

College of Letters and Science

SPRING 2016



UCDAVIS

On the Cover:

The Interconnectivity of Our World

We live in an increasingly complex and connected world. At the UC Davis College of Letters and Science, we thrive at the intersections of art and science, technology and community, East and West. Where others may see distinctions and difference, we see opportunities and unity for collaborative research and community building. We employ an interdisciplinary lens in looking at our world and our work.

Our cover reflects the theme of interconnection woven through the research and initiatives featured in this issue of the *College of Letters and Science Magazine*: from the Complexity Science Center with its focus on chaos theory and complex networks; to the research of communications professor Martin Hilbert who studies the evolution of digital information and its effects on societies; to the participatory and immersive art of Jiayi Young, a professor of design with master's degrees in atomic physics and fine arts.

Our search for answers and the knowledge we create rest at the frontiers of discovery. Diverse collaborations across disciplines, genres and cultures position the college to seed innovation and generate an exchange of ideas that can move our globe forward.

Bottom Circle: "π Study" painting detail by Jiayi Young



From the Deans

Greetings from UC Davis,

Spring is an exciting and busy season at UC Davis and at the College of Letters and Science.

In addition to preparing for the end of the academic year and planning for the next, we are deeply engaged in interviewing prospective faculty who bring new perspectives and advanced expertise to our growing college. It is thrilling to meet the scholars who will join us in shaping the University of the 21st Century and will strengthen the college's impact on society well into the future—both through their research and through their teaching and mentoring of the next generation of scientists, artists and leaders. As a Research I university within the splendid UC system, we see teaching and research as completely intertwined, providing our students and faculty a richness of experience not possible in a more constrained setting. Our diversity, intellectually and culturally, is our strength.

We have also been abuzz with activities to welcome the thousands of students admitted to UC Davis and are astounded by their talent and enthusiasm. As we celebrate the accomplishments of the class of 2016, we eagerly anticipate the vigor and optimism of the entering class of 2020 and of the students entering our graduate and professional programs.

In this issue of our magazine, we feature just a sampling of our faculty's recent accomplishments; we hear from student scholarship recipients who are grateful for the support of our alumni and donors; we give thanks for the support of our volunteer leadership; and we highlight new initiatives, such as the Feminist Research Institute and the Global Tea Initiative.

We hope you enjoy the magazine, and thank you for your steadfast support.

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

Li Zhang, Interim Dean, Social Sciences

Alexandra Navrotsky, Interim Dean, Mathematical and Physical Sciences



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UC Davis College of Letters
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In Memoriam



FRANCISCO X. ALARCÓN broke ground as a poet, writing in English, Spanish and the native language Nahuatl, creating poetry for children, and was an early, openly gay Chicano poet. His writing, like his personality, was all embracing, addressing social and political issues, love and sex and nature. Alarcón, a long-time continuing lecturer in Spanish at UC Davis, died on Jan. 15. Read a remembrance at bit.ly/1Phtsr7.



ALDO ANTONELLI, professor of philosophy, died on Oct. 11, 2015. Together with his partner and colleague, philosopher of mathematics Elaine Landry, Antonelli established philosophy of logic and mathematics as a focal point of scholarship in the UC Davis department. Antonelli was a member of the Association for Symbolic Logic, the American Philosophical Association, the Philosophy of Mathematics Association and the Society for Exact Philosophy. He had served as coordinating editor of the *Journal of Philosophical Logic* and the *Review of Symbolic Logic*. Read a remembrance at philosophy.ucdavis.edu.



Former UC Davis geology instructor **RAND SCHAAL**, whose lively teaching style inspired and entertained thousands of undergraduates, died on Sept. 11, 2015. Friends remember him as a popular teacher, an avid pilot and a superb swimmer who was generous in spirit with everyone he met. Read a remembrance at bit.ly/25a2CwM.



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evolution ▶ of information

Collective Spawns a NEW SCIENCE



How can insect swarms help researchers tease out patterns in online chatter? It turns out ant colonies and Facebook commenters are similar; both are more than the sum of their parts.

When collective behavior emerges from individuals—be they insect swarms, traffic jams or Internet users—scientists call the resulting system a complex network. With some digging, researchers at UC Davis are discovering basic mathematical principles can help predict behavior in complex networks. The findings could lead to improvements in real-world human networks, including air traffic, the stock market and the U.S. power grid.

Scientists aren't the only ones who seek patterns in the natural world. Artists also extract meaning from chaos. At UC Davis, an alliance between art and physics served to illuminate nature's beautiful complexity.

The collaboration includes **DAWN SUMNER**, chair of the Department of Earth and Planetary Sciences, **JAMES CRUTCHFIELD**, professor of physics, and artist/writer

Meredith Tromble of the San Francisco Art Institute. The team also included researchers at the college's Complexity Sciences Center (CSC) and KeckCAVES, a 3-D data visualization facility.

Tromble created a virtual installation built from the inner lives of physicists, *Take Me To Your Dream (Dream Vortex)*. Made with drawings projected in the KeckCAVES 3-D space, a vortex of dream images appears in the air before the viewer; the images can be "touched" and handled, as if they were physical objects. Seed dreams for the prototype were collected from scientists, such as a physicist's dream of lecturing to daisies.

Melding art and science offers an interesting perspective on organizing information, said Crutchfield, director of the CSC.

"The collisions that happen when you talk across disciplines are very helpful in coming up with new insights into complex networks," Crutchfield said. "And here at Davis, as an ag school, we have a history of people from different backgrounds solving problems."

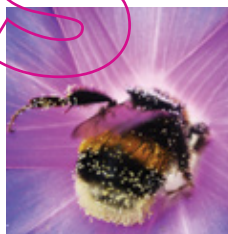
FURTHER READING

Complexity Sciences Center: csc.ucdavis.edu
Data Science Initiative: datascience.ucdavis.edu

Chaos



JAMES CRUTCHFIELD



DUNCAN TEMPLE LANG

COMPLEXITY SCIENCE

At UC Davis, the CSC provides an organizing home for faculty with interests in complex systems. Complexity science is a particularly fertile field for interdisciplinary work, Crutchfield said.

Everything on Earth is part of a complex network. These networks can be physical, such as neurons, or abstract, as with online acquaintances.

The CSC is home to more than 30 researchers who work in both theory and applications of complex networks. One project, led by **RAISSA D'SOUZA**, professor of mechanical and aerospace engineering and computer science, explores how to intervene in networks and make them more robust. The research could help alleviate widespread power outages by preventing one power grid failure from taking down the national network.

Crutchfield has been interested in complex systems and chaotic behavior since the 1970s, when he was a UC Santa Cruz graduate student. At UCSC, Crutchfield was part of a group called the Chaos Cabal, which did much of the work in developing chaos theory. Today, Crutchfield explores how humans recognize new patterns in nature—patterns we have never seen before. “There is a very real possibility we can use machines to find emergent organization in our vast data sets,” Crutchfield said.

BIG DATA

While the CSC focuses on the physics of information, campus researchers also explore the intersection of big data and science.

To gather and study the vast amounts of data available from networks requires new tools and skills from scientists. In 2014, the provost and chancellor funded a new initiative to tackle these big data challenges.

The Data Science Initiative (DSI) has several goals, including training researchers at all levels, from undergraduates to faculty, and sparking new collaborations between faculty. “We want to give people the skills to ask good questions of their data and interpret the results,” said professor of statistics **DUNCAN TEMPLE LANG**, director of the DSI and researcher in the CSC.

