Berkeley Heroes — Bolts of light piercing the darkness

A banner year for faculty fellowships

A new hub for all things design
This fall marks the start of my third academic year as Berkeley’s chancellor. Every day I meet students intent on changing the world, professors who inspire me with their expertise and passion, and alumni who give back to the university in all manner of ways. In The Promise of Berkeley, I look forward to sharing with you exciting initiatives that serve and inspire these valued members of the Cal community.

Berkeley is, without a doubt, one of our country’s most important educational institutions. Not only do we advance cutting-edge research to enhance the public good, we also make an impact on our students that is — in a word — unparalleled. UC Berkeley offers access to an extraordinary world of knowledge for more students from a broader spectrum of socioeconomic backgrounds than any of our peers. We are proud to be recognized as one of the world’s best universities in ranking after ranking, and are equally proud that we are the flagship campus of the great UC system, recently recognized by The New York Times as “California’s upward-mobility machine.”

Bringing together an incredibly diverse student body — in socioeconomic, ethnic, religious, political, personal identity, and other terms — is a hallmark of the Berkeley experience. As we continue to build a
cohesive and supportive community, I am thrilled to announce that a major campus project deeply connected to this effort was completed this fall: a new student union and outdoor plaza, a common space at the heart of student life.

The new ASUC Student Union is a modern complex representing more than 10 years of hard work in which students played leadership roles at every stage — from voting en masse to help fund the project through student fees, to collaborating directly with the architects. Among its amenities are spaces to study, socialize, meet, eat, buy books, and even repair bicycles. It also brings together, for the first time, hundreds of student organizations and services that were previously scattered across campus.

Everyone, including you, is welcome in the complex, so please stop by when you’re visiting. And thank you for continuing to support and advocate for Berkeley, what it stands for, and its impact on California and the world.

Nicholas B. Dirks
Chancellor
During times of deep unrest, whether in our personal lives or in the world at large, we need heroes to show us what’s right and reveal the qualities that will help us triumph. Heroes protect us when we’re in trouble, take care of us when we’re vulnerable, solve vexing problems, and quench our thirst for justice. Berkeley heroes in particular, motivated by the motto *Fiat lux*, bring light into a dark world.
With hundreds of thousands of students, faculty, and alumni, it is impossible to find every Berkeley hero. They are everywhere — throughout time, in every field and every corner of the world — summoning extraordinary powers from within to stand up for the greater good of humanity. Following are just a few stories that show how Berkeley heroes are tapping into the essential human needs for health, education, meaning, opportunity, and justice.
BERKELEY SCIENTISTS, ENGINEERS, AND INNOVATORS ARE WORKING TO KEEP HUMANS HEALTHY, FIGHTING VILLAINOUS ILLNESSES THAT IMPERIL OUR COMMON HUMANITY.

Alzheimer’s disease, currently diagnosed in more than 40 million people, threatens to steal away the memories that make up our lives, but scientists are working to see a better future — literally.

As a graduate student, ELIZABETH MORMINO PH.D. ’11 worked with neuroscientist WILLIAM JAGUST to combine PIB-PET and MRI imaging technologies in a new way. They sought to better detect beta-amyloid — a protein found in Alzheimer’s patients and close to one-third of clinically normal older individuals — in order to understand its relevance in people who lack Alzheimer’s symptoms. Their results suggested that this technique for identifying at-risk individuals may lead to prevention strategies.

Mormino, now at Massachusetts General Hospital/Harvard Medical School, was acknowledged for her imaging work by the MIT Technology Review as one of 2015’s “35 Innovators Under 35.” Jagust was recognized in 2013 by the American Academy of Neurology and the American Brain Foundation for his research. His continued investigations with Berkeley colleagues have revealed poor sleep as a channel through which the protein attacks long-term memory — another important discovery offering an opportunity to take action, as poor sleep is potentially treatable.
Super spoon quells quakes

For 11 million Americans with essential tremor or Parkinson’s disease, the simple act of eating can present a frustrating challenge. But today they can more easily enjoy a meal thanks to engineering alumni ANUPAM PATHAK ’04 and MICHAEL ALLEN ’11, whose Liftware utensil uses algorithms to detect and neutralize hand tremors. While Google purchased Liftware, opening up new avenues for the technology, Pathak remains focused on helping people regain the dignity of eating independently. As he told the Associated Press, “If you build something with your hands and it has that sort of an impact, it’s the greatest feeling ever.”

