A new era of energy research

Berkeley tops rankings for comprehensive excellence

Lessons from the Gulf oil spill
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Correction: A photo caption in the Spring 2010 issue of The Promise of Berkeley misidentified Molly Fraker, who was pictured with Fred Karren ’68 at the College of Environmental Design’s 50th Anniversary Gala.

Please send feedback to ureditor@berkeley.edu.
To view an online version of The Promise of Berkeley, visit promise.berkeley.edu.
Two faculty named MacArthur Fellows

Emmanuel Saez, a professor of economics specializing in tax policy and the distribution of income and wealth, and Dawn Song, an associate professor of electrical engineering and computer sciences focused on improving security and privacy, have been named MacArthur “genius” Fellows. They are among 23 recipients of the prestigious award of $500,000 in unrestricted funds over the next five years from the John D. and Catherine T. MacArthur Foundation.

promise.berkeley.edu/genius

Yellen takes No. 2 Fed post

Janet Yellen, CEO of the Federal Reserve Bank of San Francisco and professor emerita at the Haas School of Business, is the new vice chair of the Federal Reserve Board of Governors. Yellen will hold a 14-year term as a governor and a four-year term as vice chair.

promise.berkeley.edu/yellen

New plan for Cal Athletics

The University has announced a Department of Intercollegiate Athletics plan to create a more financially sustainable program and save an estimated $4 million annually. Coming after severe cost-cutting on campus and calls to scale athletic program subsidies totaling more than $12 million a year, the plan discontinues four teams (baseball, men’s and women’s gymnastics, and women’s lacrosse) after the 2010-11 season and redesignates rugby to varsity club status.

promise.berkeley.edu/calplan

Budget update

University of California President Mark G. Yudof recently proposed plans to reform the system’s overextended pension and retiree health programs and stabilize the budget, in part by enacting an 8-percent fee increase. Separately, UC Berkeley is undertaking a comprehensive operational excellence initiative designed to save the campus $75 million each year.

promise.berkeley.edu/budgetnews
promise.berkeley.edu/oe

Top public university

Shanghai Jiao Tong University’s recent rankings placed Berkeley as second in the world, after Harvard, and followed by Stanford. The rankings are based primarily on the sciences and social sciences.

The Campaign for Berkeley

July 1, 2005 – June 30, 2013

$3 Billion

$1.88 Billion

As of August 31, 2010, the campus raised $1.88 billion toward the $3-billion campaign goal with 35% endowment and 65% non-endowment funding.
Despite the global economic downturn, UC Berkeley alumni, parents, and friends signaled their generosity by contributing $313.1 million to benefit students, faculty, research, and programs in the fiscal year ending June 30, 2010. With this strong showing of support, the University is now more than 60 percent of the way toward reaching its $3-billion goal in The Campaign for Berkeley.

“I am grateful to all our Cal family for stepping up in a time of extreme economic hardship for everyone,” says Chancellor Robert J. Birgeneau. “This generous support is a positive sign for The Campaign for Berkeley. It reminds us that each gift, no matter the amount, helps to ensure access and excellence at UC Berkeley.”

Support from individuals, including alumni, accounted for $134.7 million of the $313.1 million raised. The balance of support came from other sources, including foundations. The total is up from $306.2 million the previous year and reflects gifts from 56,775 donors.

Students and faculty across campus will benefit from the following amounts raised this year, organized by campaign theme:

- Undergraduate scholarships: $22.5 million
- Program support: $103.6 million
- Facilities: $53.6 million
- Annual support: $33 million

A highlight among gifts received was $16 million from the Evelyn and Walter Haas, Jr. Fund for the UC Berkeley Initiative for Equity, Inclusion, and Diversity. This effort launches a sweeping array of research projects, endowed faculty chairs and student scholarships, 30 new American Cultures courses, and programs across the campus.

One overarching goal of The Campaign for Berkeley is to raise the share of gifts for the campus’s endowment from 35 percent to 50 percent. Building this type of support creates a long-term funding source — vital for priorities such as faculty chairs and graduate fellowships.

Reflecting the campus’s increased recognition of this priority, some divisions are launching their own efforts to create long-term endowment support, such as a payout matching program for fellowship endowments. “Top faculty choose to come to Berkeley — and stay here — because of the quality of our graduate students,” says Graduate Division Dean Andrew J. Szeri. “Top faculty, in turn, attract superior graduate students, but it is fellowship support that helps these talented students accept an offer of admission to Berkeley.”
The National Research Council (NRC) has found that Berkeley continues to be the nation’s preeminent public university for doctoral studies. The University’s high ranks come despite deep state support and budget cuts in recent years, and point to the crucial role of private support in beefing up Berkeley’s academic arsenal.

The study also confirmed the University’s preeminence for the third straight time, dating back to the NRC’s first assessment in 1982. In the current study, Berkeley had the highest number and largest percentage of top-ranked doctoral programs in the nation, based upon data from more than 5,000 doctoral programs at 212 institutions.