Data science collaborations already underway on campus include analyzing rivers and watersheds, parsing health records, and scanning historical texts. “The thing that brings everybody together is data,” said Temple Lang, who focuses on integrating computer science research with scientific and statistical research.

— Becky Oskin

visualizing ▶▶ data

Celebrating Ten Years at the Forefront of 3-D Data Visualization

A unique facility at UC Davis reveals patterns in data.

Advances in technology make it possible to collect enormous amounts of data about our planet. So how do earth scientists make sense of their trillions of bits?

One solution is a unique room at UC Davis built for interacting with 3-D data. Since it launched 10 years ago, the KeckCAVES, an immersive 3-D environment located in the Earth and Physical Sciences building, has revealed surprising patterns in data from Earth and other planets.

The facility has earned an international reputation for its 3-D visualizations. For example, in 2013, a team of archaeologists and filmmakers secretly visited UC Davis to study a proprietary airborne laser scan (lidar) of a dense

Honduran rain forest. The KeckCAVES provided a closer look at evidence of ruins hidden under the foliage. In 2015, those ruins were revealed to be a legendary lost city, the “City of the Monkey God.”

“The lidar allowed us to follow a meandering river through a narrow gap into a hidden valley and find possible helicopter landing sites, all without needing a machete or being eaten alive by insects,” said KeckCAVES lead developer Oliver Kreylos (Ph.D., computer science, ’03).

The KeckCAVES opened in 2005 with a gift from the W.M. Keck Foundation and matching support from UC Davis. The room features three walls and a floor covered by stereoscopic display screens.

Open-source software created at UC Davis handles head-tracking and controls.

In recent years, UC Davis researchers have flown over an earthquake fault, walked on the surface of Mars, and examined ancient, fossilized microbes in the KeckCAVES. Instructors also taught students how to think in 3-D by illustrating how rock layers intersect with hills and valleys.

“With the 3-D projection, your data come alive in front of you,” said KeckCAVES director Louise Kellogg, professor of geophysics.

— Becky Oskin



“With the 3-D projection, your data come alive in front of you”

—Louise Kellogg, professor of geophysics.
Director KeckCAVES

Visualizing a Dream

John Bikoba (M.S., geophysics, '15) came to Davis in 2007 from the Democratic Republic of the Congo. The DR Congo's rich mineral deposits helped fund the five-year-long Second Congo War, which ended in 2003. The fighting claimed more than 5.4 million lives.

As the youngest of 11 brothers and sisters, Bikoba mined gold to pay his school fees. His father was laid off from work and couldn't afford to send him to high school. Each week, after school, Bikoba pounded rock into sand by hand, grinding and washing the grains to extract precious metals. This was before conflicts over the rights to gold and rare earth metals fueled war in the DR Congo.

Conflict minerals in the DR Congo are tin, tantalum, tungsten and gold mined by armed groups, transported to neighboring countries and sold to manufacturers around the world. As an undergraduate student in the Congo, Bikoba wrote a senior thesis centered on conflict minerals in his native country.

“I never knew that these minerals that helped me satisfy my daily needs would become a nightmare for the Congolese people, especially those living in Kivu provinces where I am from,” Bikoba said. The experience cemented his decision to earn a doctorate in geology and work in exploration geology.

Bikoba finished his master's degree this fall under the guidance of Professor Magali Billen, Department of Earth and Planetary Sciences. He examined the mechanics of deep earthquakes using the KeckCAVES. His experience at Davis was vastly different from his undergraduate studies, where computers were only available in slow-connection Internet cafés requiring payments for access.

“He has ended up with a strong, observationally-based geophysics master's thesis for which he has had to overcome never before having access to use a computer,” Billen said.

Although he expects to make his career in this country, Bikoba said he also hopes to help Congolese people sever the link between the country's mineral resources and its militias. Because he struggled to pursue an education amid warfare in the eastern Congo, Bikoba also dreams of helping others earn their degrees.

“The guys I worked with in the mine didn't even know these were conflict minerals. The country is struggling because of its own resources,” he said. “It's not safe to go back permanently, but I feel like there are so many ways I could help,” Bikoba said.

—Becky Oskin



bridging ◀◀
cultures,
building
understanding

Global Tea



Launching a Global Tea Initiative

It all started with a modest little tea pot.

Associate Professor of Art History Katharine Burnett, an expert on Chinese art and culture from the 17th century forward, is fascinated by everything about tea—from its taste to its health benefits, to its global impact on cultures around the world. Now, she has the opportunity to translate her fascination into an exciting new initiative at UC Davis.

Applying her expertise in humanities research and her leadership as the director of East Asian Studies, Burnett is the faculty leader of the Global Tea Initiative for the study of tea culture and science.

The journey began with her love of 17th century *zisha ware* (“purple clay” ware) teapots from Yixing, China, and her desire to write about their place in Chinese culture. “Their form can range from the elegant to the whimsical,” said Burnett, shown holding one of the pots from her collection. According to Burnett, at the end of the 16th century, Chinese tea pots “suddenly become small,” coinciding with a new sense of the importance of the self in Chinese culture.

During her research, she started thinking more about all things tea and how

the campus might provide the kind of innovation and leadership around tea that it provides for wine and beer. Citing tea’s global popularity and growing strength as a commodity on the world market (with sales expected to top \$3.8 billion in the U.S. by 2017), Burnett believes UC Davis is uniquely suited to be “a global innovator” in the field.

With a focus on transdisciplinary research, teaching and outreach that will span agriculture, the humanities, social sciences, health, and cover such broad topics as culture and economics, the campus will become the world’s leader in tea-related studies, according to Burnett. “No other institution anywhere is even attempting to create a holistic research center like this,” she said, “and no other institution is as well suited to try it.”

To date, the Office of the Provost has joined with the deans of Humanities, Arts and Cultural Studies, and Social Sciences to provide seed money for three years. Burnett launched the first Global Tea Initiative colloquium, “The Basics of Tea: Tea and People,” on May 12. The colloquium featured speakers on tea cultivars, the

importance of water in growing and brewing tea, and the role of tea in East Asian cultural practices. “We need to continue the conversation, not only on campus but with other top research institutions around the world,” said Burnett.

Her vision includes a teahouse in the Arboretum, Chinese and Japanese gardens, endowed professorships, courses and workshops, symposia and peer-reviewed research publications.

“It’s thrilling that the campus is sharing this vision and being so supportive in making it happen,” said Burnett.

For more information on the Global Tea Initiative and how you can help support it, contact Charlene Mattison, assistant dean of college relations and development, at 530-754-2225 or cmattison@ucdavis.edu.

— Donna Justice

FURTHER READING:
globaltea.ucdavis.edu

SCHEDULE 24.—NEW WORDS.
(Carefully read § 24, Chapter II.)