Bringing dengue down

A team of researchers led by molecular virologist EVA HARRIS, a professor in the School of Public Health, has identified a key culprit responsible for the potentially fatal symptoms of dengue virus infections.

Each year 390 million people are infected with the virus. One in four develop symptoms; most worrisome are the roughly half-million cases that progress to hemorrhagic fever or shock syndrome caused by fluid loss from blood vessels.

The team showed that the protein NS1, secreted by virus-infected cells, can itself cause blood vessels to leak, separate from the dengue virus. Blocking this protein in mice protected them from the lethal effects of dengue virus infection — which could make it a prime target for drugs or future vaccines.
WHETHER THEY’RE JUST DOWN THE ROAD OR ON THE OTHER SIDE OF THE GLOBE, BERKELEY’S FOOD AND ENVIRONMENT HEROES ARE HEROICALLY WORKING TO IMPROVE WHAT WE EAT AND DRINK.
When **NIKIKO MASUMOTO ’07** left her family’s peach farm in California’s Central Valley to study at Berkeley, she envisioned it as a one-way ticket out of farming life. But “my experience transformed my worldview so fundamentally, it led me back home,” says Nikiko, who cites classes in environmental studies and gender and women’s studies (her major) as the spark for doing something “based in courage and value.” Berkeley has been very good to the Masumoto family. Nikiko’s father, **DAVID “MAS” MASUMOTO ’76**, gained fame as an organic farmer, author of the 1995 book *Epitaph for a Peach*, and leading voice of the local-food movement. Thanks to Nikiko’s epiphany at Cal, and her desire to work alongside her father, the Masumoto farm continues to thrive, a success story in the eyes of those who question larger growers’ use of pesticides and their focus on longer shelf life over flavor.

“Our farm was fortunate to be connected to the emerging food movements,” Nikiko says, “and those eaters who care about sustainable agriculture have helped carry us to where we are today.”

See the trailer for Changing Season: On the Masumoto Family Farm, a documentary that chronicles a year of the family’s work, at promise.berkeley.edu/peach

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**Flushing out fluoride**

**KATYA CHERUKUMILLI PH.D. ’17** may hold the key to improving life in her native India. The environmental engineering graduate student has developed a **super-low-cost approach to groundwater purification** in a district near her birthplace. It would use slightly processed bauxite to remove excess fluoride — toxic in overly large amounts — reducing water cleanup costs from $50 to $1 per person.

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**Honoring a food hero**

In September, renowned chef **ALICE WATERS ’67** received a National Humanities Medal, honoring her commitment to healthy, sustainable foods. Waters is the proprietor of Berkeley’s world-famous Chez Panisse restaurant and founder of the Edible Schoolyard project, which encourages youngsters to grow their own fruits and vegetables.
As a young financial analyst on pre-recession Wall Street, Danae Ringelmann M.B.A. ’08 learned that it wasn’t the most enterprising entrepreneurs or brilliant artists who found funding for new projects — it was the ones with the right connections. And that didn’t sit well with the daughter of small business owners.

Ringelmann knew that she wanted to democratize how ideas got funded, but she didn’t know how. So she enrolled at the Haas School of Business, “an environment that would allow me to really think big.”

With the help of her classmate Eric Schell M.B.A. ’08 and his friend Slava Rubin, her vision took shape as an online platform. The trio co-founded Indiegogo in January 2008 — the first crowdfunding site that allows ideas to go viral and gives donors perks over profit shares.

Nearly eight years later, hundreds of thousands of inventors, artists, and non-profit groups have raised more than $750 million using Indiegogo, through contributions as small as one cent.

“Indiegogo helps ideas that are community validated rise to the top,” says Ringelmann. In other words, it’s the wisdom of the crowd.
In the annals of space exploration, NASA scientist CLAUDIA J. ALEXANDER ’83 will be remembered as a pioneer and role model — and, in her spare time, the author of steampunk fiction and science-learning books for kids.

The renowned geophysicist, who passed away last July, was NASA’s project scientist on the international Rosetta mission, which captured global attention when it successfully landed a spacecraft on a speeding comet.

“These things are difficult to do,” Alexander said in an interview prior to the landing. Of course, difficult was nothing new to her. She orchestrated the finale of the 2003 Galileo mission, overseeing the orbiter’s controlled death-dive into the planet Jupiter.