“We are extremely resource-poor, yet we still manage to have a great reputation and be very good at path-breaking research,” says Gerard Roland, chair of the Economics Department, which has had five Nobel laureates among its faculty.
ENERGY RESEARCH AT UC BERKELEY and the Lawrence Berkeley National Laboratory forges new ideas in a new era — one with unprecedented focus and unparalleled resources dedicated to pioneering multidisciplinary collaborations in energy technology, policy, and transportation.

Berkeley is a global leader, transcending boundaries with spectacular discoveries. Whether developing new biofuels to improve today’s resource-intensive ethanol, perfecting battery technology to store wind and solar energy, or investigating how to optimize green energy choices, Berkeley is breaking ground. Spotlighted in the following pages are some of our most promising efforts toward building a sustainable energy future and ensuring access to affordable technology for people around the globe.
Chris Somerville didn’t need much motivation to help develop the Energy Biosciences Institute (EBI), the world’s largest public/private consortium dedicated to researching bioenergy.

“The projected effects on climate of relentlessly accelerating combustion of fossil fuels are alarming,” says Somerville, the EBI director and professor of alternative energy.

RUNNING THE WORLD’S LARGEST BIOENERGY CONSORTIUM

With more than 300 researchers, the EBI is mobilizing some of the best scientific talent to tackle two great challenges of the 21st century — freeing society from its dependence on petroleum and developing a carbon-neutral fuel that will not contribute to global warming.

It is a challenge “that our public research universities are best equipped to confront,” says Somerville.

Established in 2007, the EBI brings together Cal, the Lawrence Berkeley National Laboratory, the University of Illinois at Urbana-Champaign, and the international energy company BP, which is funding the 10-year institute for $500 million. Already, more than 70 programs are under way, with the aim to accelerate the translation of good science into real-life solutions.

A sampling of EBI’s investigations:

- Identifying potential plants that might provide maximum biomass
- Converting plant cellulose into sugars for fermentation
- Bioprocessing liquid transportation fuels
- The economic, social, and environmental impacts that a biofuels industry will bring
- The microbial ecology of fossil fuel reservoirs
A new era of energy research

Jay Keasling

is best known for developing a simple, cheap microbial-based means of producing artemisin, the powerful antimalarial drug. Now the technology behind this humanitarian triumph is being used to engineer microbes that can produce advanced biofuels directly from plant material.

Such pioneering work in synthetic biology is the cornerstone of Berkeley’s new Joint BioEnergy Institute (JBEI), which Keasling heads. An acclaimed chemical engineer with appointments at Berkeley Lab and UC Berkeley, he believes the biggest challenge for advanced biofuels is developing cost-effective, energy-efficient ways to extract fermentable sugars from plant matter and convert them into liquid transportation fuel.

“The idea is to design and construct novel organisms and biologically inspired systems that can solve problems existing systems cannot,” Keasling says. “With synthetic biology, we don’t have to accept what nature has given us.”

The multi-institutional partnership is set up to quickly transfer new discoveries to the U.S. economy, resulting in new jobs and markets.

SYNTHESIZING NEW SOLUTIONS

Harvesting sunlight

“To replace fossil fuels, we need to get a lot more proficient at harvesting sunlight and converting it into forms of energy that can be used for human needs,” says Paul Alivisatos, director of the Lawrence Berkeley National Laboratory, UC Berkeley chemistry professor, and a renowned nanoscientist. “We want to emulate photosynthesis, but do it with artificial materials that could be much more efficient than green plants and use much less land.”

The U.S. Department of Energy seems to agree. It has awarded up to $122 million to establish the Joint Center for Artificial Photosynthesis (JCAP), one of three new innovation hubs launched under Secretary of Energy and former Berkeley Lab director Steven Chu to advance energy technology. JCAP researchers will work on developing an integrated solar energy-to-chemical conversion system that combines sunlight, water, and carbon dioxide into clean and sustainable transportation fuels that help scrub excessive carbon dioxide from the atmosphere and reduce our nation’s dependence on oil.

The ultimate goal, Alivisatos says, is to install a system that is large and efficient enough to provide the entire United States with a significant alternative fuel source.
Green-minded people across the country are jury-rigging devices in their households to capture and reuse the abundant “gray water” that comes from taking showers, washing dishes, or even brushing teeth. Imagine living in an apartment building that automatically cleans and reuses that water for you.

It’s an idea being pursued by assistant architecture professor Maria-Paz Gutierrez, who is leading a UC Berkeley research team that could turn a trickling gray water movement into a gushing success. Her team won a $2-million National Science Foundation grant to test a new water recycling system for multi-story apartments that couples solar disinfection of gray water with thermal storage for energy management.

Gutierrez says sustainability and resource conservation are becoming essential due to global population growth, construction, and climate change. “Ten years from now,” Gutierrez says, “the need to radically advance building systems’ resourcing capabilities will no longer be a matter of choice.”

Overheating laptops, cell phones that constantly need recharging, battery-powered devices that always need replenishing: today’s electronic devices are energy hogs. The culprit? The transistor, a 63-year-old invention that ushered in the digital age but is now about as innovative as the Model T.