ENGLISH.	REMARKS.
1 Live stock.	
2 Horse	<i>muketa</i> <i>ta-estai</i> = one horse
3 Colt	<i>mitso</i> <i>teihltse</i> = a number
4 Mule	<i>mitso</i> <i>teihltse</i> = a number
5 Bull	<i>mitso</i> <i>teihltse</i> = a number
6 Ox	<i>mitso</i> <i>teihltse</i> = a number
7 Cow	<i>mitso</i> <i>teihltse</i> = a number
8 Calf	<i>mitso</i> <i>teihltse</i> = a number
9 Sheep	<i>mitso</i> <i>teihltse</i> = a number
10 Hog	<i>mitso</i> <i>teihltse</i> = a number
11 Cat	<i>mitso</i> <i>teihltse</i> = a number
12 Kitten	<i>mitso</i> <i>teihltse</i> = a number
13 Cock	<i>mitso</i> <i>teihltse</i> = a number
14 Hen	<i>mitso</i> <i>teihltse</i> = a number
15 Goose	<i>mitso</i> <i>teihltse</i> = a number
16 Saddle	<i>mitso</i> <i>teihltse</i> = a number
17 Bridle	<i>mitso</i> <i>teihltse</i> = a number
18 Girth	<i>mitso</i> <i>teihltse</i> = a number
19 Lariat	<i>mitso</i> <i>teihltse</i> = a number
20 Whip	<i>mitso</i> <i>teihltse</i> = a number
21 Hopples	<i>mitso</i> <i>teihltse</i> = a number
22 Spur	<i>mitso</i> <i>teihltse</i> = a number
23 Cudgel	<i>mitso</i> <i>teihltse</i> = a number
24 Axe	<i>mitso</i> <i>teihltse</i> = a number
25 Auger	<i>mitso</i> <i>teihltse</i> = a number
26 Iron arrow-head	<i>mitso</i> <i>teihltse</i> = a number
27 Awls of metal	<i>mitso</i> <i>teihltse</i> = a number
28 Beads	<i>mitso</i> <i>teihltse</i> = a number
29 Broom	<i>mitso</i> <i>teihltse</i> = a number
30 Cloth	<i>mitso</i> <i>teihltse</i> = a number
31 Comb	<i>mitso</i> <i>teihltse</i> = a number
32 Clock	<i>mitso</i> <i>teihltse</i> = a number
33 Knife, pocket	<i>mitso</i> <i>teihltse</i> = a number

Saving an Endangered Language

Members of the Hoopa Valley Tribe have for many years been trying to revitalize Hupa, a critically endangered language, and their efforts are being supported through the work of **JUSTIN SPENCE**, an assistant professor of Native American studies.

"It's hard to know how many people are still fluent in the language, but most people now grow up speaking English and learn Hupa through classes and other activities," said Spence, who recently received a \$245,000 grant from the National Science Foundation's Documenting Endangered Languages Program.

Spence has been working with Hoopa elder Verdena Parker, who grew up speaking the language in Hoopa Valley, an hour inland from Eureka. Parker made audio recordings of herself telling traditional Hupa stories and during the 1950s and early 1960s made silent movies of the tribe's dances. The project will produce transcriptions of Parker's stories and record her narrating the films in Hupa.

"I've kept these stories in my head and want to share them and see them preserved," Parker said.

Another component of Spence's research focuses on "evidentiality," grammatical markers that indicate sources of information and viewpoints in the language. Transcribed texts generated by the project will shed light on how evidential elements are used.

"The grammar of Hupa is very complicated, but evidentiality is clearly an important part of it," said Spence, who earned a bachelor's degree in French and linguistics from UC Davis and a doctorate in linguistics from UC Berkeley. "These materials will be useful to linguistic science and for revitalization projects happening in Hoopa Valley."

When Parker was growing up, speaking Native American languages was discouraged. As attitudes have changed more people are interested in reconnecting with their culture and language, but it isn't easy.

"Some of the older people are trying to learn, but Hupa is very difficult," Parker said. "There are classes for preschoolers and they're doing well."

— Jeffrey Day

Notes on the Hupa language transcribed by Jeremiah Curtin in the late 1880s. Image courtesy of National Anthropological Archives, Smithsonian Institution (MS 2063 page 192).

A focus on Iran and Persian Studies

BITA DARYABARI



PERSIAN STUDIES AT UC DAVIS are taking another leap forward with the launch of a new minor, a growing faculty, and the creation of an endowed chair in Persian language and literature.

A \$1.5 million gift from Silicon Valley philanthropist and humanitarian Bita Daryabari this academic year established the new Bita Daryabari Presidential Chair in Persian Language and Literature. The UC Office of the President is providing \$500,000 in matching funds.

The professor hired to fill that position, as early as fall 2017, will teach Persian literature and third-year Persian language courses.

“Broadening our Persian studies program will allow UC Davis students new opportunities to enrich their multicultural awareness—an essential component of a UC Davis education that is focused on preparing our students to work and live in a modern, multiethnic society,” said Chancellor Linda P.B. Katehi.

Katehi also committed campus funding for a new instructor to teach first- and second-year Persian language courses beginning this fall.

UC Davis is one of only three universities in the world to receive a gift from Daryabari earmarked for Persian studies. In 2008 she created the Bita Daryabari Endowment in Persian Letters at Stanford University. In 2013 she gave a \$2 million endowment for the Shahnama Project at Pembroke College at the University of Cambridge in England.

“Persia is known for its poets and poetry, and so much more,” Daryabari said. “Similar to what I have done at Stanford and at Cambridge, I wanted to support a program at UC Davis that shows the real

Continued on page 21

Growing Interest in Iranian Art Opens Door for Global Art History



When Professor **TALINN GRIGOR** was a graduate student, no one would give her “five cents to do research in Iran.” That’s changed. Now Iranian art is “sexy” and the market for Iranian art, both inside and outside the country, has exploded.

Although trained as an architect and architectural historian, Grigor is author of one of the few books on Iranian art since the 1979 revolution, *Contemporary Iranian Art: From the Street to the Studio* (Reaktion Books Ltd., 2014).

“The publisher came to me and said, ‘Iranian art is a hot topic; why don’t you write a book about it?’” said Grigor, who joined the Department of Art and Art History last year.

In *Contemporary Iranian Art*, Grigor examines official state art, artists working independently and often in secret in Iran, and artists outside Iran, including those who left during the Shah’s regime and others who emigrated after the revolution.

“Iran has a well-educated middle class going to galleries and buying art, which is a form of resistance, a political stance,” Grigor said.

Her goal as a professor and scholar is to change art history from a Western discipline that gives only token attention to other areas of the world. She’s doing that in part through classes on understanding visual culture, art and violence, architecture and sexuality, and post-colonial aesthetics (which will be the first class taught at the new Jan Shrem and Maria Manetti Shrem Museum of Art opening in the fall.)

“We need to talk seriously about what global art really is, how to write global art history,” she said, “and to really rethink how we do art history to address global issues.”

— Jeffrey Day



SHIVA AHMADI'S

Art Blends the Beautiful and Beastly

SHIVA AHMADI left Iran in 1998, but the country and the culture are still present in her artwork. Her paintings are inspired by delicate, jewel-like Persian miniatures depicting religious, mythological or royal court scenes, but Ahmadi's are filled with things that are not so beautiful.

"I want to make beautiful things that get the viewers' attention, but when they get closer they see the message is ugly," said Ahmadi, an assistant professor of art.

The meticulously rendered people and animals, buildings and decorative elements in her art contrast with blood, bombs, oil pipelines running through religious shrines, and tyrannical rulers surrounded by underlings depicted as monkeys, willing to serve whomever is in power for a little power of their own.

As part of an exhibition of Iranian artists earlier this year

in New York, an animation of her painting "Lotus" was singled out by the *Wall Street Journal*: "It grabs viewers and immerses them in a terrifying parable of enlightened government turned bad. With remarkable subtlety and stunning beauty, a peaceful world presided over by a Buddha-like leader is transformed by merchants of death into a wasteland of violence and wanton destruction."

