College of Letters and Science

data & dust
chemistry & cinema
brains & black holes
music & memory
art & avatars
Greetings from UC Davis,

As we reflect on the fall and look forward to the second half of the academic year, we marvel at the talent and innovation evident in the College of Letters and Science. UC Davis is an exhilarating community and, we believe, the very best place for shaping a future filled with possibilities.

We also understand that even as the specter of the Great Recession fades, the cost of college continues to provoke consternation, particularly in the homes of young people bound for the university. As a result, families have become more concerned about how college prepares students for career success. This has led some to wonder about the utility of pursuing majors in the humanities, arts or other liberal arts that may not obviously align with a defined career track.

At the College of Letters and Science we know that the liberal arts—a broad collection of disciplines that encourages creativity, critical thinking and communication—can lay the foundation for success in all careers, including those we cannot yet imagine. As UC Davis Chancellor Linda P.B. Katehi has said, our future depends on having “more people who know how to think across boundaries.”

In this issue of the College of Letters and Science Magazine, we celebrate the breadth and depth of the liberal arts at UC Davis, share news about a planned Chemistry Discovery Complex and provide a special focus on our efforts to broaden and strengthen the skills of students across the college through a new data studies program.

We hope you enjoy this issue and are inspired to become more deeply engaged in the life of the college.

Susan B. Kaiser, Interim Dean, Humanities, Arts and Cultural Studies

Li Zhang, Interim Dean, Social Sciences

Alexandra Navrotsky, Interim Dean, Mathematical and Physical Sciences
In a rapidly changing, innovation-driven knowledge economy, the specific choice of undergraduate major is less important than being sure graduates have the full complement of skills and breadth of knowledge to be able to navigate a changing and challenging workplace.”

— Debra Humphreys, vice president for policy and public engagement for the Association of American Colleges and Universities, who gave two talks at UC Davis in May 2015 on the “enduring value” of a liberal arts education.

New Chemistry Discovery Complex Planned

Chemistry touches research and teaching throughout campus, from agriculture to biology to medicine to engineering. To ensure the campus can expand its influence in what Chancellor Linda P.B. Katehi calls the “core discipline for everything that we do,” in April, Katehi and Interim Dean Alexandra Navrotsky announced the first steps toward building a new complex dedicated to interdisciplinary chemistry research and education.

The planned Chemistry Discovery Complex includes a new building and an addition and renovations to the Chemistry Building, Chemistry Annex and Bainer Hall. The complex will be the largest transformational research project in UC Davis history, Katehi said. Estimated to cost $400 million, the seven-year construction project will be funded through a mix of state, private, campus and other funds.

College Structure in Transition

The College of Letters of Science administrative structure will be reorganized to create a single dean’s position, around July 1, 2016, campus leaders announced in the spring.

The structure of the college has been under discussion for the past several years. In January 2015, Provost and Executive Vice Chancellor Ralph J. Hexter appointed a work group that subsequently met 19 times, consulted with five distinguished colleagues from other institutions and produced a 20-page report recommending the appointment of a single dean to administer the college.

“The Chemistry Discovery Project is an exciting and bold step forward to advance chemical research, in the broadest sense, at UC Davis.”

—Alexandra Navrotsky, Interim Dean, Mathematical and Physical Sciences

Read more at http://dateline.ucdavis.edu/dl_detail.lasso?id=15207
Nelson Gallery Ends 40-Year Run

The amazing 40-year run of the Richard L. Nelson Gallery came to an end in June. But the important role that the gallery played in visual arts at UC Davis will be expanded as the university prepares to open the new Jan Shrem and Maria Manetti Shrem Museum of Art in 2016.

Since opening in 1976, the Nelson Gallery has held exhibitions ranging from large stone sculptures to old master prints to video and sound installations. It has shown works by world-famous faculty members and hundreds of UC Davis art students.

The gallery was named for the founding chair of the UC Davis Department of Art. Nelson came to UC Davis in 1952 and in 1958 became chair of the newly formed department, building it into a nationally recognized program. Among his early hires were Robert Arneson, William Wiley, Wayne Thiebaud, Manuel Neri, Roy De Forest and others who made significant marks in the art world.

Read more about the Nelson closing at http://news.ucdavis.edu/search/news_detail.lasso?id=11227

Leadership Changes for Division of Social Sciences

Dean George “Ron” Mangun Steps Down

After seven years leading the Division of Social Sciences, George “Ron” Mangun stepped down as dean this fall to return to teaching and research.

At a farewell reception for Mangun, colleagues lauded him as a “fearless innovator” and “brilliant leader” who loves people and always put his faculty and students first.

Mangun, a distinguished professor of psychology and neurology and the founding director of the UC Davis Center for Mind and Brain, said serving as dean was “one of the great pleasures of my career.”

On sabbatical from UC Davis this academic year, he is spending six months in the Netherlands as a Radboud Excellence Initiative professor. He will conduct research at the Max Planck Institute and the Donders Institute for Brain, Cognition and Behavior, both in Nijmegen.

Under Mangun’s leadership, the Division of Social Sciences rose in the national rankings, doubled its extramural support of research and garnered double its goal for The Campaign for UC Davis.

“Countless faculty and students have benefited from Ron’s leadership,” Chancellor Linda P.B. Katehi said. “He has been an outstanding administrator and educator, and the entire university owes him a great debt of gratitude.”

Li Zhang New Interim Dean for Social Sciences

Li Zhang, chair of the Department of Anthropology since 2011, is interim dean of the division this academic year.

“We are grateful that Professor Zhang will fill this important role, especially during this time of transition within the division and College of Letters and Science,” Katehi said in a message to faculty and staff. “She is highly respected among her peers and brings a strong track record of success as an academic administrator.”


“My goals during this interim period,” she said, “are to continue to attract and advance our excellent faculty, to create the conditions to stimulate and enhance research accomplishments, to develop new, exciting and vigorous curricula to engage and prepare our students in today’s real-world challenges and opportunities, and to ensure that our staff provide the highest level of innovative support to our academic mission.”