“When you feel the heat from under a laptop, blame it on the transistors,” says Berkeley electrical engineer Eli Yablonovitch, who is looking for breakthroughs to dramatically cut power consumption from electronics. He is leading the multi-university Center for Energy Efficient Electronics Science, launched this year by a $25-million National Science Foundation grant.

Yablonovitch explains that a multi-core microprocessor system can contain more than one billion transistors and that server farms, like those run by Google, essentially require their own power plants. He says energy savings could come from developing semiconductors that operate on one one-thousandth of a volt, bringing electronics into an energy-efficient 21st century.
The furious pace of China’s growth has led to the rise of the superblock, rapidly built developments with up to 10,000 units of housing and sizable carbon footprints. Seeing an opportunity to promote green building, architecture professor Harrison Fraker is working with students, consultants, and engineers to develop the eco-block, an alternative that is off the grid, generates its own electricity, and processes its own water and waste.

Embracing this eco-friendly model in a big way is key to China’s sustainable growth, Fraker told the Green Dragon Media Project, makers of a documentary about sustainable building in China. “I’m talking about eco-blocks as far as the eye can see — not superblocks,” he said.

Fraker’s eco-block design features 6,000 residential units arranged around courtyards with pathways to promote walking and cycling, rather than vehicular traffic. Rooftop wind turbines and solar panels provide most of the power, with the balance coming from conversions that generate bio-gas from sewage and garbage.

By building eco-blocks, Fraker says, China could save $35 billion each year on future utility infrastructure costs. “If the ministry of construction decides this is the way they want to build,” he told Green Dragon, “almost at the snap of a finger China could start producing these eco-blocks, and it would have a huge impact on the issues of sustainability in the country.”

**ECO-BLOCKS: BUILDING A GREEN FUTURE FOR CHINA**

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Capturing carbon dioxide (CO₂) from the exhaust stacks of coal-fired power plants, rather than allowing the greenhouse gas to escape, has gained traction in combating global climate change. However, the most commonly used materials are inefficient, and finding the right carbon grabbers could take years.

Chemist Jeffrey Long, who holds joint appointments with Berkeley Lab and UC Berkeley, and Berend Smit, professor of chemistry and chemical engineering, are leading an effort to greatly speed up this search. They’re focusing on metal-organic frameworks (MOFs), molecular cages featuring channels or pores that can be tailored to selectively trap CO₂.

In addition to being incredibly porous, MOFs also boast record-shattering internal surface areas — a sugar cube-sized piece unfolds to an area the size of a football field. Yet MOFs come in millions of variations, so researchers have created a round-the-clock automated system to find the most voracious CO₂ gobbler.

“Within the next three years, the goal is to find carbon-scrubbers that only consume 10 percent of a power plant’s energy,” Long says. ●
If you think predicting the weather is hard, try predicting carbon dioxide’s (CO₂) movement around the globe.

While today’s climate models still rely on CO₂ measurements at a few dozen remote locations, including Mauna Loa volcano in Hawaii and Point Barrow, Alaska, atmospheric scientist and meteorologist Inez Fung has been improving climate models for three decades. She is adding in the effects of the carbon cycle to improve predictions of the effects of global warming.

Her newest model uses satellite measurements of upper-atmosphere CO₂ to predict levels down to the ground. Once the Orbiting Carbon Observatory 2 satellite is launched in a few years — the first never reached orbit in 2009 — data on ground-level CO₂ will be available, along with the ability to test current models.

Satellite data also pinpoints CO₂ sources, such as power plant emissions, thus assisting countries in verifying carbon emissions or checking on industries’ cap-and-trade commitments.

How can we gauge the long-term effects of poor air and water, disappearing habitats, and other results of human activity? By looking at the past — way into the past, says Charles Marshall, professor of integrated biology and director of the UC Museum of Paleontology. The fossil record provides “the only hard data we have on how past ecosystems have responded to major perturbations,” he says.

Using the largest natural history collection of any university museum in the world, Berkeley scientists are studying specimens that date back more than 540 million years to understand what caused five mass extinctions, including the demise of dinosaurs 65 million years ago. By comparing rates of extinction and magnitude, they postulate that Earth will enter a sixth episode if all currently endangered species go extinct in the next 500 years — the worst-case scenario.

“If you take the history of the Earth and make it the height of the Empire State Building, human time is a layer of paint on the top,” says Marshall. “The fossil record is the rest.”
ENCOURAGING ECO-IMPROVEMENTS

It’s a simple but transformative concept: enable property owners to borrow municipal money for environmentally friendly home improvements, then slowly pay it back as a “special” property tax.

Cooked up by Dan Kammen, the Class of 1935 Distinguished Professor of Energy, along with the City of Berkeley and Kammen’s students, the idea is being adopted in 23 states and appears as an “action item” for the White House.

DEVELOPING STRONGER ENERGY POLICY

SOWING SEEDS FOR FOOD OR FUEL?

There is nothing theoretical about growing crops for fuel in the face of world hunger and dramatic population growth, says David Zilberman, who works in the crosshairs of the food-versus-fuel controversy.