Such imagery comes directly from her youth in Iran. The family home had handcrafted, colorful rugs on the floor and modern Persian miniature paintings on the walls, but on television and outside was war. First came the 1979 Iranian revolution. The following year the war with Iraq started and would last eight years.

After college in Iran, Ahmadi joined her older sister, an engineer, in Detroit for graduate school, happy to leave behind headscarves, daily prayers, and

being forbidden to talk to boys—and those cut-rate Persian miniature paintings. She was making art grounded in feminist theory and the figure, working from the nude, which she couldn't do in Iran.

Then came the 9/11 attacks and the U.S. invasion of Iraq in 2003.

"A lot of anxiety came back," Ahmadi said, "and maybe homesickness, too."

She wanted to find a way to explore her own background in new ways and discover something she had not learned about the artistic heritage of her own country. She began visiting the Islamic Art collection at the Detroit Institute of Arts.

Her first works inspired by the miniatures were not small—they were on 50-gallon oil drums, a reference to what many saw as battles over oil. She later returned to a more traditional approach of

watercolors and ink on paper and aquaboard. And while she does small paintings, she also works big, creating pieces up to 5 feet by 10 feet.

For a decade Ahmadi has been represented by the Leila Heller Gallery in New York and Dubai, and her work is in the collections of the Metropolitan Museum of Art, Detroit Art Institute and the Museum of Contemporary Art, Los Angeles.

While her art is grounded in the cultural, historical, social and political life of her native country, it is also informed by the bankruptcy of Detroit, the shutdown of the U.S. government during 2013 and the current presidential race.

"I believe what I'm doing is universal," she said, "that there is a way for people from anywhere, any background to relate to and understand my art."

—Jeffrey Day



Sharing Science:

Faculty Translate Knowledge through Conversation, Teaching and Entertainment

Three professors in Mathematical and Physical Sciences are part of a growing movement to bring science directly to the public.

About half of all scientists in the United States engage in some type of public outreach, studies show. Their reasons for doing so include inspiring the next generation of scientists, informing public policy and competing for public funds. For instance, the National Science Foundation, a top science funding agency, encourages grant recipients to share their research findings with the public.

Chemistry professor **JARED SHAW**, who runs the monthly Science Café, said his goal is “to demystify what goes on in research.” The Science Café is not a lecture, but rather an event designed to spark conversations between scientists and the public. “When people see the research, they feel like they are part of it,” Shaw said. Some of the most popular topics to date have been beneficial bacteria in breast milk, medical marijuana and the physics of time.

Shaw primarily funds the Science Café through a National Science Foundation Early Career Development grant (renewed in 2014). “The café is an interesting and easy to understand outreach activity,” he said.

Science communication can take many forms, and some university scholars speak directly to the public through television and films. Physics professor **MANUEL CALDERÓN DE LA BARCA SÁNCHEZ** is a primary science adviser on the film *Secrets of the Universe*, a 3-D IMAX feature about the Large Hadron Collider and particle physics. “This story will be available all over the world, where it will make a real impact on today’s youth,” he said.

Climate scientist **TESSA HILL**, an associate professor in the Department of Earth and Planetary Sciences and at the UC Davis Bodega Marine Laboratory, focuses on public education and outreach through social media and interviews with journalists. Hill was recently awarded a Presidential Early Career Award for Scientists and Engineers (PECASE), the U.S. government’s highest award for scientists and engineers in the early stages of their research careers. The award criteria include a commitment to service through leadership, public education or community outreach.

“I do research on something that has societal consequences and I have an obligation to get the information out,” said Hill. “And at a very fundamental level, everything I do is paid for by the taxpayers and really needs to see the light of day.”

The ability to communicate effectively is a key skill in any science career. Although many scholars can speak to their peers, translating research into plain language that can be read or watched by the public takes practice. Hill pursued communication training from scientific societies such as the American Association for the Advancement of Science, but she said teaching a large lecture course was her most valuable experience.

“When you have to get up every day and stand in front of an auditorium of 200 students who are not science majors, you start to figure out how to communicate science,” she said.

— Becky Oskin



FURTHER READING

Science Café: chemistry.ucdavis.edu/outreach/science_cafe.html

Secrets of the Universe: bit.ly/1MrSIQX

Tessa Hill receives the Presidential Early Career Award: bit.ly/1pyPNfw

Our Cyborg FUTURE



Digital data is growing so fast, researchers ask: Could It Out-Evolve Us?

Machines growing smart enough to take over the world is an idea that has inspired science fiction tales for decades—*Doctor Who*, *2001: A Space Odyssey*, *Terminator* and *The Matrix* to name a few.

With digital information increasing at an astonishing rate, a UC Davis expert on big data and its effects on society says the concept of artificial intelligence evolving is no longer far-fetched.

“While we do not necessarily feel that we are the mere flesh-bots of our digital overlords, the merging of humans with the digital world has now passed the point of no return,” **MARTIN HILBERT**, an assistant professor in the Department of Communication, says in an article co-authored with two biologists for the academic and research news site *The Conversation*.

“We need to start thinking about the Internet as an organism that can evolve,” they write. “Whether it cooperates or competes with us is cause for considerable concern.”

The article and a companion essay in the journal *Trends in Ecology and Evolution* grew out of previous research by Hilbert on the exponential growth of digital information.

Before joining UC Davis in 2014, Hilbert spent 15 years with the United Nations as an economic affairs officer, helping officials in more than 20 countries with digital development and launching a research and technical assistance program for Latin America and the Caribbean.

In “The World’s Technological Capacity to Store, Communicate, and Compute Information,” published in *Science* in 2011, he and a colleague reported that in 2007, the world’s capacity to store information was equivalent to some 15 piles of double printed books from planet Earth to the sun. By 2014, they said, it had reached the equivalent of 4,500 piles.

The magnitude of technological information was approaching that of information stored in and processed by nature, according to Hilbert and colleague Priscila López: “To put our findings in perspective, the 6.4×10^{18} instructions per second that humankind can carry out on its general-purpose computers in 2007 are in the

same ballpark area as the maximum number of nerve impulses executed by one human brain per second (10^{17}).

The 2.4×10^{21} bits stored by humanity in all of its technological devices in 2007 is approaching an order of magnitude of the roughly 10^{23} bits stored in the DNA of a human adult.”

That caught the attention of evolutionary biologists Michael Gillins and Darrell Kemp of Macquarie University in Sydney, Australia. In their ensuing articles with Hilbert, they compared human reliance on technology to evolutionary transitions, where life forms merge to create a new organism.

While the fusion of humans and artificial intelligence sounds like science fiction, Hilbert said that idea of a “technological singularity”—long theorized as the post-human era by futurists, philosophers, computer scientists, science fiction writers and others—is now widely accepted as fact in Silicon Valley.

Artificial intelligence manages our power grid and 80 percent of our economic transitions, he said. “The human sphere has already merged with this technological resource. It’s not a hypothetical. It’s just a reality. Humans are 100 percent dependent on technology. If you have a doubt, just turn off your cellphone, just for a year. Or try to survive without any direct or indirect contact with digital financial transactions. You even might be able to survive, but you could by no standard be considered to co-evolve as an integral part of our modern society.”

