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Berkeley physicist wins Nobel Prize

Cosmologist George F. Smoot, who led a team that obtained the first images of the infant universe, confirming the predictions of the Big Bang theory, was awarded the 2006 Nobel Prize in Physics on Oct. 3. A professor of physics at UC Berkeley and an astrophysicist at Lawrence Berkeley National Laboratory, he shares the prize with John C. Mather Ph.D. '74 of NASA Goddard Space Flight Center in Craig Z. Fire '78 also won the Nobel Prize in medicine raising the number of Berkeley alumni Nobel laureates to 24.

Faculty honored for achievements

Saul Perlmutter, a professor of physics and astrophysicist at Lawrence Berkeley National Laboratory, was awarded the 2006 Shaw Prize in Astronomy for his role in discovering that the universe is expanding faster than previously thought. Additionally, Claire Tomlin, an associate professor of electrical engineering and computer sciences studying aircraft hybrid control systems, has won a MacArthur Foundation “Genius” Fellowship that includes a $500,000 grant over the next five years.

Synthetic biology center launches

Backed by a five-year, $16 million grant from the National Science Foundation, UC Berkeley researchers are gathering synthetic-biology pioneers into The Synthetic Biology Engineering Research Center, or SynBERC. The center, launched this summer, seeks to make it as quick and easy to engineer biology as it now is to assemble microprocessors, hard drives, and memory chips into a computer.

Online access to UC materials

Calisphere is a new free Web site that offers educators, students, and the public access to more than 150,000 images, documents, and other primary-source materials from the libraries and museums of the UC campuses, as well as from cultural-heritage organizations across California.

For more on these stories and the latest campus news, link to the NewsCenter or subscribe to Berkeley Online at cal.berkeley.edu
When Cal meets Stanford for the 109th Big Game on Dec. 2, more than school pride will be on the line. The game will be the culmination of a long season, and its outcome may well affect the announcement of major bowl invitations the next day.

Regardless of where Cal winds up at the end of the year, it is often said by Old Blues everywhere that the most important accomplishment of any season is defeating the Stanford Cardinal and capturing the spoils of victory — in Cal's case, retaining the Stanford Axe for the fifth year in a row.

Recent years have seen the resurgence and popularity of decades-old Big Game traditions, some of which went on hiatus prior to Coach Jeff Tedford's arrival on the Berkeley campus.

The Big Game, which falls a week later than usual this year, is preceded by a full week of activities that kick off on Monday, Nov. 27, with a noontime campus rally. The festivities conclude on the night of Friday, Dec. 1, with the traditional Bonfire Rally in the Greek Theatre.

A series of competitions is also held throughout the week between Cal and Stanford — not all of them athletic in nature.

Among the newer of these is the Cal-Stanford Sing Off, held on the campus hosting the Big Game and drawing each school's top choral ensembles. The UC Men's Octet and the Golden Overtones usually represent Cal.

Previous years have seen other rival contests:

- **the Big Splash**, a men's water polo match between the two schools
- **the Big Sail**, pitting the two schools' sailing teams against one another
- **the Big Freeze**, a hockey game between the Cal and Stanford clubs
- **the Ink Bowl**, a flag football match-up between the staffs of the Daily Cal and the Stanford Daily for bragging rights and a prized Exacto knife trophy

One of the oldest traditions dates to the era of legendary Cal chemistry Professor Joel Hildebrand, whose teaching career at Berkeley began as an instructor in 1907 and continued until his retirement as University Professor in 1952. Hildebrand initiated the Big Titration in his Chemistry 1A class. The titration tradition — which involves chemically transforming red-colored liquids to blue and gold — continues this year on Wednesday, Nov. 27 in Pimentel Hall during Big Game Week, to the accompaniment of the Cal Band.

A successful titration is said to bring good luck to the Cal Bears.

On Saturday, all eyes will be focused on the real reason for all the hoopla: the Big Game, hosted by Cal this year.

One more tradition to watch out for should Cal claim the Stanford Axe: the traditional parading of the Axe around campus at noon on the Monday following the game.
Since March, current and retired UC Berkeley faculty have established 64 new endowed funds supporting graduate students across the campus. Their gifts and pledges, along with matching funds supplied by the Graduate Division, total $1.29 million.

Why are so many faculty committed to increasing available fellowship funding and thereby helping to ensure the best graduate students come to Berkeley? They know that the University’s excellence in research and teaching depends upon the excellence of Berkeley graduate students.

**Berkeley’s challenge: making graduate support competitive**

Despite the strength of graduate education at Berkeley, over the past several years the University’s graduate programs have had increasing difficulty attracting the most sought-after students.

Berkeley often loses top prospective students to peers such as Harvard, Princeton, MIT, and Stanford because we are not able to match their level of support. For example, all of the major private universities that compete with Berkeley now offer “full funding” — five or six years of support — to 90 to 100 percent of their graduate students in the humanities and social sciences. By contrast, Berkeley can offer only four to five years of support to 50 percent of its graduate students in these disciplines.

“Fellowships are a vital tool for attracting the best graduate students,” says Mary Ann Mason, dean of the Graduate Division. “I’ve made it my priority to focus campus fundraising efforts in this direction.”

**Graduate education at Berkeley — the blue and gold standard**

The prestigious National Research Council — a part of the National Academies — has rated UC Berkeley the number-one graduate institution in the country in four consecutive studies. In the 1995 study (the most recent), Berkeley had both the largest number and the highest percentage of top-ranked doctoral programs in the nation. Of the 36 Berkeley programs ranked, 35 were judged to be among the top 10 in the nation.