Her trailblazing career at NASA’s Jet Propulsion Laboratory meant she was often the only woman of color in the room, which she fought to change — by mentoring young people, writing children’s books, and spearheading the involvement of citizen scientists on Rosetta.

“This is among the purposes of my life,” Alexander said, “to take us from states of ignorance to states of understanding with bold exploration.”

INVENTOR OF MIRACLES

“They don’t have to walk backwards. They don’t have to climb ladders. What is important to millions of people is to be upright, mobile, and independent.” — HOMAYOON KAZEROONI, UC Berkeley professor of mechanical engineering and co-founder of Ekso Bionics. Now a publicly traded company, Ekso was the first to commercialize a bionic exoskeleton that is helping wounded veterans, stroke survivors, and others with lower extremity paralysis walk again.
Patrick Awuah M.B.A. ’99 left Ghana in 1985 with $50 in his pocket and a full scholarship to Swarthmore College. After rising through the ranks at Microsoft, he was inspired by the birth of his first child to shift his focus toward home — and the belief that higher education could revitalize a nation beset by poverty and corruption.

Awuah enrolled at Berkeley-Haas and turned an audacious idea to establish Africa’s first private liberal arts college into a student project. Ashesi University (Ashesi means “beginning”) was thus founded in 2002 to educate ethical, entrepreneurial leaders and help transform their home continent. More than 700 students have graduated, nearly all of whom have stayed in Africa — a significant accomplishment in a region where only 5 percent of kids attend college, on a continent from which an estimated one-third of professionals leave.

“There have been times when it has seemed like Mission Impossible,” Awuah told the Berkeley-Haas magazine, “but magic is happening.” His vision has made him one of Africa’s most respected leaders: in 2015 alone he was awarded a MacArthur “genius” Fellowship, Berkeley’s Elise and Walter A. Haas International Award, and a slot on Fortune’s “World’s 50 Greatest Leaders” list. His heroic status has been earned, in large part, by what he brought back from Berkeley.
Paying Education Forward

“Working with students that come from similar communities as mine is important for me to sustain myself,” says Jarvis Givens ’10, M.A. ’12. Now a Ph.D. candidate in African American studies, Givens was raised in Compton by his mother and grandmother. While attending a rigorous magnet high school, he saw presentations by two prominent Cal administrators of color. “As black men representing the university, they were able to speak in a way that made me think Berkeley could be a great option for me.”

Givens’s dissertation is on historian and educator Carter G. Woodson, the father of Black History Month, who believed in teaching black students about the societal factors that affect their lives. Givens puts his intellectual work into practice through his work in the Oakland Unified School District; with an enrichment program through his fraternity that just graduated its second cohort of college-bound students; and teaching at a community college. “A lot of people have invested in me in order for me to get to this place,” he says. “I feel obligated to do the same in return — or, if possible, do more.”
“I never would have created a language if I hadn’t gone to Cal; it changed my life.”

The Dothraki word for encouragement

Is there a word for “encouragement” in Dothraki, a language spoken on HBO’s Game of Thrones? Language creator DAVID PETERSON ’03 may not have included it in the vocabulary he designed for the horse-lords of the Dothraki sea, but he certainly encourages others. A co-founder of the Language Creation Society, Peterson guides fellow enthusiasts to create viable grammars and unique vocabularies for TV and film, games, and other media. His new book, The Art of Language Invention, details how he turned thin air into Dothraki and High Valyrian for Game of Thrones, Trigedasleng for CW’s The 100, and more.

Literature is not a competitive sport

When Berkeley English professor NAMWALI SERPELL won the Caine Prize for African Writing, she performed a mutinous act: she split the prize money with the four runners up. “It’s such a wonderful group of writers,” Serpell said in an NPR interview. “It felt weird and sad that we were going to be pitted against each other in some kind of battle royal. ... Literature is not a competitive sport.” A native of Zambia, Serpell is an avowed feminist whose fiction ranges from traditional narratives to surreal works such as her Caine-winning short story, “The Sack.” At Berkeley, she teaches courses on literary craft and theory, encouraging her students to explore art for art’s sake and create their own magic on the page.