Learn more about Zhang at ls.ucdavis.edu/dss/dean/dean-bio.html
College News

what’s happening

New Program Names and Curricula

Gender, Sexuality and Women’s Studies

After more than 30 years as Women's Studies and then Women and Gender Studies, this program has a new name and a revamped curriculum.

Now known as Gender, Sexuality and Women's Studies, the program has a redesigned curriculum that includes a focus on gender studies of science and scientific institutions, a transnational focus that moves beyond a U.S.-centered studies model, and adds new courses on masculinity, fashion and food studies. The major is organized on three new tracks:

- Social Justice, Gender Politics and Activism
- Culture, Power, and Resources
- Sexualities, Subjectivities, and Body Politics

In Memoriam

HEATHER BECK
(Ph.D., chemistry, ’12)
passed away in March. She was 40. Beck worked in distinguished professor emeritus Claude Meares’ laboratory where she sought to eliminate cancer through chemistry. She is survived by her fiancé, David Ponte, who plans to establish a student scholarship in her memory.

MANFRED FLEISCHER
professor emeritus of history, passed away on April 19. He was 87.

JENNIFER PARDES WIENICK
(B.A., English, ’99), passed away on June 27. She was 38.

THOMAS ALLEN
professor emeritus of chemistry, died on June 28 at his home in Davis. He was 91. Among his many honors, he was selected to be the Picnic Day Parade Marshal in 1976.

ARNOLD JACOB BAUER

RAND SCHAAL

Cinema and Digital Media

Cinema and Technocultural Studies is now Cinema and Digital Studies. The new name represents the emergence of a new field, where media are now algorithmic as well as visual and aural. This field benefits from the intellectual depth of film studies, while simultaneously expanding its focus to better meet the needs of students interested in film and digital media.
Students First to Document Napa Earthquake

After an earthquake, scientists rush to document the damage before essential repairs scour the ground clean. These scientific clues can help identify shaky ground and improve understanding of the earthquake's source. When the magnitude-6.0 Napa earthquake hit at 3:20 a.m. on Aug. 24, 2014, geology graduate students Alex Morelan and Chad Trexler raced toward Napa Valley. Their rapid response helped preserve valuable scientific evidence, said Michael Oskin, professor of earth and planetary sciences.

Using smartphones and social media, Morelan, Trexler and Oskin created the Napa quake's first publicly available ground rupture map — locations where the fault broke the Earth's surface. The graduate students measured mangled curbs and snapped photos of split vineyards. Oskin, who was vacationing in southern California, compiled everything in Google Earth and posted updates on Twitter. Their results appeared in the May 2015 issue of the journal Seismological Research Letters.

Oskin also organized a fall 2014 graduate class to further assess Napa Valley's earthquake potential. The students presented their results at the American Geophysical Union's annual meeting in San Francisco. Collectively, the researchers found the West Napa Fault is longer than previously thought and could unleash a magnitude-7 earthquake. “In terms of Napa Valley, it would be a much larger earthquake and much more devastating than what has happened historically,” Oskin said.

See the team’s photos and maps on the Trembling Earth blog, written by Austin Elliot (Ph.D., geology, ’15) at http://blogs.agu.org/tremblingearth/2014/08/30/earthquake-rupture-u-s-suburb/

Music and Memory Researcher Part of Project that Garners Research Catalyst Award

Petr Janata, professor of psychology and researcher at the Center for Mind and Brain, is among a group of faculty from four UC campuses to win a $300,000 President’s Research Catalyst Award, one of five such awards across the UC system announced by President Janet Napolitano.

Researchers in the UC Music Experience Research Community Initiative (UC MERCI) will work collaboratively to develop methods for understanding music’s effect on the human mind. UC MERCI is among the first to receive one of the new Catalyst Awards, which will provide $10 million over three years to fund research in areas of strategic importance such as sustainability and climate, food and nutrition, equity and social justice, education innovation and health care.

Janata is one of the world’s leading experts on the relationship between music, emotion and memory. In addition to grants from the National Institutes of Health and the National Science Foundation, Janata has a grant from the GRAMMY Foundation to study music and memory in Alzheimer’s patients.
Sentence Reduction, Job Training Could Help Prisoners’ Children

Children whose parents are in prison are at greater risk for depression, anxiety, asthma and HIV/AIDS.

“Targeted use of shorter or out-of-custody sentences would reduce the strain families experience while minimizing negative effects on public safety,” said Bill McCarthy, a professor of sociology. He and doctoral candidate Angela Carter authored a report about how the incarceration of parents hurts children.

The report concludes that employment assistance for parents upon release, as well as less restrictive visitation rules, could reduce the economic and emotional effects imprisonment has on families.

In 2010, an estimated 2.7 million children in the U.S. had an imprisoned parent.

Read more at http://news.ucdavis.edu/search/news_detail.lasso?id=11266

Women Play Thin Avatars Harder

Women assigned an overweight avatar in a video tennis game didn't play as hard as those assigned a slim one — regardless of the player's actual size, according to a study by Jorge Peña, associate professor of communication.

“How we perceive ourselves can have a profound impact even when it is just our virtual self,” he said.

The study was published in Computers in Human Behavior.

Read more at http://news.ucdavis.edu/search/news_detail.lasso?id=11145

Report Calls for Higher Standards, Better Preparation for Childcare Providers and Educators

It is not enough to provide more money for early childhood education or to buttress one part of the complex system of care for infants and children without acknowledging the need to professionalize the workforce that is charged with the care of our most vulnerable. So says a report released in the spring by the National Research Council and Institute of Medicine.

Ross Thompson, distinguished professor of psychology, was a member of the prestigious committee of academics and leaders in childhood education that penned “Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation.” The report provides a blueprint for strengthening a fractured system of care through better preparation of caretakers and higher standards of professional practice.