And, in the most recent U.S. News & World Report national rankings, Berkeley had more top-ranked Ph.D. programs than any other university in the country.

Berkeley produces more Ph.D.s annually than any other American university.

From 2002 to 2006, tuition and fees have increased 94% for Berkeley graduate students who are California residents, and 50% for those who are non-residents; at the same time, the number of fellowships has fallen.
Contribute to today’s pioneering research

One thing that makes Berkeley so formidable is its cutting-edge research across the disciplines — from biological and physical sciences to social sciences, from law and business to arts and humanities.

Berkeley graduate students make this groundbreaking work possible. Across the campus, they collaborate with professors on research. Many also pursue their own important projects under faculty supervision. Often, graduate researchers develop ideas that significantly advance their field, have real-world applications, or lay the foundation for future breakthroughs.

Attract top faculty

The exceptional preparation, talents, and creativity of our graduate students attract world-renowned faculty to come to the University, or to remain here when peer institutions attempt to lure them away with attractive offers.

Graduate students directly impact professors’ day-to-day work in the laboratory and the classroom. Spirited and innovative thinkers, Berkeley graduate students are prized as up-and-coming junior colleagues, insightful research partners, and sophisticated participants in advanced courses.

Exploring monogamy

Matthew MacManes, a second-year Ph.D. student in integrative biology, spent the triple-digit summer at UC’s Deep Canyon Desert Research Station near Palm Desert, California, studying members of the species Peromyscus eremicus. The gray-brown mice are reputed to practice a rare behavior in the animal world — monogamy.

MacManes wants to determine if they’re not only socially monogamous but also genetically monogamous, which is far more rare.

“They have a lot of choices when deciding where to do the research that would win her a $1 million award from the W.M. Keck Foundation in August 2005.

The assistant professor of molecular and cell biology chose UC Berkeley over other prestigious institutions. Her primary reason: the top-flight graduate students she met here.

“They are certainly very intelligent,” she says, but the amount of enthusiasm they have for research is as important. I found that very attractive.”

MacManes, who’s 30, has four kids of his own (all with his wife) and says his Chancellor’s Fellowship was a critical factor in his move to Berkeley after undergraduate school at the University of Michigan.

Matthew MacManes, Ph.D. student, Department of Integrative Biology

MacManes, whose work focuses on finding ways to reverse age-related cognitive conditions like Alzheimer’s — now has five graduate students working in her lab. She calls them teammates and intellectual contributors. “It’s not as interesting if I’m the only one who has ideas,” she says.

Tackling Alzheimer’s with an expert team

Dr. Lu Chen had a lot of choices when deciding where to do the research that would win her a $1 million award from the W.M. Keck Foundation in August 2005.

Chen — whose work focuses on finding ways to reverse age-related cognitive conditions like Alzheimer’s — now has five graduate students working in her lab. She calls them teammates and intellectual contributors. “It’s not as interesting if I’m the only one who has ideas,” she says.
Enhance undergraduate education

Enthusiastic teachers and approachable role models, graduate students also enhance the quality of undergraduate education at Berkeley. Well-trained and mentored by experienced faculty, graduate student instructors (GSIs) teach many lower-division courses covering material they have mastered.

This sharing of teaching duties by faculty and graduate students has a big payoff for undergraduates. In seminars or discussion sections led by GSIs, undergraduates receive close attention, express ideas freely, and gain confidence. Graduate students bring to the classroom fresh excitement for their areas of study and new points of view to supplement those of professors. Undergraduates often seek out their graduate student mentors not only for one-on-one help with coursework, but also for academic and career advice.

“I’ve had amazing GSIs”

It takes a good teacher to make an undergraduate math requirement tolerable. It takes a great one to make it a joy.

Matthew Gagliardi (pictured teaching at the top of page 9) is that teacher, says Maryam Pessaran. Gagliardi was her graduate student instructor — or GSI — in math 16B, analytic geometry and calculus. She says he made the class not only bearable, “he made it a great experience. He’s very passionate about math.”

In fact, his enthusiasm inspired Pessaran to change her major. Now a senior, she came to Cal intending to study psychology. But Gagliardi revealed her talent with numbers and helped her decide to switch to a double major in environmental economics and Near Eastern studies.

Pessaran speaks with confidence about her future plans — two years with Teach for America, then on to graduate school. She owes much of this confidence to graduate student instructors such as Matt. “I’ve had amazing GSIs,” she exclaims. “I don’t know how I would have gotten through the last three years without them.”

“A Berkeley degree goes to the market (place)

Yahoo.com gets nearly 500 million visitors a month. It’s Prabhakar Raghavan’s job to keep them happy.

Raghavan is head of research at Yahoo!, the Web’s most popular site. If he delivers, Yahoo delivers — and keeps its lead over rivals Microsoft and Google in the multibillion-dollar race for net supremacy.

It’s a huge responsibility for the 45-year-old UC Berkeley grad — and a long way from the Indian Institute of Technology in Madras, where he studied before coming to Cal in 1982, to earn a Ph.D. in electrical engineering and computer science.

He couldn’t have done it, he says, without the top-notch training and financial support he received while studying at Berkeley. “The fact that I’ve been able to thrive as I’m doing now really draws from the experience I got at Berkeley. My breadth of abilities draws from the breadth of experience I got there — from the diversity and caliber of graduate students. That’s what sets Berkeley apart and makes it a premier university in the world.”
Point. Click. Learn.

Thanks to recent partnerships with two of the biggest names in technology — Apple Computer, Inc. and Google — a Berkeley education is now more accessible to students, alumni, parents, and the world.