This unprecedented merger, he said, points to a need for more collaboration among social scientists, evolutionary biologists and ecologists. “The question is, now what happens? ... Evolutionary theory should be applied to it to help us think through these things.”

— Kathleen Holder

FURTHER READING

“Not So Science Fiction After All, The Internet Could Out-Evolve Humanity”: bit.ly/1oPvJnS

More on Martin Hilbert’s research:
communication.ucdavis.edu/people/hilbert



artistic connections

**“It creates a platform
for people to share their
aspirations ... and to know we
are not alone in our struggles.”**

Measuring the Human Heart Through Art and Science

That **JIAYI YOUNG** mines scientific resources in her artwork shouldn't come as a surprise. After all, the assistant professor of design has a master's degree in atomic physics as well as a master of fine arts degree. What might be surprising is how very emotional her art is.

One of her most ambitious is “Message in the Sky,” a crowd-sourced, participatory public art project, mounted in Dubai and at the Joshua Tree National Monument with plans to take it around the globe. It allows participants to cast their hopes and dreams into the sky literally and symbolically.

“I started it during the height of the recession when neighbors and friends were losing jobs and homes,” Young said. “It creates a platform for people to share their aspirations, feeling and emotions, to see how our dreams are similar and different, and to know we are not alone in our struggles.”

Young has used data provided by a beating human heart to create three-dimensional images depicting just how complicated that beat, beat, beat really is. The modeling gained the attention of cardiologists and also spoke to how the heart embodies so many aspects of being a human.

“Your heartbeat is so much a part of who you are,” said Young, who came to UC Davis in 2015.

With data collected from migrating sea animals and the water temperature where they were swimming, she created a sound environment piece.

“These would ultimately be part of an immersive installation where the audience would rely on wearable devices to experience a visual and audible environment that reflects the diversity and abundance of life in the oceans,” she said.

Young's work has been shown internationally, including at the Chinese Biennial in Beijing, Cyberfest at the Hermitage Museum in St. Petersburg, Russia, and the International Symposium of Electronic Arts in Singapore. She's also been an active participant in the Sacramento and Davis art communities for a decade.

Mixing art and science comes naturally to her.

“I've just always had an interest in both areas,” said Young, a native of China who moved to the U.S. when she was a teenager.

For Young, what's just as important as melding art and science is having the audience as participants in making the art.

“I'm never satisfied with people just looking at my work,” she said. “It's more of a co-creative process.”

— Jeffrey Day



“... an opportunity for their imaginations to grow and to see their future expand.”

—Maceo Montoya, TANA director and assistant professor of Chicana and Chicano studies

Where Art-Making Provides Vision of the Future

The faded blue metal warehouse on a side street in Woodland doesn't look like much. But inside Taller Arte del Nuevo Amanecer (TANA), it's anything but dull. The walls are covered with bright artwork, and young people are laying down ink and making art.

“TANA is a collaboration with the Woodland community,” said **MACEO MONTOYA**, TANA director and assistant professor of the UC Davis Department of Chicana and Chicano Studies. “We aren't just creating artists, but providing an opportunity for their imaginations to grow and to see their future expand.”

TANA, part of the Chicana/o studies department, was founded in 2009 by Professor Emeritus Malaquias Montoya

(Maceo's father) and Carlos Jackson, now Chicana/o studies department chair.

Each quarter four UC Davis students serve as interns at Taller Arte del Nuevo Amanecer (Art Workshop of the New Dawn). When intern Eddie Lampkin was still at Woodland High School, he took part in a mural project led by Maceo Montoya.

“I was in a slump and idle hands are not a good thing, especially in a small place like Woodland,” said Lampkin, a transfer student from Sacramento City College who is majoring in Chicana/o studies and history. “When TANA opened I was the first one in the door.”

The interns must have taken the Chicana/o studies poster workshop course that was started by

Malaquias Montoya in the 1970s at UC Berkeley and moved to UC Davis in 1989. Poster art that melded strong visual imagery with equally strong social and political content was an important part of the Chicano arts movement of the 1960s and 1970s. So were community arts workshops known as *talleres*. TANA focuses on silk screening, a commercial printing process developed in the early 20th century that was taken up by fine artists in the 1960s.

A great deal of TANA's interaction is with the Latino community, which in Woodland is about 50 percent of the population. Many interns have backgrounds similar to the 100 or so high school students they work with each year. TANA recently began offering college

credit art classes through Woodland Community College.

Along with making art, those who attend TANA learn about their own and the wider world's history. TANA has also become a part of the larger Woodland community. At art show openings, the building is packed with young adults, parents, grandparents and children looking at the art, listening to music and eating.

“People feel this is a place they can send their children to and a place they are welcome,” said Maceo Montoya, who lives in Woodland. “We feel TANA is part of UC Davis being responsive to the region.”

—Jeffrey Day

research ▶ gender matters



Cross-Cultural Study Finds Self-Esteem Gender Gap Wider in Western World

The results of a study of the self-esteem gender gap around the world might surprise you. **WIEBKE BLEIDORN**, assistant professor of psychology, found that the confidence gap between men and women is smallest in developing nations that rank low in gender equality.

Bleidorn and her colleagues analyzed survey data from over 985,000 men and women ages 16–45 from 48 countries—the first-ever systematic cross-cultural examination of gender and age effects on self-esteem.

In general, the researchers found that self-esteem tended to increase with age, from adolescence to adulthood, and that men at every age tended to have higher levels of self-esteem than women worldwide.

However, when they broke the results down by country, they found the self-esteem gap was more pronounced in developed, egalitarian Western nations. “This is likely the result of specific cultural influences that guide self-esteem development in men and women,” Bleidorn said.

While the study didn’t examine those influences, it found that the smallest gender differences were in Asian countries. Bleidorn noted in an interview with *Time* magazine that gender equality brings new expectations for women: “Women in Western cultures are more likely to compare themselves to men, whereas in Asian countries, women compare themselves to women.”

The study was published in the *Journal of Personality and Social Psychology*.

— Kathleen Holder

FURTHER READING

“Money Can’t Buy You Self-Esteem (if You’re a Woman),” *Time* magazine

“Self-Esteem Gender Gap More Pronounced in Western Countries,” by the American Psychological Association



Breaking Free:

Many of the most productive and influential scholars at UC Davis are women. This is no accident. UC Davis has made a concerted effort to support female academics’ career trajectories, particularly in science, technology, engineering and mathematics (STEM)—fields where UC Davis is setting new standards for women.

But more progress is on the horizon, not only to advance women’s research endeavors, but also to generate more equitable knowledge for all. This year, the campus launched a Feminist Research Institute (FRI) to examine how sex, gender, race and other social structures shape the production of scientific knowledge.

AMINA MAMA, a professor in Gender, Sexuality and Women’s Studies and planning director of FRI (pronounced “free”), said the institute will have far-reaching impact by fostering research collaborations across the basic sciences, social sciences, humanities, health sciences, engineering, law, economics, agricultural sciences and environmental sciences.

Mama described FRI as transformative and socially engaged. “It has an ethic of change, of making things better.”

In February more than 140 people attended the institute’s inaugural conference, “Rethinking the Boundaries of Sex and Gender in Science, Society and Technology.” The daylong conference featured talks on feminist research in reproductive health and genomics, as well as breakout sessions for brainstorming ideas for research collaborations. Videos of the three lectures can be viewed on the institute’s website fri.ucdavis.edu.