“Abundant evidence shows how high quality early education supports school readiness and later learning, especially for children in low-income families who are educationally most at risk of falling behind,” said Thompson. “This report underscores the glaring discrepancy between how rapidly young children develop mentally in the early years and the fractionated, uncoordinated systems and services that influence them daily. Central to changing this situation is better preparation and support for those who work in these systems, especially adults who provide care for children.”

Thompson directs the Social and Emotional Development Lab at UC Davis.

Find the report at http://iom.nationalacademies.org/Reports/2015/Birth-To-Eight.aspx

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A cosmic telescope recently gave astronomers four near-simultaneous views of an ancient supernova.

The images were clustered in an Einstein Cross, which appears when the powerful gravitational pull of a black hole or cluster of galaxies distorts light like a lens.

“These kinds of systems are pure gold, because they allow us to study the supernova and the dark matter in the galaxy, as well as determine the history of the entire Universe,” said associate professor of physics Maruša Bradač, who co-authored a report on the discovery. Bradač uses galaxy clusters to probe the early universe and study dark matter, which is only known through its gravitational tugs on the visible universe.

NASA’s Hubble Space Telescope spied the supernova quartet in a galaxy cluster 5 billion light-years from Earth. The original supernova is 9.3 billion light-years from Earth, beyond even the Hubble’s powerful reach. However, the massive galaxy cluster is perfectly aligned to magnify and brighten the distant explosion for observers on Earth. This effect, called gravitational lensing, also distorts the supernova’s light into several images.

Learn more:
http://www.spacetelescope.org/news/heic1505/

When Outnumbered, Men Prefer Monogamy

A popularly held stereotype asserts that men want as many partners as possible, and women want stability and commitment. But in communities where men outnumber women, men were more likely to enter a committed relationship, according to a study by Ryan Schacht, a graduate student in anthropology.

“When partners are in short supply, men have relationship preferences more in line with women than with men. This clearly highlights that our notions of sexual stereotyping need to be revised,” Schacht said.

Schacht and Professor Monique Borgerhoff Mulder co-authored the paper that was published by Royal Society Open Science.

Read more at http://news.ucdavis.edu/search/news_detail.lasso?id=11138
To Frack or Not to Frack: Researchers Shine Light on Process

Hydraulic fracturing, or fracking, has drawn considerable attention because of its environmental and public health impacts. But the increased production has also significantly lowered natural gas prices. Research could help the public weigh the risks and benefits of fracking, but the science is often proprietary, said J. Quinn Norris, a recent Ph.D. graduate in physics.

“One of the challenges is everything is a trade secret. We don't have the information to make good decisions,” Norris said.

Norris, John Rundle and Donald Turcotte developed a simple model that explains how fracking works. (Rundle is distinguished professor of physics and earth and planetary sciences, and Turcotte is distinguished professor emeritus in the same disciplines.) In hydraulic fracturing, well operators create underground, fluid-filled cracks to access trapped oil and gas. Norris investigated how cracks spread and branch in a 3-D network similar to fracking wells. In his invasion percolation model, fluid followed a path of least resistance, breaking the weakest rock at each step.

Among other insights, the researchers’ model revealed large fractures aren’t traveling vertically upward from horizontal fracking wells. This result suggests leaky well casings are a likely source of groundwater contamination, rather than vertical cracks.

New National Monument in Our Backyard

In July, Berryessa Snow Mountain’s stunning peaks earned federal protection when President Barack Obama designated 330,000 acres of the region as a national monument. Eldridge Moores, distinguished professor emeritus of earth and planetary sciences, and Andrew Fulks, director of the UC Davis Putah Creek Riparian Reserve, were part of the years-long lobbying and planning efforts. According to Moores, the park geology preserves an ancient convergence between two tectonic plates. Berryessa Snow Mountain National Monument is about one hour from Davis near Asbill Creek in Lake County.

Read more at http://protectbsm.com/2015/06/30/the-berryessa-snow-mountain-region-its-remarkable-geologic-features/
**BABOON STUDY**

Baboons live in a strongly hierarchical society, but the big guys don’t make all the decisions.

In the first study to use GPS tracking, Meg Crofoot, assistant professor of anthropology at UC Davis, showed that baboons make decisions democratically. The study was published in *Science*.

“No we have data about group decision-making in social systems that are complex in many of the ways human societies are complex,” said Crofoot.

**Read more** at http://news.ucdavis.edu/search/news_detail.lasso?id=11249

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**Big Guns on Campus**

Although the UC Davis rifle range was shuttered years ago, big guns will soon be back on campus. Workers are building a new laboratory to house giant, gas-powered cannons that launch projectiles faster than the speed of sound.

Sarah Stewart, professor of earth and planetary sciences, will direct the Shock Compression Laboratory, scheduled for completion in 2016. Stewart studies the violent collisions that created our solar system. Experiments at the laboratory will improve computer models of how the Earth and Moon formed.

“I’m incredibly excited about the new lab and to have new collaborations,” said Stewart, who joined UC Davis in 2014 after 11 years as a professor at Harvard University.

Stewart’s experiments will rely on two powerful guns. One gun is scheduled to arrive this winter from her former lab at Harvard. The single-stage gun has a 20-foot barrel that can launch four-ounce projectiles up to 6,000 miles per hour — nearly eight times the speed of sound. After the cross-country trip, it will join a new, two-stage gun that drives similarly-sized projectiles even faster, at 18,000 miles per hour.

“Just like it takes more than one rocket to get to space, you need two stages to get really fast,” Stewart said.

When the projectile hits its target—sheltered inside a blast chamber—the resulting shock wave spawns pressures and temperatures similar to those inside planets. Hydrogen, oxygen, iron and other geologic building blocks take on strange properties under such extreme conditions.
ABOUT 25 JUNIORS AND SENIORS HAVE A HOT NEW JOB SKILL to add to their résumés, thanks to an innovative new program created to address employers’ needs: DATA ANALYSIS.

