant with Manex, a nonprofit NIST affiliate, helping small to midsize manufacturers to be more competitive. He had previously worked at the Lawrence Berkeley National Laboratory and at Read Write systems.

2018 **Owain Boughtwood**, an English major, died June 24, 2016, after an automobile accident. Owain's home was Canterbury, England, and through parentage he was a proud Welshman. The 21-year-old was a skilled footballer with an awesome left foot and change of pace. He loved music and was an accomplished musician, teaching himself to play guitar and drums. Owain was sweet, loyal, and decent, the youngest of six children.

Faculty, Staff, and Friends

Mark Ardema was a world authority on dynamics, trajectory optimization, singular perturbation theory, game theory, and hypersonic aircraft trajectories and structures; he taught dynamics and control theory, served as chair of mechanical engineering, and wrote two textbooks. He received his Ph.D. in mechanical engineering from the University of California at

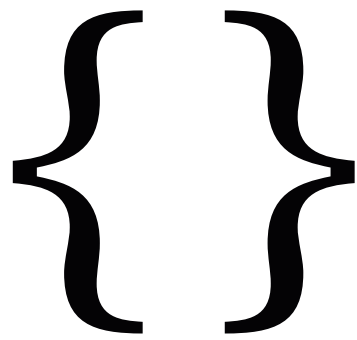
WHAT'S LIGHTER THAN AIR? During the late 1970s and 1980s, **Mark Ardema** researched the feasibility of lighter-than-air technology for NASA, including large airships like blimps and zeppelins. The airships, usually fuel efficient, were considered as a way to combat rising oil prices.

Berkeley while an active research scientist at NASA Ames Research Center. But he once said that despite all his professional accomplishments, the single greatest thing he ever did was have children. He was an avid sailor, and he and wife Lynda toured the west coast of North America. He skied—sometimes 20 runs a day. He sometimes joked that he had thighs made of redwood trees. He is survived by Lynda and children **Aubrey Ardema J.D. '03** and **Matthew Ardema '02**.

Rich Toomey J.D. '82 was a man with smiling Irish eyes. His California and later Texas plates read *BXLNTI* (or Be Excellent)—a nod to *Bill and Ted's Excellent Adventure* and a reminder to be excellent to one another. Be excellent was also his approach to work, and it helped enable many thousands of students to attend Santa Clara. Joining SCU as director of financial aid in 1974, Rich spent 42 years at the University before retiring as dean of University Financial Aid Services. He didn't believe in shortcuts and was known to say some of the best work you do is after 5. Rich was a South Boston native. He had a warm smile, open heart, and a quick wit. He was a wonderful brother, husband, father, grandfather. He loved **Kurt Rambis '80** and the Oregon Ducks; Rich passed away Oct. 30, 2016, while returning home to Santa Cruz after attending an Oregon football game. He was an honest man, an advice man; he excelled at it and people came to him for it. His son David once asked what he should do for a living. Rich told his son he excelled at two things: producing hot air and moving furniture. He suggested David put one to use. David became a lawyer and met his wife Sarah when he offered to move a stranger's couch—following his father's good advice.

Let's dance: Rich Toomey and his grandkids





Here Comes the Sun. In the chapel of the Jesuit Residence on the corner of Franklin and Alviso streets, you'll find six panes of stained glass. A view from outside only hints at the warmth and brilliance with which they bathe the interior. The glass has journeyed to a new home since it was first commissioned in 1975 by **William Rewak, S.J.**, then President of Santa Clara.



THE CHAPELS For decades the Jesuits and their chapel resided in Nobili Hall, built in 1930 and named for the first president of Santa Clara. (That's groundbreaking, left.) The new Jesuit Residence was constructed in 2006 to be "a place open to campus to develop relationships," says **Gerdenio "Sonny" Manuel, S.J.**, who previously served as rector of the Jesuit community.

*The new layout elicits a different effect—these panes with the sun create a spark of color rather than a cascade of light. "It has a tremendous depth of intensity," says **James Blaettler, S.J., minister of the Jesuit community.***



THE ORDER In Nobili, the six panes were afforded space to create a horizontal landscape across the back wall—like we've re-created here on the page. In the Jesuit Residence Oratory, the order has been shuffled a bit to fit the space.



THE ARTIST Roger Hogan of Oregon's Hogan Studios designed a sunrise to represent the "growing light of Christ." Look, and you'll see swirls from Hogan's tools in the glass.



The technique used is dalle de verre—French for "glass slab"—and involves laying thick and uneven glass in epoxy resin. This produces deeper colors—and very heavy windows, weighing about 10 pounds per square foot.

THE ANGELS The old chapel in Nobili Hall is now home to Miller Center for Social Entrepreneurship—which fosters global, innovation-based entrepreneurship in service to humanity. While blinds have replaced the stained glass in the room, sculpted angels still keep watch, and a 10-foot-tall wooden cross anchors one wall.



WORDS BY MAURA TURCOTTE '17; PHOTOGRAPHY BY CHARLES BARRY AND JOANNE LEE

REFLECT. ACT.

Lidia Diaz-Fong '17 fell in love with Santa Clara, then made it better: student government, internships, clubs, Greek life. As a senior, she was elected student body president. She's busy. And, she says, as the daughter of two immigrants and as a LEAD Scholar, life as a first-generation college student isn't easy. "We don't hear stories from our parents about social life, classes, how to manage time, how to socialize." ¶ Here, she relies on a devoted support system: bright, passionate friends as well as people like LEAD Director **Erin Kimura-Walsh** and Professor **Jane Leftwich Curry** in political science. Whether it's advice on leadership or just a sounding board, they're a text or call away. ¶ Lidia interned with the U.S. House of Representatives last year and wants to return to D.C. after grad school. She'd like to make a difference in politics. ¶ Scholarships were instrumental in her coming to Santa Clara. Even if you're just considering giving, she says thank you. *Are you in? scu.edu/give*





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