CAROLE JOFFE, a UC Davis sociology professor emerita now on the faculty at UC San Francisco’s Bixby Center for Reproductive Rights, was one of the conference speakers.

“UC Davis is the perfect place to bring together natural scientists, social scientists and humanists to engage in collective feminist research,” Joffe said. “I am thrilled for you, and, as a professor emerita, I am thrilled for me.”



“It has an ethic of change, of making things better.”

Feminist Research Institute Looks Toward Future

SUAD JOSEPH, a distinguished professor in the Department of Anthropology and the Gender, Sexuality, and Women's Studies and Middle East/South Asia Studies programs, chaired the committee that developed the proposal to create FRI.

“Many of us live at the academy inside social structures—departmental structures and disciplinary frames—that really were inherited from the 19th century, and yet we are trying to address 21st century issues,” Joseph told conference participants. “We thought that we needed an institute that was forward looking and yet recognized our debt to our past and our history.”

That history includes two other campus efforts to advance women scholars at UC Davis:

- The Consortium for Women and Research, which sponsored research and travel awards, talks and professional development for women on campus for two decades.
- The ADVANCE project, launched by Chancellor Linda P.B. Katehi in fall 2012 with funding from the National Science Foundation to increase participation by women, especially Latinas, in the STEM careers.

Hispanic women make up only 1 percent of the U.S. science and engineering work force. Through an ADVANCE initiative called CAMPOS (Center for Advancing Multicultural Perspectives on Science), UC Davis has recruited 12 Latina scientists to the faculty over the last two years.

Of the 1,545 ladder-rank faculty members across campus, 542, or 35 percent, are female, and that ratio is increasing. Nearly 45 percent of the ladder faculty hires over the past five years have been female.

FRI has 140 affiliates and also draws on the strengths of over 100 scholars affiliated with a fast-growing graduate studies designated emphasis in feminist theory and research.

Provost and Executive Vice Chancellor Ralph Hexter said FRI's mission is critical to the university's “great enterprise to create the world we want and deserve, one that treats us all equitably, fairly and inclusively, and supports our health, well-being and happiness.”

— Kathleen Holder

Online College Database recently ranked UC Davis **#1** among the top 50 colleges advancing women in **STEM**. Chancellor Linda P.B. Katehi, an electrical engineer, has been honored as a “Leading Woman in STEM” by the California STEM Summit.

UC Davis is **#1** on **Forbes** magazine's list of “best value colleges for women in STEM.”

Among STEM students at UC Davis, recent data shows **56 percent were female**, and **12 percent were women of color**.

Photo above from left:

Suad Joseph, distinguished professor of anthropology, gender, sexuality and women's studies, and Middle East/South Asia studies at UC Davis

Amparo Villeblanca, professor of cardiovascular medicine at UC Davis

Carole Joffe, a UC Davis sociology professor emerita and current professor in the Advancing New Standards in Reproductive Health Program at UC San Francisco

Amina Mama, professor in gender, sexuality and women's studies and planning director of the Feminist Research Institute at UC Davis

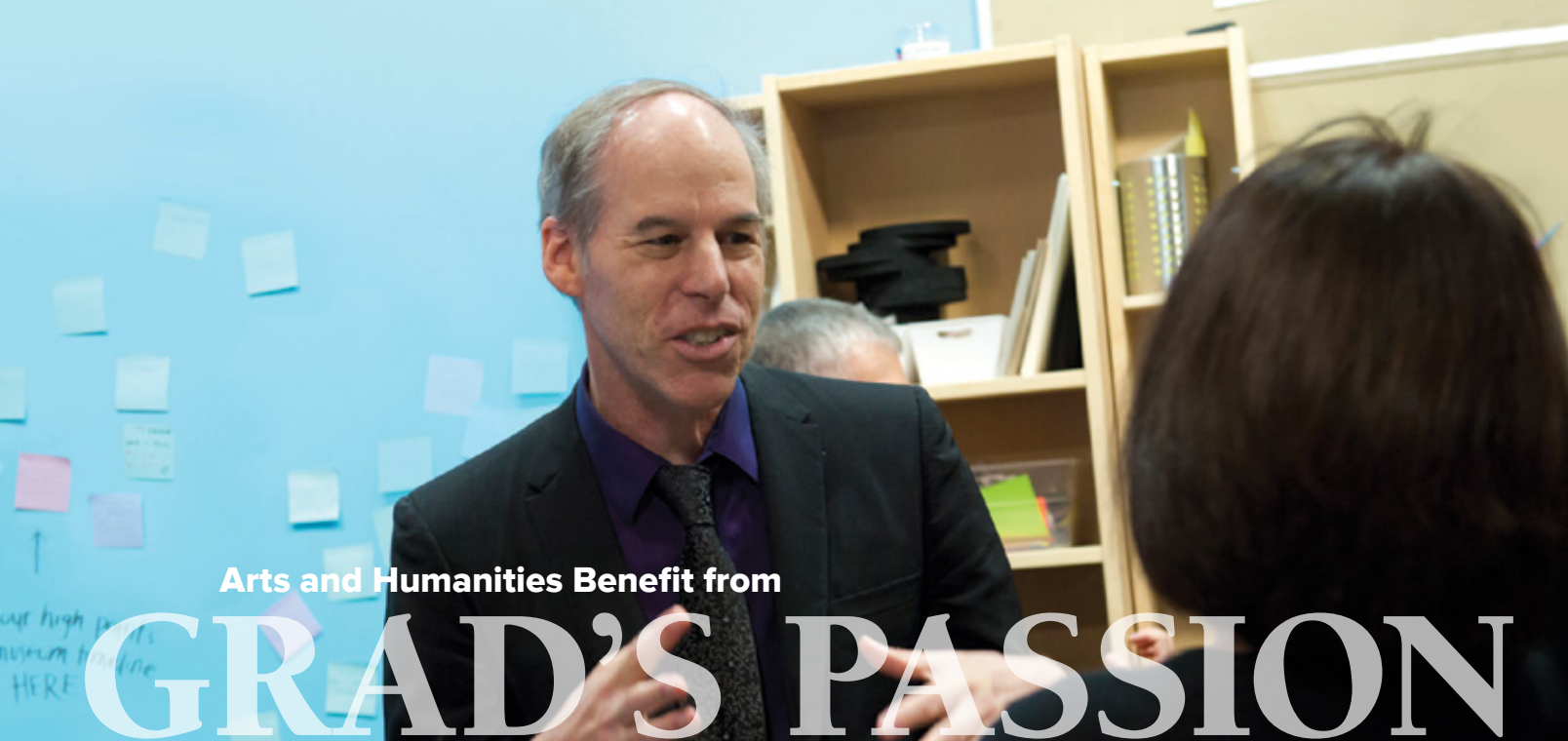
Jenny Reardon, sociology professor and director of the Science and Justice Research Center at UC Santa Cruz

Millisa Gilliam, professor of obstetrics and gynecology and pediatrics at University of Chicago

Joffe, Reardon and Gilliam were speakers at the inaugural FRI conference in February.

FURTHER READING:

UC Davis Ranks **#1** for Total Women in STEM: bit.ly/1Rxmbj



Arts and Humanities Benefit from

GRAD'S PASSION

Alan Templeton
is the kind of
donor who likes
to be involved.

"The biggest fringe benefit of being a donor is you're engaged in a form of high-quality continuing education," said Alan Templeton over lunch in a simple Thai restaurant near his Oakland home. "I love talking to the faculty and students; it's really such a privilege."