The students, most of them humanities and social sciences majors, learned techniques for teasing answers from large datasets—and realized the power of asking good questions—during three inaugural courses of the Data Studies Program.

The new courses grew out of conversations held by a UC Davis team last year with executives at more than 20 Northern California companies. Many of those one- to two-hour interviews about what managers are looking for in employees took place at Silicon Valley firms.

“They would like to hire graduates who have the critical thinking and the big picture skills of social science and humanities,” said Joe Dumit, director of the UC Davis Institute for Social Sciences and professor of anthropology and science and technology studies. “But they also need these graduates to understand their number one problem: data.”

Data used by companies, government agencies and other employers range from demographic facts and figures to information stored on mobile phones, businesses’ customer profiles and social media postings.

“Over and over, businesses told us that they need graduates who want to think about customers as people as well as data, who are willing to work with data scientists to identify problems, interpret findings and ask whether a presentation really shows what it promises,” said alum-nus Tim McCarthy who joined the faculty and former dean George “Ron” Mangun in meetings with business leaders. “This combination of high tech and big think is what companies are looking for.”

To help fill that need and improve graduating students’ job prospects, UC Davis piloted the Data Studies Program this summer. The demand was great: 136 students applied for 35 slots. Ultimately, 22 completed the pilot program. Dumit hopes to expand the program, with additional course offerings during the academic year and the possible creation of a new minor.

The program is aimed at current and potential students in the College of Letters and Science, including students in political science, history, sociology, Native American studies, theatre, philosophy, economics, art and dozens of other areas that are the core of a liberal arts education.

“The goal is helping liberal arts majors, but we’ve had interest from across campus,” Dumit said.

Ian Heath, a senior anthropology major who returned to school after 15 years in the workforce, said data studies classes were exactly what he needs to complete his education.

“These will provide the skills I need for working in Internet marketing, which is both data and demographics intensive, and give me an edge in being proficient in both,” Heath said. “Without them I wouldn’t be eligible to get a paid internship, which is the primary entry path into that field. As an anthropology major I am already practiced at understanding people’s language use and culture, but now I will also be able to analyze data trends pertaining to how they search the Internet and their online behavior.”

Duncan Temple Lang, a statistics professor and director of the UC Davis Data Sciences Initiative, Xan Chacko, graduate student in cultural studies, and Carl Stahmer, director of digital scholarship for the university library, helped Dumit teach the courses. McCarthy and representatives from Dropbox and other companies gave guest lectures.

The first two courses, offered during Summer Session 1, provided what Dumit
“We can collect so much data, but not very many people may know what to do with it.”

called an “intensive boot camp” in data analysis, with students attending classes from 11 a.m. to 4:30 p.m. three days a week. They learned, among other things, how to query databases, “clean” data for accuracy and use Excel, R and other software to search and organize data. In addition, they practiced methods for interviewing bosses and clients to pinpoint what exactly they hoped to glean from data.

“I feel like the class really trained me in critical thinking,” said Jiaying Maria He, a third-year student double majoring in managerial economics and art history. “This is unlike any other class I’ve taken at UC Davis. You really need to slow down and think about what you want to find.

“Before doing this, we would always go straight to the problem. We never thought about the stakeholders: What do they want and what are their problems and what are their bottom lines? Is [the question they’re asking] the right question?”

To encourage teamwork rather than competition among students, the courses were not graded on a curve. Assignments were sometimes intentionally vague, requiring students to query instructors about the desired goals.

The approach initially unsettled some students. “As a student, I care about my GPA a lot. It was so scary for me at first,” said He, who grew up in Shanghai, graduated from a girls’ boarding school in Maryland and aspires to a job at an art auction house.

During Summer Session 2, students worked in teams on capstone projects they could later use in portfolios to show in job and internship interviews.

For his capstone project, Nic Doyen, a junior majoring in science and technology studies, teamed with classmates to “scrape” data from job search websites to compare keywords that health and Internet companies use in describing similar jobs.

As a former math and computer science major who began programming in the fourth-grade, Doyen said he had to resist his first instincts on assignments to jump immediately into writing computer code. “Asking the right questions to me is the most important thing,” he said.

Doyen said he would recommend the program to students regardless of their major. “Everyone can benefit from it. The world is changing very fast. One of the big drivers in this changing world is data. Understanding what data exists out there, what data is being kept on you, is very important for your life in general and definitely for your career.”
In a world driven increasingly by information, Tim McCarthy believes that what companies need most to succeed are more employees with liberal arts degrees.

In recent conversations at more than 20 Northern California companies — a number of them technology firms in the Silicon Valley — executives told him, former dean George “Ron” Mangun and a select group of UC Davis faculty that they have plenty of engineers. What they lack are workers who understand how people think, who communicate well, and who can create knowledge. In short, liberal arts majors. But they must also know how to crunch data to answer fundamental business questions engineers don’t ask.

McCarthy knows the value of a liberal arts perspective from his own education as well as his 42 years in financial services, including stints as president of Charles Schwab and Nikko Asset Management. So McCarthy reached out to professors at UC Davis to find a way to teach students in majors as diverse as English, art, and communication how to mine and analyze data. The result is a pilot data studies program (page 12).

“It dawned on me that being a STEM [science, technology, engineering or math] major doesn’t help you get insights into the data,” he said. “Sociology, history and other liberal arts fields teach people how to think … how to read and write.”

Yet, with costs of a college degree rising and job prospects often slim for liberal arts majors, students nationwide have flocked to business and science programs. Enrollments in many social sciences and humanities degree programs have declined.

“We really do need lots of people getting liberal arts degrees, but we have to get them jobs,” he said. With training in data analysis and some basic software skills, “They could go into a firm and immediately make money for them.”

Many companies no longer invest in training new employees, he said. When he started his career on Wall Street, firms provided six months or more of training for new employees. That training now lasts only a few days. “Firms have to think so short-term, they can’t buy green bananas.”