“Addressing food, fuel, and greenhouse gas concerns requires understanding tradeoffs and taking bold actions,” says Zilberman, an agriculture and resource economics professor whose team at the Energy Biosciences Institute is analyzing the potential economic impacts of a new biofuel industry.

“We cannot save the planet by saving the status quo.”

Reflecting on the opinion that growing biofuels has exacerbated global hunger by replacing food crops, he says, “Unless we improve agriculture with genetically modified organisms and develop second-generation biofuel feedstocks for lands that do not grow food, we will have problems.”

Sowing seeds for food or fuel?
The real-estate adage “location, location, location” could get stiff competition from the phrase “go green,” according to economics professor John Quigley. Working with research colleagues in the Netherlands, Quigley determined that commercial property owners enjoy sizable increases in a property’s market value and rent when they invest in proven green building practices.

Green-certified buildings produce an 8.5-percent increase in effective rent, his research found, and additional rent in an average-sized green building amounts to almost $309,000 per year.

“I was blown away by the fact that this does appear to pay for itself,” says Quigley, whose studies garnered his research team a United Nations sustainability prize in May. “Making your building more energy efficient — and publicizing it at low cost — is a market signal that the building is worth more. And rents can go higher.”

Pricing regulations on another front could also be helpful. Severin Borenstein, a professor in the Haas School of Business and director of its Energy Institute, says the best policy for reducing greenhouse gas emissions through pricing carbon is to charge more.

Failed U.S. proposals price emissions at about $20 a metric ton. “We need a price of 5 to 15 times higher,” says Borenstein.

So far, encouraging alternative energy innovation and use by pricing cheap, dirtier fossil fuels — particularly coal — out of the market hasn’t found political traction, admits Borenstein. But that could change as climate and energy issues become increasingly urgent.

Wouldn’t you be more apt to go green if it cost you less green?

That’s what Lee Friedman is counting on. The public policy professor has proposed that utilities sell electricity cheaply during off-peak times, motivating consumers to switch to electric cars to save on fuel costs.

The biggest win? Cleaner air. Vehicle emissions make up 40 to 45 percent of California’s greenhouse gas emissions. Electric cars reduce California emissions by 75 percent.

California’s utilities are just beginning to install residential “smart” meters, and Friedman is working on solving regulatory obstacles to an efficient and consumer-friendly grid.

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THE PRICE IS RIGHT: GREEN ENERGY

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TURNING GREEN BUILDINGS TO GREENBACKS
The New Helios Energy Research Facility

Rapidly rising on a University lot just west of the central UC Berkeley campus is the new Helios Energy Research Facility — the brainchild of former Lawrence Berkeley National Laboratory director Steven Chu, who is now head of the U.S. Department of Energy.

The five-story, 112,800-square-foot, state-of-the-art building will house the University’s existing Energy Biosciences Institute (EBI) — including specialized analytical research laboratories, laboratory support space, offices, and other support functions — as it produces research focused on the production of renewable, carbon-neutral biofuels. The Department of Bioengineering and other compatible programs are also expected to use space in the building.

By 2013, when EBI researchers are anticipated to move into the building, the east side of the property will have been transformed into a modern, accessible space, in keeping with the City of Berkeley’s goals for downtown renewal, and will feature a public park-like area that can be enjoyed by the community.
A New Home for the
MAGNIFICENT MAGNES

Ornate Hanukkah lamps and menorahs. Fifteenth-century books and modern paintings. Letters and photographs from Jewish families. Some 10,000 material objects from Jewish daily life that individually and collectively tell a story of culture and history have a new home at UC Berkeley.

The world-renowned collection of the Judah L. Magnes Museum, established over the past 50 years, has traveled from a quaint mansion on the south side of Berkeley to campus — a move made possible with a $2.5 million gift from philanthropists Warren Hellman, Tad Taube, and the Koret Foundation.

Berkeley Chancellor Robert Birgeneau invited hundreds of community members to celebrate the union and sign a symbolic ketubah — a marriage contract — at an event earlier this month (see page 31).

“We are excited to acquire, steward, and grow this precious cultural asset and ensure that it contributes to a much broader vision for our already robust Jewish studies programs at UC Berkeley,” says Birgeneau. “We also look to build on the foundation of support created in the last five decades by the many friends of the Magnes Museum who have given generously and made this collection the treasure that it is today.”

Part of The Bancroft Library, the Magnes Collection of Jewish Art and Life will house its archives at the Bancroft and material treasures in a soon-to-be-renovated downtown Berkeley building that is just a block from the University. Magnes Museum Foundation donations are supporting the renovation.

“The partnership with UC will also introduce the collections to a new generation of scholars,” says Frances Dinkelspiel, former president of the Magnes board of directors. “The board of the Magnes Museum is delighted that the collection will not only be preserved, but will flourish.” Dinkelspiel says showcasing the collection in the downtown arts district will ensure that it continues to enhance the cultural life of Berkeley. •
Exploring the ‘Road Map’ of Failure

Robert Bea is no stranger to disasters. In the past, the federal government tapped the civil and environmental engineering professor to investigate the Columbia Space Shuttle explosion and levee failures related to Hurricane Katrina. Now, asked by the Obama administration to probe the Gulf spill, he is experiencing a sort of disaster déjà vu.