They also like talking to him; he's down to earth, more likely to be wearing jeans and t-shirt—as he was on this warm February day—than a suit. Since graduating from UC Davis in 1982 with degrees in art history and psychology, he's worked as a professional artist, teacher, labor union administrator and private investor.

When he was a boy, his family lived in France for six months. That formative time and two later trips ignited a passion for art leading him to study, purchase and donate art, and then to support the arts and humanities at his alma mater.

His main interest is European art of the 17th and 18th centuries, but he places few restrictions on his gifts. The last Templeton colloquium was mostly about Islamic art and architecture.

"The colloquium is so good for the intellectual life of the students and faculty," he said. "Scholars meet one another and share ideas. Students and graduates get to network with others in their field."

He has also supported Art History for a variety of needs, including funding graduate student

travel to explore the subjects of their research.

"Too many students were writing senior and master's theses on artworks and places they had never seen in person because they did not have enough money to travel."

Another fund he started, the Templeton Endowment for the Arts and Letters (TEAL), will benefit a number of areas in the arts, humanities and social sciences.

"It can blossom in different ways," he said, "with annual payouts used in a variety of ways over time."

Several professors played an important role in Templeton's life at UC Davis and beyond. His first adviser was artist Roland Petersen. Art history professor Jeffrey Ruda could "talk to anyone about art" and psychology professor Theodore Parks "made you believe you could do anything."

Templeton grew up in the Bay Area. His parents David and Lieselotte were distinguished chemists, his father serving as dean of the College of Chemistry at UC Berkeley. His father provided a model for giving when he established an endowed chair in chemistry at UC Berkeley aimed at supporting female professors with children.

"He had such a clear idea of what he wanted to do and that is the example I have followed," Templeton said.

—Jeffrey Day

deans' advisory council



Volunteer Profile:

CHUCK LOUDERBACK

As a UC Davis student, Chuck Louderback never doubted his choice to pursue a liberal arts degree—even in the face of that frequently asked question: “What are you going to do with a history major?”

His answer, over the long run, was—and still is—plenty!

After earning his bachelor's degree in 1976, Louderback went to law school and launched a successful career in the San Francisco Bay Area as an employment and commercial litigation attorney—winning multimillion-dollar trial verdicts for his clients and being named to *Super Lawyers*’ ranks every year since the organization was created in 2002.

Now, as a member of the Deans' Advisory Council (DAC), he is helping to ensure that UC Davis students can pursue their academic passions and enjoy equally accomplished careers.

At the fall DAC meeting, after hearing a presentation about a new data studies program by faculty leaders and a current student, Louderback pledged \$25,000 in matching funds to support this new Data Studies Program aimed at improving graduating students' job prospects.

Others responded to the challenge with additional gifts, including Kevin Bacon and his wife, Kim; Rod Davis; Joan De Paoli; Tim McCarthy and his wife, Kirsten; Nancy Roe and her husband, Bill;

Joan Sallee and her husband, Tom; and Patrick Sherwood and his wife, Stacey.

The Data Studies Program, which started with three courses last summer, grew out of conversations held by a UC Davis team—including McCarthy, a former president of Charles Schwab and Nikko Asset Management—with Silicon Valley executives. Repeatedly, company leaders said their biggest need is for data analysts.

With gifts from Louderback and other DAC members, faculty launched a new course, “Introductory Data Exploration with R,” this spring. More than 100 students signed up to learn the programming language used by leading technology companies.

“I enjoyed going to UC Davis very much,” said Louderback, who played Aggie baseball and intramural football and softball and studied European history. “It makes me want to give back to such an institution that fundamentally changed my life.”

Louderback said volunteering with the DAC gives him a view of the vibrant life of the campus. “It's fascinating to see what's happened at the university. It really enhances the joy in my life to see both the teachers and the students who are helping to change the world for the better. To be around that kind of energy, it's very infectious—in a positive way.”

— Kathleen Holder

DEANS' ADVISORY COUNCIL PROVIDES COUNSEL AND SUPPORT

The Deans' Advisory Council is the primary volunteer advisory body for the UC Davis College of Letters and Science and is composed of civic, business and education leaders drawn from the college's alumni, emeriti and friends. Members act as ambassadors for the college to the broader community, advise the deans on planning and implementing programs and initiatives, and support the college through annual membership in the Herbert A. Young Society or through support of a program or department in the college.

“The council plays a key role in the ongoing success of the college,” said Charlene Mattison, assistant dean for college relations and development. “The deans and I are grateful for their service and steadfast advice and support.”

To learn more about the Deans' Advisory Council or other volunteer opportunities, please visit our website at ls.ucdavis.edu/get-involved/volunteer-leadership.

DEANS' ADVISORY COUNCIL

Kevin Bacon '72	Diane Loranger, M.D.
Brian Burwell '72	Charles Louderback '76
Renée Child '76	Tim McCarthy '93
Joan De Paoli	Eldridge Moores
Sundee Dugar '84	Nancy Roe
Darryl Goss '83	Robert Rotstan Jr.
Anne Gray	Joan Sallee
Jackson Gualco '78	Patrick Sherwood '87
Bret T. Hewitt '76, '83	Roy Shlemon

FURTHER READING

Alumni Profile, Tim McCarthy: bit.ly/1nViP7g

Thanks to ▶▶ you ...



JAMES RIZZO

“It is an immense opportunity and an immense responsibility.”



CHLOE TSUDAMA

Young Alum Wins New China Study Scholarship

If you've already earned a pilot's license, a black belt in kung fu, an undergraduate degree from UC Davis and a great spot in the tech industry, what's next?

JAMES RIZZO, 22 (B.A., political science, '15), has answered by winning a prestigious new scholarship for a year's graduate study in Beijing at one of China's leading universities.

Rizzo, who grew up in Burbank and now lives in San Francisco, is one of the 111 members of the inaugural class of Schwarzman Scholars selected from more than 3,000 applicants worldwide.

“Living and studying with the other scholars is going to be an amazing experience,” Rizzo said. “It is an immense opportunity and an immense responsibility.”

Stephen A. Schwarzman, philanthropist and founder of the Blackstone investment firm, established the scholarship program to develop global leaders with an understanding of China. The award covers study at Tsinghua University—ranked 25th among the world's universities by QS World University Rankings—and all expenses for the year including travel, tuition, room and board, and a personal stipend.

Rizzo and other scholars from 32 countries and 71 universities were selected for their proven intellectual and academic ability, leadership potential, strength of character and other factors.

Beginning in September 2016, the scholars will pursue master's degrees in global affairs and participate in internships and intensive travel seminars. Rizzo, an associate in an early career leadership program at software firm Intuit, will work toward a degree with an emphasis in public policy.

Three other finalists for major postgraduate scholarships this year hailed from the College of Letters and Science.

DAVID BELCHER, who graduated last December with a bachelor's degree in political science and German, made the final round of consideration for a Rhodes Scholarship.

ESTEVAN SANCHEZ, a graduating senior majoring in African American and African studies, and **AARON HSU** (B.A.S., mathematics and statistics, '14) were finalists for Marshall Scholarships.

Students Thrive with Support from Scholarships

THANKS TO THE GENEROSITY OF OUR ALUMNI AND FRIENDS, each year the College of Letters and Science provides scholarships that make a real difference in the lives of our students. Your support helps empower the next generation of leaders such as **ROSE TRULIN** and **CHLOE TSUDAMA** (both received gifts through the Letters and Science Undergraduate Scholarship Fund). Thanks to you!