In building his own management teams, McCarthy said, he sought the broadest diversity in age, gender, ethnicity and educational backgrounds because “you get better arguing.”

Spending more than half of his career overseas, McCarthy saw wide differences in how well nations connect academics with their private sectors—with tech-savvy Singapore and Ireland leading the way, Japan falling behind and the United States somewhere in the middle.

McCarthy said he was impressed by the initiative shown by Mangun, anthropology professor Joe Dumit, development director Karen Block and others at the university to interview business leaders and start the data studies courses. “They were so entrepreneurial—just as entrepreneurial as a Silicon Valley start-up. The result was a pilot three-course data studies program designed to help liberal arts majors increase these skills and their marketability in a short period of time. My hat’s off to them.”

McCarthy said he will be forever grateful for his UC Davis education—and for practical advice he received from two professors after he transferred from community college.

International relations professor Randolph Siverson and economist Andrzej Brzeski both encouraged him to go to business school after graduating.

At Brzeski’s urging, McCarthy applied to Harvard Business School. “Lo and behold, I got in.” He completed his MBA there in 1978, graduating as a Baker Scholar in the top 5 percent of his class.

Another pointer from Siverson helped guide his career. “Randy said, ‘Don’t fall in love with any particular job. Be flexible,’” McCarthy recalled. “That was terrific advice to get when you’re 19 or 20.”

During a guest lecture to the data studies class this summer, McCarthy told students that Siverson’s advice on job flexibility still holds true. “Keep looking for what’s not being done well and where the demand for expertise is greater than the supply of trained students,” he recommended. “What worked for me, and I think will work for you is: learn stuff that your boss doesn’t know.”
New Faculty

The College of Letters and Science was pleased to welcome 49 new faculty this academic year.

In the Division of Social Sciences, 22 new faculty joined anthropology, economics, history, philosophy, political science, psychology and sociology.

The Division of Mathematical and Physical Sciences had 13 new scientists join its faculty. The new faculty are concentrated in chemistry, physics and statistics. Two new faculty will also join the Department of Mathematics. The Departments of Physics and Mathematics jointly recruited five of the new hires to build an interdisciplinary program in physics and mathematics of the universe (read more on the back cover).

The Division of Humanities, Arts and Cultural Studies had a diverse group of 14 faculty join its ranks, ranging from comparative literature, writing, Spanish and Portuguese, English, design, art history, art studio, gender, sexuality and women's studies, and religious studies. Four new faculty have joined the newly named Cinema and Digital Media (see page 6 to read more about this major).

Gorman Museum: Native American Art Collection Quadruples in Past Decade

The C.N. Gorman Museum at UC Davis is on the rise and will soon be on the move. Sometime in late 2016, the Gorman is slated to move to a new home in part of Nelson Hall, formerly occupied by the Richard Nelson Gallery (see page 5).

Unique and ever-evolving, the Gorman has quadrupled its collection over the last decade. “We’ve made great progress in building the collection, expanding the number and reach of the exhibitions, and drawing attention to the museum,” said Hulleah J. Tsinhnahjinnie, museum director and professor of Native American Studies, who along with curator Veronica Passalacqua came to the museum 10 years ago.

“When we arrived, there were about 150 pieces in the collection, so we have been able to expand that greatly mainly though artist and collector donations,” Passalacqua said.

The museum, located in Hart Hall, mounts four exhibitions each year and now features artists of national and international repute as well as art by indigenous people from around the globe. Recent shows featured Inuit art from the Arctic and Maori art from New Zealand, and in 2016 the museum will have its first Aboriginal Australian art exhibition. For many artists the museum provides an all too rare venue for solo or small group shows.

The museum often publishes exhibit catalogs and nearly always has artist events and related performances. The museum loans artwork to other institutions and since 2006 has been touring Our People, Our Land, Our Images: International Indigenous Photography throughout the country.

“What really sets us apart is the emphasis on contemporary art,” Tsinhnahjinnie said “This is the place to see contemporary native artist creativity in various forms. So many of these artists are addressing societal, environmental and economic issues.”

Founded in 1973, the museum is named for Carl Nelson Gorman, an artist and a Department of Native American Studies founding faculty member.
In April 2015, Yiyun Li, professor of English, was the first woman to win the Sunday Times Short Story prize for “A Sheltered Woman,” first published in the New Yorker in March 2014. Now in its sixth year, the £30,000 award is the world’s largest prize for a single piece of short fiction.

Dawn Sumner, professor and chair of earth and planetary sciences, shared her inspiring story in the Sacramento News and Review in June. The front page feature covered everything from Sumner’s early love of science to her current efforts mentoring young women in STEM. Read the article by Rachel Leibrock at https://www.newsreview.com/sacramento-mars-needs-this-woman/content?oid=17298240.

Anna Maria Busse Berger, distinguished professor of music, won the UC Davis Faculty Research Lecture Award, the Academic Senate’s highest honor. Busse Berger, whose research on medieval music and German missionaries’ exploration of music in Africa, is only the second music professor to receive the award since it was established in 1942. Busse Berger has also received top awards from the American Musicological Society, the Society for Ethnomusicology and Society for Music Theory.

Kari Cooper, a professor of earth and planetary sciences, was elected a fellow of the Geological Society of America. The honor recognizes her fundamental contributions to understanding how volcanoes store magma before eruption.

Clarence Walker, distinguished professor of history, received the 2014 UC Davis Prize for Undergraduate Teaching and Scholarly Achievement. The $43,000 prize is believed to be the largest of its kind in the country and is funded through philanthropic gifts to the UC Davis Foundation. Walker, who retired in June, also received the Academic Senate’s 2015 award for undergraduate teaching, along with Kristin Lagattuta, professor of psychology.