MEANWHILE IN THE ARTS ... THESE WORD ALCHEMISTS ARE IGNITING OUR IMAGINATIVE POTENTIAL, TRANSFORMING AUDIENCES, AND CREATING LINGUISTIC AND LITERARY GOLD.
Bad ideas, great plays

Playwright YOUNG JEAN LEE ’96 engages in an unusual ritual to create her work. She thinks of the worst possible idea for a play and then forces herself to write about it. This method bewitches her inner critic long enough to let her tap her unconscious for challenging subjects, such as privilege, death, gender, and identity politics. Working with her eponymous theater company, she helps audiences drop their defenses and confront difficult questions by keeping them “disoriented and laughing.” Called “the most adventurous downtown playwright of her generation” by The New York Times, Lee ascribes her success to a willingness to meet fear of failure head on. Also known for her openness, she invites actors to help develop her scripts and encourages audiences to have their say at lively post-show talkbacks.
When a man walked into the Jacksonville, Florida office of attorney James Kowalski ’86 and said his bank was forcing him out of his house, mortgage fraud was not yet a national issue. Kowalski took the case — finding that the mortgage company had signed phony documents — and won.

Dozens of cases later — including a landmark one in which a GMAC Mortgage employee admitted to preparing documents no one had reviewed (“robo-signing”) — Kowalski is now considered a pioneer in exposing the foreclosure mess that has cost millions of Americans their homes. His testimony before Congress detailing the systemic use of false documents led to stronger legal protections for homeowners. He has also taught other Florida lawyers how to do this work, on his own time.

Keith and Vickki Jordan almost lost their home when life took an unexpected turn for the worse. Kowalski defended their foreclosure and guided them through the loan modification process.

“Everyone has a dream house, whether it’s a shack or a mansion,” says Vickki. “This is my mansion, and he was able to save it. He was like the guardian angel.”

Kowalski, who now leads Jacksonville Area Legal Aid, recently won Berkeley’s prestigious Peter E. Haas Public Service Award for his heroic efforts to advance civil justice.
Fueled by passion and a pledge to stay, Berkeley students will continue turning their good intentions into lasting results for the people of New Orleans.

It’s not uncommon for volunteers to swoop in after a natural disaster with food, money, medicine, and building supplies. It’s also not uncommon for them to leave, as life or new catastrophes call.

Ten years after Hurricane Katrina, Berkeley’s Magnolia Project has not given up on New Orleans. **More than 1,200 students have dedicated over 74,300 service hours to Gulf Coast restoration.**

While the experience touches each student differently, many quickly learn that effective recovery takes time. **ALICE CHAMBERLAIN ’08**, an early project leader, told *California* magazine, “By the second year, we found the need for hard physical work decreasing, and responding to our (local) partners’ needs on things such as food banks and daycare centers increasing. That involves … a much longer time scale than simply gutting houses.”
As the 20th century began, University of California benefactress Jane K. Sather had a vision — a bell tower that would serve as a centerpiece for Berkeley’s growing campus. In 1911, she cemented that vision with a large gift and a request that work proceed on Sather Tower. It was completed in 1915.

Happy Birthday, Campanile!
The Campanile, as it is commonly called, celebrated its centennial this past year, culminating with a site-specific performance by vertical dance pioneers Bandaloop. More than a beautiful monument, the Campanile is a trusty landmark, music box, guardian, and familiar friend. Most of all, it is a symbol of Berkeley’s enduring contributions to the world. Visit campanile.berkeley.edu for sound clips, an historic timeline, and the opportunity to share your Campanile story.
We asked you, “Can we talk?”
More than 2,500 of you said, “Yes!”

LAST JANUARY WE SENT A SURVEY THAT ASKED YOU
WHAT MATTERS MOST AND WHAT YOU WANT TO HEAR FROM US.

YOU TOLD US THAT YOU:

- Care deeply about Berkeley and its future.
- See the campus through the lens of your experience.
- Want Berkeley to remain the best public university in the world — whether you were transformed as a student, are a Cal parent, or met important people in your life here.
- Think the campus could do a better job of managing its volume and coordination of communications.

We want to improve how we communicate with you.
We’re continuing to listen.
Thank you for staying in touch!

I learned to live in the world at Berkeley.

Berkeley allowed me to have a world-class education at an affordable price, which enabled me to have my dream career.
small but mighty group of seniors has come together for decades to raise money for Cal. Here’s how it typically works: Every year, Berkeley staff members set the goal, build the student committee, and manage the campaign’s nitty gritty. Students then work feverishly to meet the goal.