“The BP/Deepwater Horizon failures follow the road map of the previous major disasters,” he says. “The majority of the causative factors are human and organizational malfunctions, and the majority were developed during the concept and design phases.”

He adds that BP’s failures to contain the spill and to clean it up adequately only underscore the company’s human and organizational weaknesses.

Bea is using the lessons of the BP accident in his classroom to illustrate the fundamentals of improving assessments and managing risks. He has been quoted widely by the news media — including a segment on 60 Minutes in May.
— and does not mince words in publicly describing his findings.

“We failed to properly assess the likelihoods of failure — and the consequences of failure,” he says. “We were not prepared. We have and are paying the price for our human frailties — hubris, arrogance, greed, ignorance, indolence.”

MITIGATION VIA MICROBES

While the oil industry’s efficiency has been called into question, the effectiveness of microbes — Mother Nature’s own environmental restoration crews — is being viewed more positively.

Decomposing matter is what these single-celled microscopic “bugs” do, and they are an efficient, proficient, and tireless workforce.

“There is no known compound, natural or synthetic, that microorganisms cannot degrade,” says Terry Hazen, a microbial ecologist with Berkeley Lab’s Earth Sciences Division and a principal investigator with both the Energy Biosciences Institute (EBI) and the Joint BioEnergy Institute.

The power of microbial activity to clean up environmental damage was amply demonstrated in the Gulf of Mexico following the oil spill. In the aftermath of the explosion of the Deepwater Horizon drilling rig, a huge dispersed oil plume formed at the damaged wellhead.

A study by Hazen and his research group revealed that microbial activity, spearheaded by a previously unknown bug closely related to Oceanospirillales, degraded virtually all of the oil in that deep-water plume to undetectable levels within a month after the wellhead was capped. The degradation took place without a significant level of oxygen depletion.

“We found that the influx of oil profoundly altered the microbial community by significantly stimulating deep-sea microbes that are closely related to known petroleum-degraders,” Hazen said.

This study was funded by EBI through its Microbial Enhanced Hydrocarbon Recovery (MEHR) Systems Biology Program, which Hazen leads. The same process by which microbes degraded the hydrocarbons in the Gulf oil plume can also break down crude oil in reservoirs and make it easier to extract. Through the MEHR program, Hazen and his group are developing a better understanding of native reservoir bacteria and their potential to enhance oil recovery.

“There is no known compound, natural or synthetic, that microorganisms cannot degrade.”

— Terry Hazen
Giving back with gusto

“Scholarships provide the opportunity of a lifetime to so many remarkable students,” says Vice Chancellor of University Relations Scott Biddy. “In that sense, Mike Mahoney’s generosity will have a deep and lasting impact. His scholarships honor young lives cut short and renew the promise that was lost. They will extend that promise to future generations of Berkeley students.”

Mahoney endowed his first scholarship at UC Berkeley in 1990 to honor his younger daughter’s best friend, Lisa Ann Rist, who had died in a car accident at the age of 17. That initial scholarship led to 20 more designated for Berkeley undergraduates, and three funds for graduate students. To date, more than 1,500 students have benefitted from Mahoney’s scholarships.

“UC Berkeley is a great public university, one of the greatest in the world, and I’m so proud of it,” said Mahoney. “I just admire the whole idea of a public university, and how it takes students from all walks of life who want a good education.”

Upon hearing about the desperate suicide of 15-year-old Phoebe Prince, philanthropist J. Michael Mahoney was deeply moved. The Irish-born Massachusetts girl took her own life in January after suffering from merciless harassment at school, and her death — along with other recent student suicides — has drawn national attention to adolescent bullying.

This summer, Mahoney established the Phoebe Prince Memorial Scholarship Endowment Fund to honor her, marking the 24th scholarship that this remarkable benefactor has created at Cal. With 65 percent of Berkeley undergraduates receiving some form of financial aid, scholarships such as Mahoney’s — which collectively are valued at more than $9 million — play a crucial role in ensuring that the campus enrolls the best students, regardless of their ability to pay.

“Scholarships keep memories of fallen youth alive.”
New campaign co-chairs Paul and Stacy Jacobs are

Giving back with gusto

The new Campaign for Berkeley co-chairs Paul and Stacy Jacobs collectively earned three bachelor’s degrees, two master’s degrees, and a Ph.D. at Cal, finding in Berkeley a diverse, intellectually stimulating community and — perhaps most importantly — each other.

“We got so much from the University. We are very fortunate people,” says Paul ’84, M.S. ’86, Ph.D. ’89, who met Stacy ’84, ’87, O.D. ’89 while organizing an intramural volleyball team.

Paul, CEO and board chair of the global tech leader Qualcomm, and Stacy have three children, ages 11, 15, and 18, and live in La Jolla, Calif. Stacy serves as a UC Berkeley Foundation trustee and Paul serves on the College of Engineering Advisory Board.

The Jacobses have championed — and personally given — significant gifts to the campus, including a recent contribution to establish the Qualcomm Ubiquitous Swarms Center in the College of Engineering.