From left: Chancellor Linda P.B. Katehi, Anne Gray of the UC Davis Foundation Board and Professor Clarence Walker

Niels Grønbech-Jensen, professor of mathematics and mechanical and aerospace engineering, was appointed systemwide director of COSMOS, the California State Summer School for Mathematics and Science. The program serves high school students gifted in math and science. Learn more at https://cosmos-ucop.ucdavis.edu

Faculty in the Nanomaterials in the Environment, Agriculture, and Technology (NEAT) research unit were featured in a video produced for the Materials Research Society’s spring meeting in San Francisco. Alexandra Navrotsky, Ricardo Castro, William Casey, Sabyasachi Sen and Gang-Yu Liu were interviewed. Watch the video at https://www.youtube.com/watch?v=F710MjvcVqc&feature=youtu.be

Jesús De Loera, professor of mathematics, has been elected to the executive committee of the American Mathematical Society.


Margaret Ferguson, distinguished professor of English, received the 2015 Graduate-Professional Teaching Award from the UC Davis Academic Senate.

Robin Hill, art studio professor, and Nolan Zane, professor of psychology and Asian American Studies, are 2015 recipients of the Chancellor’s Award for Excellence in Mentoring Undergraduate Research.

Jenny Kaminer, associate professor of Russian, received the Heldt Prize from the Association for Women in Slavic Studies for her book Women with a Thirst for Destruction: The Bad Mother in Russian Culture (Northwestern University Press, 2014).

Eric Schroeder, retired lecturer, received the 2015 Charles P. Nash Prize, the only joint award given by the faculty senate, federation and Davis Faculty Association. The prize recognizes faculty committed to shared governance and who advocate on behalf of faculty. Schroeder served over 30 years as a lecturer in the Campus Writing Center, Composition Program and University Writing Program, and served as director of Summer Abroad for 10 years.

Alan Taylor, professor emeritus of history, is the 2015 Sarah Josepha Hale Award Medalist. The prestigious award recognizes distinguished work in the field of literature and letters. Taylor has won two Pulitzer Prizes for American History.

Charles “Chuck” Walker, professor of history, has been named the MacArthur Foundation Endowed Chair in International Human Rights, one of seven MacArthur Foundation Chairs in the University of California system. Walker, the director of the UC Davis Hemispheric Institute on the Americas, also received the Norris and Carol Hundley Award from the Pacific Coast Branch of the American Historical Society in recognition of his 2014 book, The Tupac Amaru Rebellion.
Eric “Ric” Blumhardt (B.A., economics, ’76) and Summer Smith (B.A., political science and rhetoric & communication, ’97) have been recognized as top attorneys by Super Lawyers magazine. Blumhardt was named a 2015 Northern California Super Lawyer, and Smith was named a Rising Star.

Lynda Frese (B.F.A., art studio, ’78 and M.F.A.,’86) is the inaugural recipient of a year-long artist residency at the Shadows-on-the-Teche plantation in New Iberia, Louisiana, funded by the National Historic Trust and the National Endowment for the Arts. Frese teaches photography in the Visual Arts Department at the University of Louisiana at Lafayette, where she received the 2013 Distinguished Professor award. Read more at http://arts.louisiana.edu/2014/09/22/professor-lynda-frese-completes-italian-artist-in-residency.


Stephanie Herman (B.A., communication, ’06) was recognized as a top entertainment executive under 35 on The Hollywood Reporter’s Next Gen 2014 list. Herman is vice president for casting at 20th Century Fox TV. Read more at http://www.hollywoodreporter.com/person/stephanie-herman-30?mobile_redirect=false.

Delaine Eastin (B.A., political science, ’69) received the UC Davis Medal in June. The medal is awarded for the very highest levels of distinction, personal achievement and contributions to the ideas of higher education. Eastin is the 14th person to receive the medal since 2002, joining President Bill Clinton and Chancellor Emeritus Larry Vanderhoef. Eastin was the first and only woman to serve as the California state superintendent of public instruction from 1995 to 2003. Citing her efforts to “raise standards, increase access to technology and make gardens part of our classrooms,” Chancellor Linda P.B. Katehi said, “Ms. Eastin has profoundly broadened the meaning of public education in our state.” Read more at http://news.ucdavis.edu/search/news_detail.lasso?id=11178

Alumni Books

Mark Wisniewski (M.A., creative writing, ’91) Watch Me Go

David Wolf (B.A., international relations, ’86), Public Relations in China: Building and Defending your Brand in the PRC
In December 2014, José Ragas, a Ph.D. candidate in history, received a two-year Mellon Postdoctoral Fellowship in the Department of Science and Technology Studies at Cornell University. He will work on his project “From Citizens to Algorithms: Civil Society, Identification, and the Rise of the Biometric State in Modern Peru.”

Atrin Toussi, a fourth-year student double majoring in neurobiology, physiology and behavior, and religious studies, received a $7,500 Barry Goldwater scholarship to continue her studies for a career in research. Toussi, who has worked in professor Hwai-Jon Cheng’s lab at the UC Davis Center for Neuroscience, conducts research on nerve fibers. She plans to incorporate her interests in science and religion to pursue a medical degree or doctorate. Toussi is one of only 260 scholars nationwide to receive the nation’s most prestigious undergraduate award in mathematics, natural sciences and engineering.

Jessica Gutierrez is the first music and Native American studies major to receive a Chancellor’s Award for Excellence in Undergraduate Research since it was established in 1994. Gutierrez’s research project is “Mapping Zapotec and Mestizo Cultural Alliance in La Zandunga.”

Shadd Cabalatungan, a sociology major, received the Chancellor’s Award for Excellence in Undergraduate Research. His honors thesis, “The Consequences of Alcohol Consumption for Drinking and Non-Drinking Students” was also awarded the Sociology Department’s John and Lyn Lofland Undergraduate Research Award. It uses the logic of biological research on second-hand smoke to examine the consequences of exposure to the second-hand effects of other students’ alcohol use (such as, having to “babysit” inebriated students or being assaulted by a student who has been drinking).

Gloria Wong-Padoongpatt, a Ph.D. student in psychology, received the Chancellor’s Award for Excellence in Mentoring Undergraduate Research-Postdoc and Graduate Student Award.