That shifted last year when they asked to take on more. Inspired by a national conference where they met student fundraisers from other universities, Berkeley’s committee leaders wanted a greater share of leading the Senior Gift Campaign — and to see it grow long after they have graduated.

“The university can seem abstract and daunting to many students,” says Lena Horvath ’16 (middle), president of the 2015–16 Senior Gift Committee. “By redefining our responsibilities and making the campaign a student-to-student cause, it became more rewarding to participate in.”

The committee also opened the campaign’s doors to other students — so you don’t have to be a senior to volunteer or give.

“We used to focus on getting donations,” says Abby Nagle ’16 (top), head of logistics. “Now we’re focused on educating everyone across campus about what philanthropy means and why it matters. That makes the money part easier!”

Last year’s results were immediate and impressive: 1,640 donors gave more than $98,000.

“We give back because we want to leave our mark on a place that has changed our lives,” says Pamela Sherman ’15 (bottom), a former committee leader.

That’s exactly what Berkeley is all about — empowering students to be impassioned leaders for what they believe in. Except this time, the university itself is benefiting.
New cybersecurity center flashes forward to 2020

We live in a time when the line between the public and the personal has become blurred, and power struggles that take place in the virtual realm of 1s and 0s can have major consequences in real life.

Berkeley is now poised to lead the nascent field of cyber policy analysis — how best to ensure the security of sensitive data, while encouraging innovation and protecting the broader public interest. As part of its Cyber Initiative, the William and Flora Hewlett Foundation selected Berkeley, Stanford University, and the Massachusetts Institute of Technology (MIT) to receive $15 million each to advance our understanding of security in the digital age. While each school will take a slightly different tack, Berkeley established the Center for Long-Term Cybersecurity (CLTC) in the School of Information (I School). Steven Weber, an I School and political science professor, serves as faculty director.

When Weber joined Berkeley in 1989, his research focused on national security during the Cold War. Since then, he says, our concept of security has changed significantly, and the quality of our collective human future depends on how well we navigate the vulnerabilities that have arisen as a result of our ever-increasing connectivity.

“Security is no longer about avoiding nuclear annihilation, or even about someone hacking into the Pentagon,” he says. “Today, security means the
most important values that people hold when machines and humans interact.”

In the 90s, Weber became interested in what he calls “the iconic problem” in international relations — how do you encourage large-scale, non-hierarchical cooperation? Around that time, the open source software movement and the collaborative environment that made it possible grabbed his attention, and he wrote *The Success of Open Source*. Today, Weber’s work on humanity’s interface with technology joins a growing body of research that supports his assertion that cybersecurity is a “master problem that we have to manage.” Making use of the breadth of Berkeley’s intellectual capital, the CLTC is cultivating interdisciplinary inquiry around this critical issue.

“You might guess that this work touches on computer science, economics, healthcare, and law,” says Weber. “But how about sociology, linguistics, and anthropology?”

Approaching the complex interactions between humans and machines from multiple angles, the CLTC seeks to create dialogue among industry, academia, and government and anticipate challenges to societal and individual wellbeing that may arise as we deepen our engagement with digital networks and tools. In its inaugural year, it is developing scenarios that will serve as models and help the center’s leadership determine the best avenues for research.

The CLTC recently welcomed a new executive director and senior research fellow. They join faculty researchers who are determined to get ahead of emerging problems in the rapidly evolving technological landscape, not simply react to crises as they occur. When 2020 arrives, Berkeley faculty will have seen it coming — and their insight will help people co-exist productively, safely, and meaningfully with the machines of our collective creation.

THREE KEY QUESTIONS THE CLTC IS INVESTIGATING

1. In an era of decentralized information, how will conceptions of privacy, intellectual property, and personal safety evolve?

2. What role will big data play in understanding health and wellbeing?

3. Will the “internet of things” improve our ability to manage resources in the face of climate change and other challenges?
Digitizing the underground

KALX 90.7 — like many college radio stations — exists on the far left of the FM radio dial, and the 53-year-old station is tucked away in the basement of Barrows Hall. It just isn’t on the map for most big-money donors.

So when an anonymous gift of $20,000 arrived last year, Station Manager Sandra Wasson asked, “KALX, really? Are you sure?” But she knew exactly what to do with it — digitize roughly half of the station’s 800 reel-to-reel tapes of studio and on- and off-campus performances from the late 1970s to the early ’90s.