Assuming the campaign chair mantle from Coleman Fung ’87, the Jacobses will engage with Berkeley alumni and friends around the world and continue to lead by example — helping Berkeley remain the top public university in the nation.

“People like to say that the world is flat,” says Paul. “I feel strongly that Berkeley isn’t flat. It’s a mountain on the landscape.”

Thanks to Berkeley . . .

I have a family because Stacy and I met in the dorms our first week . . . I have a career because working with brilliant people challenged me and made me continually strive to be better . . . and I have a point of view, because I lived in a place that housed UC Berkeley and also the People’s Republic of Berkeley, where I learned that embracing diversity is critical for creativity to flourish.

— Paul Jacobs
It’s fortunate for the world that some people — like Josef Leitmann Ph.D. ’92 — have the skills to step up and literally step in after unmitigated natural disasters.

A few days after a 9.3-magnitude Indian Ocean earthquake in 2004 triggered a tsunami that killed more than 180,000 people, left a half million homeless, and shattered an already fragile infrastructure in Indonesia, Leitmann was assessing damage to people and property, and soon found himself managing a $700-million reconstruction fund. Less than a week after the earthquake in Haiti in January that killed 230,000 people, injured 300,000, and left one million homeless, he was advising the Inter-American Development Bank, United Nations, and World Bank on how to set up a similar fund.

Leitmann, an alumnus of Berkeley’s College of Environmental Design and grandson of legendary Berkeley professor George Leitmann, has been to some 50 countries in over a quarter-century in the course of his development and environmental work for the World Bank. In April, the World Bank appointed him manager of the Haiti Reconstruction Fund to mobilize and allocate hundreds of millions of dollars in aid from around the world.

As the fund’s founder and manager, Leitmann coordinates donations from sympathetic nations to provide the Haitian government with strategic and flexible reconstruction funding. He says the $135 million in aid received and distributed by the World Bank (the fund’s trustee) so far from Brazil, Norway, Canada, Australia, Oman, Colombia, and Estonia is having an effect. The U.S. pledge of $120 million to the reconstruction fund, made in March, was reportedly on its way to Haiti in November. Several other countries, including Japan, France, and Saudi Arabia, are still expected to contribute.

“Without external assistance, things would be worse than they are, if that is imaginable,” Leitmann says. “Imagine mass malnutrition, outbreaks of disease, the majority of children out of school, heightened crime and violence, and a bankrupt government.”
The overall amount pledged to help Haiti totals $9.9 billion from countries around the world.

As he took the helm of the Haiti Reconstruction Fund, Leitmann pledged strict anti-corruption and fiscal oversight, and said a critical success factor would be the leadership of the Haitian government itself in directing the world’s resources.

“The silver lining of the devastating earthquake of January 12 is that the ensuing aid for reconstruction represents the country’s major opportunity to begin to turn things around,” says Leitmann. “That knowledge, coupled with the positive spirit of the Haitian poor, keeps me going.”

Once a Peace Corps volunteer, Leitmann says his Berkeley degrees in developmental studies, political science, and city and regional planning serve him well in often challenging work around the world.

He says the best way for people to help Haiti now is by contributing to organizations that have a proven track record or by donating time on the ground. He cited Berkeley graduate student David Lallement, who is working on a World Bank-financed project to assess the structural integrity of hundreds of thousands of buildings across the country, and encouraged other students to devote their energy toward the monumental task of rebuilding Haiti.

To learn more about the fund, visit haitireconstructionfund.org.
The Fab Four as never before
In the midst of recording sessions for the "White Album," the Beatles decided to spend a "mad day out" being photographed throughout London on July 28, 1968. Stephen Goldblatt’s images — exhibited for the first time — tracing that magical day are on view at North Gate Hall through Jan. 18, 2011. More photographs and a boxed book set are available at maddayout.squarespace.com.
In honor of their nuptials, Karan Singh ’05 and Leena Bhalerao Singh ’06, and Anna Almendrala ’06 and Simon Ganz ’07 offered family and friends the opportunity to donate to Berkeley.

“We met at Berkeley, and it holds a special place in our hearts,” says Singh, who is pursuing a master’s in business administration at MIT and a master’s in health, science, and technology at Harvard.

“We want to help students who have the grades, but don’t have the funds to attend,” adds Bhalerao Singh, who completed her master’s in public health at Columbia University in May.

“Cal is about more than an education,” explains Almendrala. “It’s a culture. We found each other here, and we liked the idea of helping other students go to Berkeley.”

Surprisingly, the two couples — who do not know each other — share a wedding date, May 30, as well as their desire to give back to Berkeley. Both set up wedding websites with links to givetocal.berkeley.edu and directed their gifts to support undergraduate scholarships.

In addition to gifts made in the Almendrala-Ganz’s honor, their wedding — a mix of Filipino and Jewish traditions — gave them the opportunity to become bigger donors themselves: “With money we got for the wedding, we thought ‘Now’s our chance,’” says Almendrala, an associate editor at the Huffington Post in Los Angeles. Ganz is a production assistant at Imagine Entertainment.