Both agreements provide a UC Berkeley-branded gateway for the campus’s rapidly expanding catalog of multimedia offerings. Berkeley on iTunes U enables visitors to download video recordings and audio recordings (podcasts) of course lectures and special events to their computers, iPods, or any MP3 player. Through Google Video, visitors can search and view streaming videos (webcasts) of academic seminars and cultural events hosted by the campus.

These services are free and available to both UC Berkeley students and the public. For students, this means easy access to course lectures through the familiar gateways of iTunes and Google. Alumni can take advantage of the public accessibility to take the course they never got around to in college, while parents can use the service to “sit in” on some of the same classes as their students.

While Berkeley’s alliances with Apple and Google are new, its commitment to advancements in teaching and learning is not. “These partnerships are a logical extension of what we’ve been doing on campus,” said Obadiah Greenberg, manager of the Berkeley on iTunes U service for Berkeley’s Educational Technology Services (ETS). The University, a leader in the use of classroom technology, has been experimenting with webcasting for more than a decade.

Learning My Way

Growing up in a world of time-shifted television, text messaging, and instantaneous access to vast storehouses of knowledge, today’s students expect a learning environment that accommodates their digital lifestyles. Not surprisingly, student response to technology-enhanced teaching has been overwhelmingly positive — and demand has been strong. In its first month of operation, iTunes U attracted nearly 10,000 subscribers and this spring, podcast listeners accessed more than 10 million recordings on webcast.berkeley.edu.

When surveyed about the services, students say they especially appreciate the convenience of listening to lectures while walking across campus or doing laundry. Another plus is the ability to pause, rewind, and review sections of the lecture for better comprehension. Some students report that, far from replacing the classroom experience, the recorded lectures allow them to be more focused in class and save note taking for home “where the desk is bigger.”

Rajpal Brar, a Berkeley junior, listens to lectures during his commute between campus and San Francisco. “At first I was a little bit reluctant to use [podcasts] because I thought, ‘Oh, I won’t retain any of the information that I hear and will become really bored just listening to them.’ However, once I started utilizing them, particularly for reviewing the first midterm, I found them pretty effective in supplementing what I had already gotten in class.”

Berkeley strengthens its public mission with help from Apple and Google
New study options allow students to adapt the learning experience to their individual needs, says Christina Maslach, vice provost for undergraduate education and instructional technology, who oversees ETS. “Online lectures and other classroom technologies connect our students to the educational and intellectual excitement of the campus, no matter what the time and place,” she says. “It allows them to be even more engaged with what’s going on at Berkeley and enhances the quality of their learning.”

Open Enrollment

While a number of other universities provide some content through Apple’s iTunes, UC Berkeley is the first university with its own page on the Google Video Web site. The University is taking a unique approach among academic institutions by making its content available to the public without restricting it to students or alumni, and without any cost or associated advertising.

“Our interest is not just to tell the people of California about all the wonderful things we do, but to actually share the intellectual resources of campus with folks beyond the campus” says Dan Mogulof, executive director of public affairs for the University and manager of the collaboration with Google Video.

As part of that partnership, Berkeley will launch with 200 hours of course lectures and event video. Through iTunes U, Berkeley plans to have more than 40 courses available for the fall semester. “Imagine what we could do if we had more technology enabled classrooms,” says Greenberg, who is also the product manager for webcast.berkeley.

Seven lecture rooms on campus are currently equipped for webcasting and 15 are podcast-ready. Because the webcasts are more labor-intensive, ETS charges a fee to departments for this service. “When we first began offering podcasts, which are free to record, we received a flood of new requests from departments that had never participated before,” says Greenberg. “Many of these were from the humanities, including philosophy, history, the earth sciences, and other departments with less funding to devote to this purpose. Our history podcasts are by far the most popular.”

Visitors to the Berkeley on iTunes U and Google sites have the opportunity to sample a wide variety of educational content ranging from Professor Thomas Lacquer’s history lectures on the French and Russian revolutions (podcast on iTunes U) to Professor Richard Muller’s popular course “Physics for Future Presidents” (available through both services).

Recordings of events made available through these services capture rare and exceptional moments on campus and make them available to a wider audience. Such moments include Lawrence Ferlinghetti’s appearance as part of the Lunch Poems series, the 2005 Mario Savio Memorial Lecture delivered by Seymour Hersh, and even “The Play” — the amazing last maneuver of the 1982 Big Game against Stanford, considered by many sports enthusiasts to the greatest moment in college football history (available on iTunes U).

Students, Cal grads, and parents aren’t the only ones tuning in. Professor Muller has received appreciative e-mails from listeners in more than 34 countries, including Holland, Turkey, New Zealand, and even from Timbuktu (in Mali). “This is really thrilling for me as a teacher,” says Muller. “As a university professor, one of my central jobs is to teach. Now I’m reaching out to thousands with no extra effort on my part. It spreads wonderful goodwill for the University and will hopefully make that many more people want to come to Berkeley.”

One of Muller’s listeners from Chile wrote that he, his brother, and sometimes his father connect via videoconference and listen to the lectures together. “Imagine that even I, who studied business administration and had no idea of physics … am getting to understand it!” the listener wrote to Muller. “Thank you very much for sharing your classes with us. It is a very nice time and experience for me to spend with my family.”

Coursecasting at Cal

Visit the following Web sites and take advantage of lifelong learning at Berkeley.

Berkeley on iTunes U

iTunes.berkeley.edu

Berkeley on Google Video

video.google.com/ucberkeley

UC Berkeley Webcasts and Podcasts

webcast.berkeley.edu

Coursecasting Timeline

2006

Berkeley forms partnerships with Apple and Google to offer webcast.berkeley.edu content through iTunes U and Google Video, increasing exposure to the intellectual riches of the campus.