Alena Anberg, a student in sociology and communication, received a Spirit of the Red Cross award earlier this year to honor American Red Cross volunteers in Sacramento and Yolo Counties. Anberg was recognized for delivering care packages filled with basic household supplies such as soap, toilet paper and laundry detergent to families.

Students in Professor Michel Siminovitch’s “Design with Light” course put their work to the test in the California Lighting Technology Center’s (CLTC) 11th annual Luminaire Design Competition this spring.

Using kits that contain organic light-emitting diodes (OLEDs) from Acuity Brands, students embarked on a 10-week design challenge to create lighting that is thin, lightweight, dimmable, cool-to-the-touch and energy-efficient. Many in the industry consider this emerging technology the future of lighting.

Entries were judged by a panel of lighting design experts from the CLTC, industry leaders and local designers.

The top prize went to U Teng Long. Sally Chae received second prize, while Tom Chen got third. Cydne Hirstein and Luyao Zhang garnered honorable mention awards for their designs. In May, Long, Chae and Chen attended the annual 2015 Lightfair International Tradeshow and Conference in New York City, the world’s largest in architectural and commercial lighting. Their luminaires were featured at Acuity Brand’s booth.

Siminovitch’s class is offered through the college’s design department.

Read more about the competition at http://ucdavis.edu/ucdavis-today/2015/april/01-lighting-the-way-to-a-future-career.html

Tom Chen, third prize winner at 11th annual Luminaire Design Competition.
**Philanthropy**

**UC Davis Launches New Program for Community-based Humanities Research**

This summer, the UC Davis Humanities Institute received a $400,000 award from The Andrew W. Mellon Foundation to launch a new program to support humanities graduate students in leading community-based research projects.

Pairing community organizations with graduate students whose research bridges a wide variety of disciplines in the humanities and social sciences, the Mellon Public Scholars Program strengthens the university’s commitment to publicly engaged scholarship and provides graduate students opportunities to apply their research in real-world settings and explore possible careers outside of the academy. Opening up new career paths for graduate students in both the sciences and humanities has become a national issue as the job market for tenure-track faculty continues to shrink.

“The Mellon Public Scholars Program will take the university into new territory since it has the potential to foster innovation across the humanities at UC Davis and beyond,” said David Biale, Institute director and Emanuel Ringelblum Distinguished Professor of Jewish History. “At the same time, our graduate students will have the opportunity to apply their research in novel and exciting ways that will have an immediate positive impact on the vital work of community organizations throughout our region, state and even globally since some of our students’ research is international.”

With the award, the Institute invited 10 graduate students at UC Davis to participate in a quarter-long seminar that covers all aspects of public humanities scholarship—from research methods and practices to project management, fundraising and marketing. Each student is paired with a faculty mentor whose research connects to a community organization or public agency. In the summer, each student will serve in a paid internship with the organization to translate their research into action.

The grant covers the period from July 2015 through June 2018. According to Biale, additional students from across the UC, up to one student per campus, may be invited to participate through a UC-wide effort among the other UC humanities institutes to include more students during this pilot program.

In 2014, the Institute was awarded $1.725 million by the Mellon Foundation to support the Mellon Research Initiatives in the Humanities, interdisciplinary collaborations in the humanities and the arts, including social justice, environmental humanities and digital cultures. Learn more at http://dhi.ucdavis.edu/research/mellon-research-initiatives.

**Alumni couple lends Inuit artwork for exhibition**

Last December, a UC Davis alumni couple loaned its collection of artworks by aboriginal people of the Arctic for an exhibition at the C.N. Gorman Museum.

Listening to the Stone: Original Inuit Art, which ran from January 6 to June 11, was made up of about 50 carvings and a dozen works on paper collected by Jürg Bieri (M.S., agricultural economics, ’64) and Christel Bieri (M.A., English, ’64). Most were being shown publicly for the first time.

“The Bieris were very generous in sharing this wonderful artwork with the museum, the university and the community,” said Veronica Passalacqua, Gorman Museum curator. “This was also an important exhibition because it marks the first time the museum has shown Inuit art.”

After meeting at UC Davis, the Bieris, who live in the Bay Area, continued their studies at UC Berkeley, where Jürg Bieri earned a doctorate. They founded the solar energy manufacturing company Helodyne in the 1970s.

“We have been collecting Inuit carvings and graphics for several decades and are witnessing through this work how the artists deal with the tremendous changes from a hunting society to communal village life,” said Christel Bieri.

Many of the artworks depict polar bears, walruses and other animals of the regions. Others blend human and animal characteristics reflecting the spiritual beliefs of the Inuit. Some show daily life scenes such as hunting and fishing. A few pieces are abstract. The art was made between the 1960s and today of stone and bone, with the works on paper including a variety of prints.

“We are glad to contribute to the diversity of shows at UC Davis for the enjoyment and education of students and the public,” said Christel Bieri.
Building a New Brain Science: Foundation Support Kick-Starts Conversation

With support from The Kavli Foundation, the UC Davis Center for Mind and Brain co-hosted a summer symposium aimed at advancing brain science.

The two-day Kavli Futures Symposium held at UC Santa Barbara — Emerging Technologies For Neuroscience: Building the New Brain Science — brought leading neuroscientists together with experts in engineering, physical sciences and data science.

Neuroscientists have made great strides using medical imaging devices to study the brain, said George “Ron” Mangun, a cognitive neuroscientist, former dean of the Division of Social Sciences and founding director of the Center for Mind and Brain. But a brain research initiative announced by President Barack Obama in 2013 will require a new array of tools.

“Understanding the brain at all levels of explanation is critical. Take Parkinson’s disease. The problem starts at a cellular level, the treatment happens at the molecular level, and the effects are seen at the behavioral level.”

Mangun said the workshop was an important step in creating a new community of scholars to develop that technology — and create the neuroscientists of the future.