The audio goldmine includes the likes of Los Lobos, Chris Isaak, Nick Cave, Toots and the Maytals, John Lee Hooker, New Order, Iggy Pop, and the Talking Heads. “This really is about preservation of historical content,” says Wasson.

Since most reel-to-reels have degraded over time, they must be baked before being processed off the machine and digitized. But the student volunteer spearheading the project — using the low-fi method of a food dehydrator — graduated, putting the project on hold until the prestigious Berkeley recording studio Fantasy Records took over. “I’m sure they’ve got something that’s much more high-tech than a food dehydrator,” says Wasson.

When the digitization is completed next year, KALX plans to broadcast the revitalized “basement tapes.” And while copyright restrictions prevent download of the recordings, they could be an important contribution to a radio preservation project of the Library of Congress.

“This collection,” says Wasson, “is the perfect thing for that list.”
Doctoral students drive their own discoveries, catalyze faculty-led research, and inspire and mentor undergraduates. We know that fostering their talent yields incredible results.

To support our outstanding graduate students — while countering downsized state support, the high cost of living, and stiff competition from our private peers — Berkeley launched a program in August with the potential to significantly raise both the number and amount of fellowships we can offer. Berkeley Endowments to Attract and Retain Graduate Students (BEAR GradS) aims to create $1 million fellowship endowments by pairing private gifts of $500,000 with $500,000 in matching funds. The first five matches were made possible through the bequest of Helene I. Cantor ’35.

“We are thrilled that visionary donors have stepped up to seize this opportunity in only a few months,” says Fiona Doyle, the new dean of the Graduate Division. “It can truly pay forward the benefits of a doctoral education to new generations of students.”

Efforts are underway to expand the matching opportunities in 2016.

Li-chiang Chu ’64, M.S. ’67, who studied nutritional sciences as a master’s student, established the first BEAR GradS fellowship for the College of Natural Resources.

“It was an easy way for me to say thank you for an education that enabled an interesting and satisfying career,” says Chu, a solid supporter and UC Berkeley Foundation trustee.

“Berkeley in some magical way allows our students to be more than they would have been had they attended another university,” says Doyle.

To learn more about BEAR GradS, email gradsupport@berkeley.edu
Every year, Berkeley professors shine in attracting prestigious awards, reflecting our long history as a research powerhouse and top draw for foundations willing to fund bold ideas. This past year, Berkeley knocked it out of the park — particularly young faculty who received coveted fellowships that allow them to experiment with high-risk, high-potential concepts.

These substantial early-career grants come at a crucial time when young faculty have a lot to balance: building a lab, seeking funding, and teaching, while also generating their own breakthrough research. Here are three of our rising stars — pursuing very different ideas while sharing appreciation for Berkeley’s collaborative culture.

POLINA LISHKO
Assistant professor of molecular and cell biology
2015 Sloan Research Fellowship and 2015 Pew Scholar

Research: Understanding the basic molecular mechanisms underlying mammalian fertilization and pain perception. Findings could lead to the development of safe unisex contraceptives, more advanced diagnostic tests for male infertility, and novel strategies to manage pain.

“These awards are a big help coming at a time when governmental funding is decreasing,” says Lishko. “Berkeley is an amazing place because I’m surrounded by the brightest people. There’s peer pressure, but it’s friendly, stimulating, and supportive in the best ways. Being at Berkeley means that we are constantly exposed to new discoveries, developments, and breakthrough technologies such as gene editing, which are ultimately going to help our research as well.”
Research: Developing new methods of computation and optical system design to turn simple microscopes into cutting-edge imaging machines. Applications include optical and x-ray microscopy for biology, defense, physical science, and semi-conductors.

“We are building tools for a lot of different applications for more broad-based research. We’re more about figuring out what is possible first, and then looking for the problems that it can solve and what we can do with it,” says Waller, adding that “Berkeley is the best place to collaborate across all departments. It’s very easy to talk to people and brainstorm how to apply something to a completely different area.”

Research: Role of prenatal inflammation in autism, and testing the hypothesis that sex hormone nuclear receptors can repress inflammation and restore normal immune function in the brain. Findings could lead to the development of therapeutic treatments for autism.