2005

Berkeley begins podcasting course lectures through webcast.berkeley.edu.

2002

Berkeley expands webcast.berkeley.edu offerings to include campus events, beginning with President Bill Clinton’s January address to campus.

2001

Berkeley Internet Broadcasting System (BIBS) evolves into webcast.berkeley.edu, and Berkeley’s Educational Technology Services (ETS) assumes operation of the service.

1999

Astronomy 10, Chemistry 1A, IDS 110 (Introduction to Computers), and Computer Science 61A-C are offered with a webcast component.

1998

The Berkeley Multimedia Research Center (BMRC) develops BIBS to manage the production and broadcast of courses in real time and for replay on demand.

1995

BMRC — a campus consortium of artists, educators, professionals, and scientists on campus — begins webcasting seminars on the Internet.
University Medalist combines passions for technology and world cultures

On any given day, Lane Rettig has ground breaking educational software to design, inner-city children to mentor, Japanese literature to translate, new languages to master, and new countries to explore.

To top it off, the New Jersey small-town boy who started his first Internet company at age 14 landed the highest honor for a graduating senior at UC Berkeley. As the 2006 winner of the University Medal, Rettig spoke at Commencement Convocation at the Greek Theatre on May 10 and received a $2,500 scholarship.

A computer science and Japanese double major with a 3.96 grade point average and more than 160 units under his belt, Rettig certainly didn’t earn the University Medal by holing up in the library.

During his years at Berkeley, Rettig jet-setted around the world, completing three studies abroad in England, Japan, and China; worked as a system administrator; mastered Japanese; volunteered at an orphanage; and designed software to educate children in developing countries. He also dabbles in theater, karate, and a cappella, and served as a mentor to 5th graders at a Berkeley elementary school.

As a child, technology was Rettig’s unwavering passion. He took computer classes at a community college because his high school didn’t offer any. At 14, he and a friend ran a network of computer gaming Web sites, making money from advertising revenues. He was admitted to UC Berkeley in 2001.

He started thinking seriously about the University Medal a couple of years ago when he read the biographies of the medalists and finalists. “I said to myself, ‘How can I compare myself to these people?’ but I was inspired.” Rettig says. “I said, ‘Wow, I’ve got two years left to get my act in gear and accomplish the things these people have accomplished.’” The rest is history.

Travel and Revelations

Having discovered Berkeley Programs for Study Abroad, Rettig traveled to London in 2003 to attend a summer session in British theater. He followed that with a junior year abroad in an engineering program at Tohoku University in Sendai, Japan.

One day in Japan, while visiting a memorial museum in Hiroshima, something deep inside him changed. An elderly couple who had survived the atom bomb asked him where he was from. He felt bad saying he was from the United States, which had dropped the bomb on Hiroshima and Nagasaki, but the old man assured him it was important that young Americans learn what happened in the spirit of “never again.”

“Having that conversation, I realized I wasn’t happy being the sideline student observer,” Rettig says. “I wanted to make a difference. I wanted to do more than observe.”

Inspired Research

After that, he threw out a research project that had been frustrating him. He traveled to China and Thailand, visiting hill tribes where people were disconnected from technology. He worked at a Thai orphanage, and taught children English and how to use the Internet.

That set his research spinning off into an entirely new direction as he sought to bring Internet technologies to the developing world. Pursuing that goal has become the “big picture” for him and may require him doing graduate studies in law or economics, he says. For now, he’s working on a project with UC Berkeley’s Technology and Infrastructure for Emerging Regions to use cellular phones as English-language learning tools.

This fall, he began working in New York at the investment firm D.E. Shaw & Co., which was founded by a computer scientist.
Born to two University of Texas psychology professors, Nicole Swann inherited her parents’ interest in the workings of the brain. At Berkeley, Swann double-majored in psychology and molecular and cell biology, focusing on neurobiology in her lab work at Professor Robert Knight’s cognitive neuroscience research laboratory, part of the Helen Wills Neuroscience Institute and the Department of Psychology. In the lab, she studied how different parts of the brain work together, recording electrophysiological signals from human subjects using electroencephalograms (EEGs). She is now attending UC San Diego, where she is pursuing a Ph.D. in neuroscience.

As if his dual majors of Arabic and English weren’t enough to keep him occupied, Brian Loo used his years at Berkeley to explore the crossroads of international policy and interpersonal relationships. Loo’s accomplishments include the creation of the “Plans for Peace” scholarship at his high school in Redlands, Calif., which encourages students to suggest peaceful solutions to world issues, and leadership roles at Berkeley’s Model United Nations and the Student to Student Peer Counseling program. After graduation, Loo completed a TEFL (Teaching English as a Foreign Language) certification program, and he plans to volunteer for a nonprofit in Palestine.

Civil engineering major Siu-Ting Mak brought an engineer’s precision not only to his studies but also to his passion for music. Academic highlights of the Hong Kong native’s years at Berkeley include his in-depth studies relating to self-anchored suspension bridges and his involvement in the Katrina Recovery Task Force, which studied the structural aspects of levee failures. A gifted pianist, Mak was also a standout student in music classes and participated in Cal Community Music, a group that performs live music at convalescent hospitals and retirement centers in the Berkeley area. This fall, Mak began UC Berkeley’s one-year master’s program in structural engineering.

Laurel Mackenzie distinguished herself in the classroom as a dual major studying French and linguistics, but her formidable talent on the carillon — the chimes inside the Campanile — displayed her musical skills campuswide. During her years at Berkeley, the Texas native thrived on multitasking, supplementing a heavy course load with work-study positions, responsibilities at her 60-member co-op, and membership in the University Symphony Orchestra, finishing her senior year with a 3.98 grade point average. This fall, Mackenzie began graduate school at the University of Pennsylvania’s linguistics program, where she is studying dialects and accents with outstanding scholars in the field.