Nearly 20 gifts were made in honor of the Bhalerao-Singhs, who had a traditional Indian wedding. Singh isn’t surprised by the generous response — which will count toward his fifth reunion gift campaign. “It was a very pro-Cal wedding,” he says. “People shouted ‘Go Bears!’ during the reception.”
Creating the largest student donation in the history of giving on campus, the University of California’s Optometric Student Association (UCOSA) gave $250,000 in endowment funding to the School of Optometry. A subsequent dollar-for-dollar match by the Chancellor’s Challenge for Student Support has boosted that total to a whopping $500,000.

Optometry students were able to make such a significant donation through the use of surplus funds, which were generated by various fundraising efforts over the years and held in the UCOSA coffers. Their gift also marks the first major gift within the UC system to be given by current students to their respective program.

The School of Optometry now has 53 endowments for student support, 49 of which were established during The Campaign for Berkeley.

The $500,000 endowment was formally announced last spring at the Class of 2014’s Admit Day. Amid discussions of dwindling State funding to Berkeley, the timing couldn’t have been better.

The students’ generosity — coupled with a large number of $10,000 faculty and staff donations that were also matched by the Chancellor’s Challenge and support student aid — demonstrates a major shift in thinking about philanthropy within the school.

“This act of giving among the faculty and staff clearly exemplifies the school’s big-heartedness,” says Dean Dennis Levi of the philanthropic inspiration they provided. “I think our students really appreciate how our faculty and staff have stepped up to the plate. They know that members of our community are really there for them.”

Largest-ever student gift gets matched, reaches $500,000
The University Library has embarked on a $50-million campaign to renovate Moffitt Library, the undergraduate gateway to Berkeley’s scholarly community. Since it opened in 1970, the modes of scholarship have changed dramatically, and decades of heavy use have worn out the building’s physical structure and mechanical systems.

“Deep learning comes from quiet, solitary experiences, as well as those that encourage collaboration and nurture the technological skills needed in our increasingly wired culture,” says Elizabeth Dupuis, associate University librarian and Moffitt project director. “The renewed library will embrace an exciting range of learning environments that are essential to our current students and can be adapted to meet future needs.”

“A great part of being at a distinguished research university is that the collections provide the raw materials for study and the creation of new knowledge,” says Tara Phillips ’12. “This asset is just as indispensable to undergraduates as it is to the scholars and professors who use our libraries.”

Relying completely on private funding, the campaign got a boost last fall when the Skirball Foundation awarded a $1.5-million challenge grant that will match each gift dollar for dollar. The campaign’s success will bring to life our students’ “dream library,” while creating a dynamic new learning center that showcases Berkeley’s vibrant world of scholarship and inquiry.

Moffitt Library construction is expected to begin by 2013 and be completed by 2015. The renovation will include:

- A dynamic environment that nurtures active, collaborative learning.
- Quiet spaces for concentrated study and independent learning.
- Wired and wireless computing throughout the building.
- Environmentally friendly features, with attention to air, light, and climate control.
1. Deborah Koons Garcia (left) meets Dick ’68 and Carolyn ’67 Beahrs at a College of Natural Resources reception for a screening of Koons Garcia’s film Symphony of the Soil.

2. Gaylord Hall and his son Tom Lyons attended an unveiling of Turkish artist Bedri Rahmi Eyuboglu’s Bosporus. This piece, a gift from Dr. Roy W. Leeper ’42 and Mr. Hall, was installed between Stephens Hall and Moses Hall.

3. Graduate School of Education Dean Judith Warren Little and David and Pat Behring congratulate Aryn Bowman (left), Principal Leadership Institute 2010 graduate and assistant principal at the East Oakland School for the Arts. The Behrings are the founding donors of the institute.

4. Sacramento Mayor Kevin Johnson ’97 and donors Betty ’50 and Jim ’52 Huhn were on hand at an Incentive Awards Program reception in Sacramento.

5. Judy Moorad ’68 (left) and Naheed Misfeldt ’96 (right) join School of Public Health Assistant Dean Pat Hosel at a reception for members of the School of Public Health’s Dean’s Circle, a community of benefactors who make annual leadership gifts.

6. SAGE Scholars Program alumnus Jason Gant ’06, Haas School of Business lecturer Timothy Dayonot, and SAGE alumnus Scott Izu ’03 were on hand at a SAGE fundraiser. SAGE provides professional leadership training and career development guidance to low-income, high-achieving undergraduates through internships, mentoring, and education.

7. Pamela Heisey and Jan Behrsin at the Goldman School of Public Policy’s Michael Nacht Distinguished Lecture on Politics and Public Policy, featuring veteran pollster and GSPP board member Peter Hart.

9. Eric Stern '87, M.B.A. '91 and his wife, Rachel, attended the Meet the Dean dinner at Cafe Pinot in Los Angeles, hosted by Graduate Division Dean Andrew Szeri.

10. At the eighth annual Haaski Open Golf Tournament in May, Professor Emeritus Ray Miles (left) and Grant Inman M.B.A. ’69 (right) presented Tom Broderick M.B.A. ’74 with the Haaski Leadership Award for excellence in leadership and volunteerism. Both Miles and Inman are past award winners.