“The brain at all levels of explanation is critical,” said Mangun. “Take Parkinson’s disease. The problem starts at a cellular level, the treatment happens at the molecular level, and the effects are seen at the behavioral level. Being able to see the whole picture is critical for biomedical research that will ultimately result in eased suffering, improved quality of life, and reduced public health costs. “Building a new brain science will speed us on our way to these important goals,” he said, “and I know UC Davis will provide leadership to get the job done.”

Graduate Student Fellowship Matching Initiative

The Office of Graduate Studies has launched a new fellowship initiative for graduate student support. The College of Letters and Science is pleased to offer our alumni, donors and friends an opportunity to establish a named graduate student support fund that will be matched by Graduate Studies.

Through a unique method of matching the targeted payoff of a gift endowment rather than the principal, the endowed fund value doubles in size in as little as 12 years, after which it becomes self-sustaining. To learn more about how this unique new matching opportunity works, contact Charlene Mattison, assistant dean of development, at cmattison@ucdavis.edu or 530-754-2225.

Matching Gift Challenge for Social Science Endowments

The College of Letters and Science has established a Matching Gift challenge to create up to seven new endowments in the Institute for Social Sciences, which will provide matching funds of up to $25,000 to donors who create new endowments in support of the Institute.

The match is possible thanks to the generosity of past donors to the Institute for Governmental Affairs (IGA), an institute at UC Davis that had a long history and a great deal of impact on research in the social sciences and on policy in California. Through support for interdisciplinary research in the social sciences, the fostering of training for graduate and undergraduate students, and the continuation of the Noon Lectures series, IGA’s legacy will live on in the Institute.

Endowed funds may provide operational support for the Institute or can be directed to support key programs, including research seed funding, summer travel for graduate students and undergraduate honors research projects.

For more information on this opportunity, please contact Karen M. Block, director of development, at (530) 754-2223, or kmblock@ucdavis.edu.
Gifts at Work

Hemispheric Institute on the Americas Wins Grant to Support Graduate Student Research

The UC Davis Hemispheric Institute on the Americas (HIA) has received a three-year grant from the Tinker Foundation to support field research for graduate students in Latin America. The grant will allow HIA to continue to sponsor cutting-edge research in regions from Mexico to the southernmost areas of South America.

“This funding is crucial for graduate students,” said Charles Walker, director of the institute. “It’s an important first step to get funding from other sources, like the National Science Foundation or Fulbright, which UC Davis Latin Americanists have an excellent track record of receiving. These agencies expect you to have done summer research before they fund you.”

The grant provides $30,000 over three years. Those funds will be matched by the Division of Social Sciences for a total of $60,000 to fund HIA’s Tinker Field Research Grants for up to 18 UC Davis graduate students each year to conduct research during the summer. The funding won’t cover everything, said Walker, but students can use the support as a basis to ask for additional help from their departments.

This is the second Tinker Foundation grant to HIA. Previously, they received funding from 2009 to 2012. The institute has used those funds to support a range of graduate student research projects.

Since 2008, HIA has provided summer funding to almost 100 graduate students from more than a dozen disciplines across campus to do research in nearly every country in Latin America.

Learn more about the HIA at http://hia.ucdavis.edu.
On Campus

Events

Heroes/Ghosts: A Painting Exhibition
Jan. 5 – Mar. 11, 2016
Gorman Museum
Annie Ross (Ph.D., Native American Studies, ’02), associate professor in First Nation Studies at Simon Fraser University

Il divino Cipriano: New Perspectives on the Music of Cipriano de Rore
A conference to celebrate the 500th birthday of Flemish composer Cipriano de Rore

The Orlando Consort: Music of Cipriano de Rore
Jan. 13, 8 p.m.
Mondavi Center

Exploring the Music of Cipriano de Rore
The Early Music Ensemble of UC Davis
Jan. 14, noon
Mondavi Center

The Orlando Consort performing to a screening of the silent film The Passion of Joan of Arc
Jan. 15, 8 p.m.
Mondavi Center

UC Davis Humanities Institute Book Chat:
The Animal Claim: Sensibility and the Creaturely Voice
Jan. 27, noon
Voorhies Hall, Room 228
Tobias Menely, assistant professor of English
Find more on book chats at http://dhi.ucdavis.edu/

2015-16 Community Book Project Author Visit
Feb. 3, 8 p.m. – 9:30 p.m.
Jackson Hall, Mondavi Center
Matt Taibbi, The Divide: American Injustice in the Age of the Wealth Gap
Purchase tickets at http://mondavicenter.ucdavis.edu or call the Mondavi Center Box Office at 530-754-2787. For a full list of community book events, visit http://occr.ucdavis.edu/ccbp2015/.

Contemporary Experience / Political Expression:
Australian Aboriginal Printmakers at Cicada Press
Mar. 29 – Jun. 3
Gorman Museum
Find more on events at the Gorman Museum at http://gormanmuseum.ucdavis.edu/Exhibitions/exhfmst.htm

For a full list of events in the college and on campus visit ucdavis.edu/calendar.

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Frontiers of the Universe

From superstring theory to the Higgs boson, theoretical physics often captures the imagination. Five new faculty hired this year by the Departments of Physics and Mathematics will catapult UC Davis to the forefront of this amazing field. The five researchers will join forces to uncover the elegant mathematics and natural laws that underpin the universe. “Adding a strong research group in theoretical physics is a key element in making UC Davis a world leader in physics and mathematics,” said professor of physics Markus Luty, who helped oversee the hiring push. The physics department already has active groups in cosmology and particle physics, with researchers conducting experiments at the Large Hadron Collider at CERN in Switzerland. The photograph here shows a small segment of the 17-mile (27-kilometer) long circular tunnel, where particles smash together at nearly the speed of light.

Top photograph: An enviable selfie. John Conway, professor of physics, and Rachel Yohay, a postdoctoral researcher, test a mockup of an experimental apparatus called a forward-pixel detector at CERN’s Large Hadron Collider (shown right).