A much-honored history of art major, Alexis Ashot is quick to defend the relevance of his chosen discipline, citing the powerful emotions one can feel when experiencing an expressive, effective work of art. Ashot received the Maybelle Toombs Award for Excellence in the History of Art, the departmental citation, and he served as the history of art valedictorian this year (selected unanimously by his department’s faculty). He is now pursuing a master’s degree in art history at University College London.

Photos by Bonnie Azzi Powell and Wendy Edelstein.
The Berkeley Art Museum and Pacific Film Archive (BAM/PFA) has selected an award-winning Tokyo-based architecture firm to design its new facility — an ambitious project that will rely largely on a continuing capital campaign for its timely completion.

Toyō Ito & Associates, Architects was selected by a committee comprising BAM/PFA trustees and staff and UC Berkeley staff, including faculty from the College of Environmental Design, out of a group of five finalists. The selection concludes a yearlong process during which the committee solicited qualifications from 141 architects and narrowed that selection to 20 firms, then five. The committee also made site visits and interviewed each of the five architects before making a recommendation that was approved by Chancellor Robert J. Birgeneau.

**Added Emphasis on Education**

Seismic concerns at the current BAM/PFA site on Bancroft Way prompted discussions of a new facility to be built on University property at the corner of Oxford and Center streets in downtown Berkeley, at the western entrance to the campus. One block from the Downtown Berkeley Arts District, the new museum will provide a physical and metaphorical link between the city and the University. It would also be adjacent to the campus’s proposed hotel and conference center.

With the new facility, BAM/PFA officials plan to create a more integrated environment for art appreciation, research, and education — one that offers expanded, flexible gallery and theater spaces that can accommodate evolving contemporary art forms, as well as lecture halls, seminar rooms, and study areas that provide ample teaching, research, and exhibition space.

Private funding will cover most of the museum’s construction costs, and BAM/PFA officials are quick to note the new facility’s importance in underscoring the University’s ongoing commitment to supporting the visual arts. “This museum should be on everybody’s list of projects essential to keeping UC Berkeley up at the top,” says Barclay Simpson ’66 (ex-’43), Chair of the BAM/PFA Board of Trustees. Presently BAM/PFA trustees and staff are in the early stages of the fundraising campaign. The timing of building construction depends on BAM/PFA’s progress in raising capital support.

**Japan’s ‘Poet of Architecture’**

Toyō Ito is known for his inspirational architecture and for designing multiple-use buildings that closely interact with the urban streetscape. The BAM/PFA facility will be Toyō Ito & Associates’ first project in the United States. Among the firm’s most acclaimed projects are the Sendai Mediatheque, Sendai, Japan; Shimosuwa Municipal Museum, Nagano, Japan; and the Yatsushiro Municipal Museum, Kumamoto, Japan.

UC Berkeley professors praised Ito’s inspirational architecture and fluid designs that unify the building’s surface and structure. Harrison Fraker, dean of UC Berkeley’s College of Environmental Design, describes Ito as one of the world’s “most innovative” architects, while Dana Buntrock, associate professor of architecture, calls Ito “the poet of architecture in Japan.”

Ito is an honorary fellow of both the American Institute of Architects and the Royal Institute of British Architects, and his many awards include The Arnold W. Brunner Memorial Prize in Architecture from the American Academy of Arts and Letters (2000) and the World Architecture Award for the Best Building in East Asia (2002).

To learn more about the building project and the architect, visit www.bampfa.berkeley.edu/newbuilding.

In his most recent projects, architect Toyō Ito (left) unifies a building’s surface with its structure, a design approach that is clearly visible at the Sendai Mediatheque in Sendai, Japan (inset).

The proposed location for the new museum is on the corner of Oxford and Center streets.

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At first glance, a statistics lecturer, an assistant professor of city and regional planning, and an assistant professor of computer science might not seem to have much in common. But three UC Berkeley educators from those varied disciplines now claim a common honor — they each received the University’s Distinguished Teaching Award for 2006, bestowed by the Berkeley Division of the Academic Senate’s Committee on Teaching.

Ani Adhikari, a statistics lecturer; Ananya Roy, assistant professor of city and regional planning; and David Wagner, assistant professor of computer science, were honored at a ceremony held at Zellerbach Playhouse.

In addition to their Distinguished Teaching Awards, this year’s awardees have something else in common — they each received their Ph.D.s from Berkeley.

Ani Adhikari

Teaching course load: Introduction to Probability and Statistics, Concepts of Statistics

Years teaching at Berkeley: 25 (includes time as a visiting lecturer from Stanford)

On the value of a Berkeley education: “Most important to me is the quality of education that is available at Berkeley, for such a small expenditure in comparison to Stanford and in my view for precisely the same result. That makes the biggest difference to me: how we use the resources we have to give such a rich experience to the students, and therefore give the faculty an equally rich experience.”

What she’s learned from teaching at Berkeley: “I’ve learned to listen. I learned to look at my subject through the eyes of somebody who isn’t used to thinking in that way at all. Through that, I learned to understand my subject much better because I can’t hide behind mathematics or formulas or the computer. I have to be able to explain in clear English why it is I’m making the steps I’m making.”