11. Boalt Hall Class of 1978 members Louise Ing, (president-elect of the Hawaii State Bar Association), honoree Elizabeth Cabraser (co-chair of the Campaign for Boalt Hall), and Lillian Miyasaki Nakagawa celebrate at the American Bar Association’s Margaret Brent Awards Luncheon.

12. M.B.A. alumni from the Class of 1995 celebrate at the annual Haas Reunion Weekend Conference.

13. Boalt Hall Alumni Association board member and Federal Election Commission chairman Steve Walther J.D. ’68 meets with Joe Lee J.D. ’82 at the Boalt reception for alumni and students at the American Bar Association Annual Meeting.


Builders of Berkeley
Alumni, donors, and friends of Cal gathered in October for the annual induction ceremony. (photos 15-20)

15. ASUC President Noah Stern ’11 addresses guests.


17. Professor Merrill Shanks (seated), his wife, Pat, and their son, David, pose by the Builders wall outside Doe Library.

18. New Builders Michael Torres ’82, M.B.A. ’86, a UC Berkeley Foundation trustee, and wife Nancy.


20. UC Berkeley Foundation trustee Mike Williams ’82 and wife Jeanne enlist the aid of their children, Steven and Jenna, to find their names on the wall.
New York Campaign Gala

In September, Berkeley went to the Big Apple for the official New York kickoff of The Campaign for Berkeley. The gala event, held at the American Museum of Natural History, drew approximately 300 alumni and friends of the University. (photos 21-29)

21. The crowd gathers at the museum.
22. Ricardo Mora ’88.
25. MTV News correspondent SuChin Pak.
26. Eleanor Jackson Piel ’40, J.D. ’43 chats with Bill Ausfahl ’61, immediate past chair of the UC Berkeley Foundation, and his wife, Trudy.
27. A performance by the Cal Band capped the evening’s celebration.
28. Federal Reserve Bank of New York president and CEO Bill Dudley M.A. ’80, Ph.D. ’82; Assistant Professor José Carmena; Professor Jay Keasling; Professor Claire Tomlin Ph.D. ’98; Professor Robert Hass, and screenwriter James Schamus ’82, M.A. ’87, Ph.D. ’03 discussed the themes of “Insight. Innovation. Inspiration.”
29. Professor Robert Hass mingles with UC Berkeley Foundation trustees Jeff McDermott ’81 and Maureen Orth ’64.

Magnes Celebration

Hundreds of guests celebrated the “marriage” of the Judah L. Magnes Museum and UC Berkeley’s Bancroft Library at an event in October. The 10,000-piece Magnes Collection of Jewish Art and Life will reside in a renovated building on Allston Way in downtown Berkeley and at the Bancroft. (photos 30-32)

30. Participants in a celebratory glass-breaking ceremony at the Magnes event included UC President Mark Yudof; former Magnes board chair Frances Dinkelspiel; Class of 1937 professor of Hebrew and Comparative Literature Robert Alter; philanthropist Warren Hellman ’55; Koret Foundation chairman Ted Taube; and Koret Foundation CEO Jeff Farber.
31. Signing an honorary ketubah, or “marriage contract,” were Robbie Cohn ’82, her son Barry Cohn, and husband Len Cohn ’57.
32. Warren Hellman ’55 (center), whose generosity helped bring the Magnes Collection to the University, celebrated the union with a band featuring Ron Hendel, chair of Berkeley’s Jewish Studies program, and Francesco Spagnolo, the Magnes’s curator of collections.
In April 1860, trustees from the College of California, the University of California’s private predecessor, stood upon a distinctive rock in undeveloped land north of Oakland to dedicate the site of what would eventually become UC Berkeley. They prayed that it remain “a blessing to the youth of this State, and center of usefulness in all this part of the world.” 2010 marks the 150th anniversary since this seminal event took place at the rock, located on the northeast corner of campus. “Founders’ Rock!” — an exhibit featuring images, documents, diaries, and other artifacts — highlights this poignant time in the history of higher education in California. Here are just a few of the items on view.

Organized by the University Archives and University History Museum Project, “Founders’ Rock!” is on display in Doe Library through March 31, 2011.

A dozen young men — sometimes called “The 12 Apostles” — constituted UC’s first graduating class in 1873.

Samuel Willey and Henry Durant, two clergymen from the east, were committed to creating an institution of higher learning as envisioned by the State’s constitutional convention in 1849. Durant, painted here circa 1845 (artist unknown), later became UC’s first president.
A lot was happening at the time the campus was dedicated, including the election of Abraham Lincoln; combat between the California Calvary and advancing Confederate troops during the Civil War; and the arrival of the first westbound Pony Express, as this poster illustrates.

In 1960, UC President Clark Kerr organized a centennial celebration at the rock that included Regents Donald McLaughlin and Governor Pat Brown — both Berkeley alumni.

Drawn by the U.S. Geological Survey in 1873, this may be the most detailed early map of the Berkeley campus. The site was carefully chosen to be close to Oakland, yet far enough away that the male students would not easily be lured into town for amusement.