“Right now five times more boys are affected by autism than girls,” says Saijo. “I’m looking at gender bias, and proposing quite a new idea and directions, but high-risk proposals are normally very difficult to get funding for.” She came to Berkeley “because it’s highly encouraged to do a multidisciplinary approach. It’s so easy to approach people, and so supportive to find collaborators. That makes it possible to try something completely new.”
A rocking chair that harnesses its user’s motion to generate electricity. A stethoscope that amplifies and digitizes heart sounds, giving doctors an easier read on normal versus abnormal sounds. A solar lantern that offers a sustainable, affordable alternative to kerosene lamps used in the rural Philippines.

These sound like technology innovations you might find inside a startup incubator. In fact, they are student projects that took shape in the College of Engineering and its Jacobs Institute for Design Innovation, which opened its new home, Jacobs Hall, in August. The hall was funded entirely by philanthropy, starting with a cornerstone gift from the Paul and Stacy Jacobs Foundation.

The light-filled building is full of open design studios and the latest equipment for digital design, prototyping, fabrication, and manufacturing. More than a place for students to experiment, it is the physical link between their creative ideas and solutions that meet real needs in health, energy, and communications.

“It’s so cool to make something yourself, to know that it came from your head and that you can make something tangible — anything you can think of — and change the world with that,” says Paul Jacobs ’84, M.S. ’86, Ph.D. ’89.

Sanjay Mehrotra ’78, M.S. ’80 and his wife, Sangeeta, were among many donors who stepped forward to help open the hall. “In making this gift, we honored the pivotal role that my parents played in inspiring me to attend Berkeley,” says Sanjay. “They taught me that if you seek success, start with tenacity.”
A mix of tenacity and inventiveness is already evident in the 1,300 students participating in design activities during the institute’s first semester. Among the new courses offered in Jacobs Hall are a freshman seminar called “How It’s Made,” a class on user interface design, and a lab in which student teams compete to create socially conscious products.

Shanthi Shanmugam ’16, who is studying electrical engineering and computer sciences, is leading student efforts to create a larger design community through workshops, design-a-thons, and other events.

“Jacobs Hall is a space where students from different years and disciplines can collaborate on interesting projects and hang out with open-minded people doing incredibly interesting things,” says Shanmugam. “Our community finally has what it needed the most — a home.”

Professor tapped to lead Arts + Design

Shannon Jackson has been named Berkeley’s first associate vice chancellor of arts and design. A faculty member with deep ties to many academic areas and cultural institutions on campus, she is charged with coordinating a huge range of creative resources, as well as fostering community engagement.

“Berkeley’s strengths in the arts and design are wide, deep, and historic,” she says. “My job is to mobilize our terrifically talented brain trust to activate our creative strengths as a campus.”

Each year more than 25,000 students take a course on the history or analysis of the arts and design, and more than 9,000 are practitioners. Jackson imagines a future in which all students gain meaningful exposure to this creative ethos, “whether they are encountering artistic work in museums, theaters, and labs or creating their own new work.”
1. Geri ’84 (left) and Bryan ’83 (right) Wilson celebrate Homecoming Weekend in October with their son, freshman Joshua ’19, at the College of Natural Resources picnic.

2. Seniors enjoy a sushi dinner provided by alumnus Tonny Soesanto ’80 on the newly renovated College of Chemistry patio to celebrate the kickoff of the Class of 2016 Senior Gift Campaign.

3. Cal in the Capital students and alumni mark the 50th anniversary of the program and the launch of a $5 million endowment campaign. Left to right: Urvashi Malhotra ’15, Alana Floyd ’15, Arthur Shartsis ’67, J.D. ’71, Justin Germain ’15, and Anne Seymour ’15.

4. At Cal Performances’ Gala at the Greek, conductor and guest of honor Gustavo Dudamel poses with Professor Janaki Bakhle, Chancellor Nicholas Dirks, and Cal Performances Director Matias Tarnopolsky. The event raised more than $650,000 to support the arts organization’s education and community programs.

6. Goldman School of Public Policy board member Catherine Unger ’69, C.Sing. ’70 and her husband, Leonard J.D. ’70, meet new board member Wayne Brown M.P.P./J.D. ’92 at a recent dinner.