Collaboration vs. presentation: “My goal in lecture is to have as much participation from students as possible. That’s what makes it different from reading a textbook. It’s almost like playing with Legos. Unless students manipulate with me, they are getting a version of the subject that is once removed from them. If they’ve taken the trouble to come to my class, I want them to get something that they can only get in that room.”
Ananya Roy

**Teaching course load:** Urbanization in Developing Countries, The City, at least one graduate seminar per semester; fall seminar on international development; spring core research methods class for graduate students; works with graduate students and Ph.D. candidates; fall Global Poverty course at the Blum Center for Developing Economies (see page 26).

**Years teaching at Berkeley:** 7

**On the importance of teaching at Berkeley:** "I'm constantly inspired by my undergraduate and graduate students, and there's a certain magic in the Berkeley classroom that has to do with the sorts of students we get, and their passions and commitments — in particular their commitment to the idea of learning and being really open about the diversity of ideas."

**Favorite Berkeley classroom moment:** "I get students who disagree with me and challenge me. We can have a meaningful dialogue as to what things mean and where we're each willing to rethink our positions and to do some serious research rather than remain caught up with ideology. We have these wonderful conversations that are difficult, but I think we learn quite a bit."

**Action beyond the classroom:** "Some amount of institution-building is necessary. I recognize the importance of making sure we have the endowments and fellowships, that we create new initiatives in collaboration with donors, like with the Blum Center, and that we create a strong alumni network that takes ownership of the University. I don't see administrative responsibilities as separate from the idea of teaching. For me, they're very much linked."

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David Wagner

**Teaching course load:** Undergraduate and graduate-level Computer Security classes, Discrete Mathematics, graduate-level Cryptography

**Years teaching at Berkeley:** 7

**On giving back to public education:** "For a large part of my education and career, I've been supported by public money. I've always felt a little bit of a debt because of that. It feels fitting to be at a public university. It fits my style and my personal leanings."

**Favorite Berkeley lecture:** "Juggling is a fantastic example of the concept of state machines, which is pretty important in computer science. It was very fun to have the chance to teach the state machines material by showing students how juggling patterns connect back to computer science — and how mathematical theory can pop up in all sorts of wonderful and unexpected places."

**The importance of mentorship:** "The Computer Science Department is very supportive of junior faculty. I was able to pair up with one of the most senior and experienced teachers in our department, someone with decades of experience. The department has an interest in making their faculty successful, and they put in the time needed to make that happen."

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Another record fundraising year

For the second year in a row, UC Berkeley has set a new record for private support, with $347.6 million in the 2005-06 fiscal year contributed by alumni, parents, and friends.

The total breaks the previous record of $318.3 million set in 2004-05. The number of gifts to the University also established a new benchmark at 87,803, up from 80,234 gifts contributed the previous year.

“The extended Cal family of alumni, parents, and friends raise the bar once more, and through their generosity they help to strengthen Berkeley’s ability to compete — and prevail — among the very best universities in the world,” says Vice Chancellor for University Relations Donald McQuade, who is completing his final year in this leadership post.

Under his direction, the UC Berkeley campus has raised more than $2 billion over the course of his seven-year service as vice chancellor.

This year’s success provides a solid foundation for the future, McQuade says, noting that these results bode well for the campus’s fundraising efforts as it enters what is expected to be UC Berkeley’s most ambitious fundraising campaign.

The $347.6 million includes contributions to benefit students and faculty directly, advancing a wide range of research as well as boosting financial aid for undergraduate students.

Notable gifts and pledges for the fiscal year, which ended June 30, include:

- $25 million, from Ann and Gordon Getty, to support campuswide teaching and research in cutting-edge biomedical science.
- $25 million, pledged anonymously, to the Haas School of Business.
- $15 million, including a $5 million challenge grant, from Richard C. Blum, for the Richard C. Blum Center for Developing Economies.
- $8.8 million from the Henry B. and Elsie Clay Fund to support undergraduate financial aid.

A record amount, $1.8 million, also was raised online for programs across the campus through the University’s Give to Cal site. This included 9,706 gifts.
Global poverty program launches

The New Blum Center Welcomes its First Class
While the issue of global poverty has dominated headlines in recent years, it has long been a concern for alumnus Richard C. Blum ‘58, M.B.A. ’59. Last spring — building on his three-decade involvement with poverty alleviation efforts — he initiated the new Richard C. Blum Center for Developing Economies with a $15 million gift to the campus that includes a $5 million challenge grant. Less than five months later, his dream of giving Cal students the tools to combat poverty through integrated coursework and service has come to fruition with the launch of the new two-unit, eight-week survey course “Global Poverty: Challenges and Hopes in the New Millennium” and the hiring of the new executive director; George T. Scharffenberger.

Fresh Thinking About an Old Problem
“The class is built upon the premise that tackling poverty requires fresh thinking and fresh action,” says Ananya Roy, associate dean in International and Area Studies (IAS), who has served as acting faculty director for the Berkeley Programs for Study Abroad. Roy, who recently was awarded the Distinguished Teaching Award, the highest teaching honor UC Berkeley bestows on its faculty, is teaching the class this semester and leading curriculum development efforts for the Blum Center.

The interdisciplinary curriculum program will involve faculty from the social sciences, humanities, and the various professional schools such as law, engineering, public health, and natural resources. It is envisioned as both a short- and long-term endeavor — starting with the new poverty survey course and then building to a global poverty minor and eventually sequencing into a B.A. and an M.A. in global studies.

Abounding Interest
Student demand for the curriculum is so high that the class location had to be changed twice to better accommodate its 220 undergraduate, graduate, and doctoral student enrollees. It is now being held in the Pacific Film Archive Theater.

“We’re attracting a really wonderful group of students from a range of departments and disciplines ranging from molecular biology to sociology,” says Roy. “The level of interest in this class demonstrates why it is so important that Berkeley is creating this curriculum.”

There is plenty of faculty support aligned behind the effort. Already, Roy has enlisted key Berkeley faculty — including Eva Harris (public health), Kara Nelson (civil and environmental engineering), Eric Brewer (computer sciences), Raka Ray (sociology), Eric Stover (Human Rights Center), Dara O’Rourke (environmental science), and Ted Miguel (economics) — as guest lecturers.

“We’re all passionate about these issues,” Roy says of her faculty colleagues, “but we haven’t necessarily collaborated across these fields.”

A History of Involvement
Blum is no stranger to turning his concerns about the world’s poor into action. He has been devoted to helping to solve the issue of poverty since the ‘80s with particular emphasis on investing in local communities to help them develop greater economic self-sufficiency. Twenty-five years ago, he founded the American Himalayan Foundation, which runs more than 130 projects in the Himalayan region including schools, health services, cultural preservation, forest restoration, and small-scale economic development.

The Dalai Lama (far left) and former President Jimmy Carter (far right) are pictured with Richard Blum and his wife, U.S. Senator Dianne Feinstein; last fall. Both men are honorary trustees of the Blum Center.

“‘It has been fantastic to see how Dick Blum thinks about globalization and inequality,’” says Roy. “He has learned a great deal from his travel experiences and grassroots work, and he is open to learning and encouraging students to build a critical framework for examining global development and thinking about what it might take to do it differently.”

The support that Blum has provided to UC Berkeley will eventually make it possible for faculty to offer new courses, hire graduate student instructors, and provide student fellowships. More information on the $5 million challenge grant is available at blumcenter.berkeley.edu.

Blum says of the program, “Even after these students graduate, they will have a sense of engagement with the world and an understanding of poverty and inequality that they will carry with them throughout their experiences in life.”

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Volunteer enthusiasm fuels reunion-year fundraising campaigns

What’s the key to a successful reunion gift campaign? The following three class campaigns, all taking place this year, show that the strongest impact often comes when alumni volunteers reach out to fellow classmates and encourage their support. “When alumni leaders are inspired to celebrate through giving we know their reunion campaign will take off,” says Jennifer Kitt, the University’s director of volunteer campaigns.

Class of ’96: Giving Early, and Giving Again
When the Class of ’96 launched a senior gift campaign — one of the first at the University — many students pledged $19.96 in honor of their graduation year. Those seeds of philanthropy planted 10 years ago are blooming today with the class’s Reunion Gift Campaign.

Reunion committee member Edward Chien ’96 initially sparked giving with a $25,000 pledge, and another committee member matched that gift, helping to propel the campaign to its $150,000 goal well before Homecoming.

“We’ve spread the task of asking classmates for gifts, with committee members approaching friends and colleagues with whom they have a prior relationship,” says committee co-chair Bob Jensen ’96, referring to the 20-member Reunion Class Committee. “Personalizing this process has yielded wonderful results.”

With their class’s goal met, Jensen and fellow reunion committee co-chair Robert Dickinson ’96 hope to encourage further giving among more recent graduates. “We challenge the Class of 1997 to meet and surpass this benchmark,” Jensen says.

Class of ’61: A Challenging Campaign
What began as a campaign with a modest goal of $245,000 quickly turned into an inspiring story of “challenge” fundraising that could net $1.5 million in contributions — making it just the third class campaign in Cal history to surpass the $1 million mark.

Shortly after the Class of ’61 campaign launched, an anonymous donor offered a dollar-for-dollar match if the class raised $250,000 by June 30 and another $250,000 by September 30. Then another classmate offered $250,000 more in matching funds. By the end of September, the Class of ’61 had exceeded its campaign goal of $1.5 million.

“The matching gifts generated excitement among the folks on the campaign,” says Bill Ausfahl ’61, reunion class co-chair and vice chair of the UC Berkeley Foundation. “We’ve had several people whom I know donate just because of those gifts.”

Reunion committee co-chair Peter Frazier ’61 also believes the anonymous challenge gifts inspired the class’s success. “I think those large matches made people realize that they have the capacity to give more than they have in the past,” he says. Go Bears, indeed.

Class of ’56: In the Books and Beyond
The Class of ’56 Reunion Committee continued raising funds for the class’s Library Preservation Endowment, which it established in its 40th reunion year. This summer, the campaign surpassed its goal of $286,000, putting contributions over the $1 million mark.

Not bad for a bunch of alumni who attended Cal when “the state paid all the bills,” recalls Bill Floyd ’56, a UC Berkeley Foundation trustee and the class’s reunion committee chair. “Our class wasn’t raised with the idea that you had to raise money to support the school.”

The giving hasn’t stopped with the library endowment. Spurred by Floyd’s $250,000 matching gift, the class has marked the 50th anniversary of its graduation by contributing more than $1 million to beneficiaries across campus.

Still, Floyd takes particular pride in his class’s fulfillment of its initial goal, the Library Preservation Endowment. “The library was something that resonated with the class,” Floyd says, “and they’ve been very good about supporting it.” Preserving the library collections for future students is an admirable gift from the Class of ’56.
1. Nadine M. Tang, M.S.W. ’75, Kirk McKusick M.S. ’79, M.S. ’80, Ph.D. ’84, Eric Allman ’77, M.S. ’80, and Bruce Smith ’68 (pictured left to right), enjoy a reception before the Cal Performances Centennial Celebration Gala in May. The evening marked the public announcement of the $15 million Centennial Campaign, which will support endowment, artistic initiatives, and improvements to Zellerbach Hall.

2. Pantas Sutardja ’83, M.S. ’85, Ph.D. ’88 (right), chief technology officer of Marvell Semiconductor, speaks with current electrical engineering and computer sciences undergraduate Arash Ghanadan during a recent Engineering Dean’s Society event, “Educating Leaders: Innovation & Entrepreneurship.”