7. At the August ribbon-cutting for the new Jacobs Hall, Janelle ’86 and Michael ’87 Grimes, Dean of Engineering Shankar Sastry M.S. ’79, M.A. ’80, Ph.D. ’81, Paul Jacobs ’84, M.S. ’86, Ph.D. ’89, Oski, Stacy Jacobs B.A. ’84, B.S. ’87, O.D. ’89, Chancellor Nicholas Dirks, and Hathaway & Dinwiddie CEO Greg Cosko do the honors.

8. Scholarship donor Beany Wezelman ’64 meets with Lynda Dunkwu LL.M. ’20 at the International House Scholarship Reception in October. Dunkwu is the 2015 recipient of the Wezelman Scholarship at I-House, established by Wezelman and her husband, Dick.
9. Chemistry student Brett Van Der Goetz Ph.D. ’20, recipient of the Chun and Wai Sim Ma Fellowship, mingles with fellowship benefactors Catherine Ma ’75, M.Eng. ’77, and Richard Hathorn at the Dean’s Leadership Reception, hosted by the Graduate Division, in November.

10. Academic program coordinator Robert Gleeson (right) and exchange students celebrate the launch of a dual bachelor’s degree program between UC Berkeley and France’s premier social sciences university, Sciences Po.

11–12. The Beahrs Environmental Leadership Program recently celebrated its 15th anniversary with a reception at Giannini Hall. Since 2000, the program has trained over 540 environmental practitioners from more than 100 countries in environmental and natural resource science, policy, and leadership.

11. Members of the 2015 cohort pose with major program supporters Carolyn ’67 (left) and Richard ’68 (center) Beahrs.

12. Chancellor Nicholas Dirks and Berkeley Mayor Tom Bates ’61 chat with four of this year’s program participants.

13. Tyler Morse ’96 (right) with Chancellor Nicholas Dirks and Professor Janaki Bakhle.


15. UC President Janet Napolitano speaks with Goldman School of Public Policy board member Douglas Goldman, M.D., ’74 at the school’s board dinner.

16. Berkeley Art Museum and Pacific Film Archive trustees, staff, and campus partners tour the museum’s nearly completed new home, expected to open on January 31, 2016.
Alumni a source of hope in alleviating global poverty

Answering the explosion in student interest to address global poverty, Berkeley launched the Global Poverty & Practice (GPP) minor in 2007—and it remains one of the campus’s most popular minors.

Run by the Blum Center for Developing Economies, GPP combines classroom studies with fieldwork and has sent students to communities in more than 50 countries. To date, over 13,500 students have participated in GPP programs, including 600 who completed the minor. We recently surveyed GPP alumni to find out where they are now. Below are snapshots of four alumni who have gone on to help improve the world.

WHERE SHE IS TODAY:
An information officer with USAID’s Office of U.S. Foreign Disaster Assistance, where she ensures that communities affected by conflict, complex emergencies, and natural disasters receive humanitarian assistance. Among her recent assignments, Sofie served on the U.S. government’s response team for the Ebola outbreak in West Africa.

IN HER WORDS: “The GPP minor challenged me to think critically and innovatively about some of the world’s most pressing issues. Its practical component provided a rare opportunity to apply academic theories and concepts to a real-world situation ... It encouraged me to be curious about systems and structures, and to seek answers to the questions that no one is asking.”

Sofie Fredlund-Blomst ’09

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WHERE SHE IS TODAY: The World Bank’s Social Protection Unit in New Delhi, India, where she focuses on the impact of government poverty reduction policies in urban communities. She also consults for the Economic Research Institute on ASEAN (Association of Southeast Asian Nations) and East Asia.

IN HER WORDS: “I try to take on projects that seek to improve opportunities for access to services for the most vulnerable communities. The limitation of options that poor people face is a gross violation of social justice.”

WHERE HE IS TODAY: A doctoral student in civil engineering at the University of Colorado, Boulder. Devoted to the intersection of social responsibility and engineering, he will teach engineering and sustainable community development at the Colorado School of Mines.

IN HIS WORDS: “Taking GPP 115 first exposed me to injustices that had not previously been a part of my life experience. That exposure ultimately changed the trajectory of how I would live my life.”

WHERE SHE IS TODAY: Public Interest Indian Law Fellow at Berkey Williams LLP, a law firm that exclusively represents Native American interests in the United States.

IN HER WORDS: “GPP showed me the possibility of pushing radical ideas through conventional practice. That orientation inspires me to be a better lawyer, and find creative ways to use the law to more effectively advocate for Native American interests.”