3. Marty Griffin ’42, M.D. ’72, M.P.H. ’72, his wife Joyce Griffin (seated), and Professor Martha Campbell attended the School of Public Health’s Appreciation Dinner on June 19 at the Bancroft Library.

4. Guests at the Runnymede Art Farm Ramble, a benefit for the Environmental Design Archives, enjoy the spectacular art, a picnic lunch, and great company. Pictured from left to right are Brittany Feitelberg, Dan Feitelberg, Sophie Hahn ’83, Vice Chancellor Nathan Brostrom (with baby Anna), Caitlin Lempres Brostrom M.Arch. ’90 (event cochair), Michele Bronson, Sarah Lempres, Sharon Brostrom, Neil Brostrom, Mercedes Corbell ’86, Molly Brostrom, Barbara Westover M.Arch. ’89 (event cochair), and Po Bronson.

5. Linda Millard (left) of the Achievement Rewards for College Scientists Foundation and Jeanne Stachowski, Ph.D. candidate in mechanical engineering and ARCS fellowship recipient, attended the May 2 Graduate Fellowships Luncheon cohosted by Chancellor Birgeneau and Graduate Dean Mason.

6. This summer Alice Waters ’67 hosted a Chez Panisse lunch for 40 participants of the Beahrs Environmental Leadership program, an intensive training program for environmental leaders from around the world. Pictured from left to right are: Martine Ngobo Nkongo; Waters, owner of Chez Panisse; Chancellor Robert J. Birgeneau; Sara Mateo Centeno; Robin Marsh, co-director of the program; Aman Singh; and Biatus Bito.

7. Dzongsar Jamyang Khyentse Rinpoche (right) is shown with George Breslauer, executive vice chancellor and provost, during a campus celebration of the Khyentse Foundation’s establishment of a $1 million distinguished professorship in Tibetan Buddhism. With the addition of the new professorship, Berkeley will have one of the strongest faculties in Buddhist Studies outside of Asia.

8. Professor Marion Nestle ’59, Ph.D. ’68, M.P.H. ’86 (front left), who won the 2006 Best of the Bay Award for her graduate seminar series on food politics, converses with food policy leaders including John Scharffenberger ’73, Alice Waters ’67, and Professor Michael Pollan (pictured left to right) at a recent Goldman School of Public Policy dinner.

9. Alumni in London gathered for a June 28 reception at the home of Albert Scardino M.Jour. ’76 (far right), pictured here with Daniel Moun-Makoua M.S. ’85 and Obebe Moun-Makou. The event brought together more than 80 alumni and friends from the United Kingdom.
I joined the faculty at UC Berkeley in 1971 — in an era when houses were still affordable, and salaries for professors, though modest, were still competitive. The jobs I have held at Berkeley since then have given me progressively wider views of the fabulous research and teaching that take place at this University. They have also given me a close-up view of how difficult it is to recruit and retain the top-flight faculty who produce that research and teach our students.

Simply put, UC Berkeley competes with the leading private universities, including Harvard, Princeton, MIT, and Stanford, for the best faculty talent — but it does so with a handicap. Our faculty salaries lag greatly behind those of the competition (in the middle ranks — tenured associate professors — by about 25 percent). With these salaries, we seek to attract faculty to an area in which housing prices are among the most expensive in the nation. Our modest home-loan program is far less attractive than those of our competitors, who offer forgivable loans, low-rent apartments, and enormous housing subsidies. This leads to many tense moments. Our private competitors are constantly trying to raid our faculty by offering them higher salaries, better housing, more research funds, and better research facilities than we are able to offer. Our professors have many reasons to wish to stay here, including the intellectual excitement of working with world-class faculty colleagues and graduate students, and the fact that ours is a public university dedicated to providing upward mobility for many thousands of students (one-third of Berkeley’s undergraduates come from low-income households). But when our privately funded competitors tap their huge endowments to offer a standard of living, quality of research facilities, and housing that by far exceed what they have here, I can see them — and their families — torn by the choice.

The fact is, with spiraling housing prices, the situation has become a crisis. Some of our faculty, like me, came to the University in the 1970s and 1980s, when housing was much more affordable; others come from wealth, and as a result live comfortably. But very large numbers of faculty arrived in the 1990s and 2000s and do not come from wealth. Even with help from the campus, they often live in cramped quarters, spend an exorbitant proportion of their income on mortgage payments, and worry about affording college tuition for their kids. (The private universities pay for much, if not all, of that tuition, but we cannot afford to offer such a benefit.) As a result, even less-prominent institutions in low-cost regions are becoming increasingly attractive to our faculty. We recently lost a professor to the University of Illinois at Urbana-Champaign, solely because of the spacious housing available, at relatively low cost, in that town.

The price of excellence is high, but it is a small price to pay to keep the finest minds in the country coming to California. Children from low-income and middle-class backgrounds deserve to attend a public university that remains on par with the leading private universities in the country. Faculty from modest socioeconomic backgrounds deserve to enjoy a comfortable, middle-class lifestyle for which they have worked so long and hard. They excel in their fields of specialization, transform the world with their research findings, and have won a hard-fought international competition for appointment to the faculty at UC Berkeley. Hence, whatever the mechanism for housing assistance, the time has come to solve this problem of faculty recruitment and retention. It took decades to build a great university; it will take much less time to lose it.

By George W. Breslauer, Executive Vice Chancellor and Provost, UC Berkeley

An earlier version of this piece appeared in the San Francisco Chronicle on July 25, 2006.