Rose Trulin, a double major in art history and anthropology, grew up in Chico and is the first member of her family to attend college.

"I fell in love with both the subjects," said Trulin, who transferred to UC Davis from a community college. "I love looking at people and the things they do to express themselves. I think it's really important to be passionate about the major you decide to pursue."

Along with her studies she's involved with the Art History Club, the Aggie Arts Student Advisory Board at the Robert and Margrit Mondavi Center for the Performing Arts, and has interned at SynRG Arts & Wellness and Pence Art Gallery.

"The scholarship has allowed me to not have to work so much and spend more time on my studies," said Trulin, a senior. "There are a lot of students out there that don't get any help from their families, and by providing scholarships you are creating opportunity as well as showing someone that you care, that they aren't alone in their pursuits. They say it takes a village to raise a child; the same applies to college students. It takes a community to raise a successful graduate."

"... you are showing someone that you care, that they aren't alone in in their pursuits."

Chloe Tsudama, a transfer student majoring in psychology, is following in her older sister's footsteps as a member of the first generation on her mother's side of the family to attend college.

"In order to implement change in society, it is critical to understand behavior," said Tsudama. "Psychology is a vast, diverse field that can be useful in so many ways and do a lot of good."

Tsudama garnered a position as an undergraduate researcher in the Personality and Self-Knowledge Lab, run by **SIMINE VAZIRE**, associate professor of psychology. She is also involved with the Sexual Assault Awareness Advocacy Committee (SAAAC) and is engaged in discussions about sexual violence awareness on campus.

"The scholarship I received helped me pay for textbooks I need to succeed in class," said Tsudama. "It has removed a lot of the anxiety that comes with realizing how much textbooks and related materials cost. Donors who make the gift of financial peace of mind allow students like myself to focus that much more on their studies and things they are passionate about. They make life much better for students following in their footsteps."



ROSE TRULIN



▶ student
success

New Class

Helps First-Year Students Succeed

The first year of college can be daunting for students, whether they are freshmen or transfers. To help with the adjustment to college life, UC Davis launched a new class for first-year students in fall 2015.

“We know that the first year, sometimes even the first quarter, really sets the tone for the rest of a student’s stay in college,” said Michael Valenzuela, an academic counselor in the College of Letters and Science who works with first-generation students and taught one of the new seminars. “At UC Davis, we go out of our way to not only provide a welcoming environment, but also back that up with resources and tools that will help smooth their transition.”

The EDU 98 course is a small, discussion-based seminar that covers academic topics and personal growth, including study skills, time management,

interacting with faculty and staff, making friends and getting involved on campus. Students are also introduced to services such as advising, tutoring and wellness. In the College of Letters and Science, seminar students also had to overcome their fear of talking to faculty during office hours, said course instructor Kate Shasky, assistant director of COSMOS (California State Summer School for Mathematics and Science).

Freshman Jesse Erdmann, who plans to major in chemistry or environmental engineering, said the seminar provided valuable exposure to interesting classes and majors. “This class showed me how to succeed, have fun and get ahead on campus,” Erdmann said. “It also gave me the push to join organizations on campus and try out new interests.”

More and more universities are offering courses for students transitioning to college life. The outreach can help lower dropout rates and increase retention, according to studies. At UC Davis, the first-year seminar is sponsored by the Aggie Connections program and taught by staff advisers. Aggie Connections mentors new UC Davis freshmen and transfer students within small communities formed around a shared interest.

“One of the goals for my class is to create a home base where students know they can bring questions and get help,” said adviser Joanne Snapp, who taught nonscientists interested in health careers. “The first quarter can be challenging, but hopefully they feel motivated to work toward their goal as opposed to feeling alone or lost.”

— Becky Oskin



PERSIAN STUDIES AT UC DAVIS

Continue from page 8

role of Iranian studies and Persian literature and poetry, and a real appreciation of Iranian culture.”

SUAD JOSEPH, a distinguished professor of anthropology and gender, sexuality and women’s studies who served as founding director of the Middle East/South Asia Studies (ME/SA) program until 2009, said growth of Iran and Persian studies reflects a broad commitment from Iranian American alumni and regional community leaders. Two new faculty joined Iranian studies this year: Talinn Grigor in art history and Shiva Ahmadi in art studio. Professors Jocelyn Sharlet (comparative literature) and Ali Anooshahr (history) have worked to develop the Iranian studies minor and Persian language and literature. PARSA Visiting Professor Wendy de Souza regularly teaches courses on Iran in the ME/SA program.

Read more about a lecture and reception honoring Daryabari in January at bit.ly/1SWGHO3.

Joseph, whose own research focuses on Arabic studies, said expanding Persian studies strengthens the ME/SA program, which has grown from two faculty, five courses and a few hundred students in 2001 to close to 30 teaching faculty, more than 100 courses and 2,500 enrollments, including instruction in three languages—Arabic and Hindi/Urdu as well as Persian. The classics department also offers courses in Hebrew.

UC Davis is the only campus in the UC system with a major and minor in ME/SA, and only one of four of its kind in the nation, Joseph said. “It’s important for a world-class university like UC Davis to offer to its students instruction in as many languages and cultures of the world as possible,” she said. “We need to be informed. We are a small planet.”

— Kathleen Holder

Calling all alumni: Let us know what you are up to by sending updates to lettersandscience@ucdavis.edu.

We publish alumni news on our website at ls.ucdavis.edu.

Save the date!

events

Spring Commencement

June 11, 9 a.m., 2 p.m., 7 p.m.

ARC Pavilion, UC Davis

Pete Scully: Urban Sketcher

Department of Design

Sept. 19–Nov. 13

Design Museum, UC Davis

Ann E. Pitzer Center Opening Weekend

Sept. 22–25

See music.ucdavis.edu for more details.

The Trojan Women

By Euripides, new adaptation by Sarah Thompson, Ph.D. student
Directed by Kristen Brandt, Granada Artist-in-Residence

Department of Theatre and Dance

Nov. 10–19

Wright Hall Main Theatre, UC Davis

UC Davis Symphony Orchestra

Exciting Worlds: Music by Brahms, Dutilleux and Lutoslawski
Christian Baldini, music director and conductor

Department of Music

Nov. 19, 7 p.m.

Jackson Hall, Mondavi Center for the Performing Arts

BOOKS AND BLOGS

Books

After Appomattox: Military Occupation and the Ends of War, by Gregory Downs, associate professor of history

Humankind: How Biology and Geography Shape Human Diversity, by Alexander Harcourt, professor emeritus of anthropology

Into the Wet, by Jerry Coker (B.A., English, '76). Coker also published *First Among Men: The Story of the Invasion of Attu Island* in 2013.

Gender and Chinese History: Transformative Encounters, edited by Beverly Bossler, professor of history

The Money Makers: How Roosevelt and Keynes Ended the Depression, Defeated Facism, and Secured a Prosperous Peace, by Eric Rauchway, professor of history

Right Out of California: The 1930s and The Big Business Roots of Modern Conservatism, by Kathryn Olmsted, professor of history

Alumni Blogs

Tri-Karen-Tri charts Karen Singh Almquist’s (B.S., anthropology, '94) life as a triathlete. Read it here: trikarentri.blogspot.com.

Beth’s Book-Nook Blog, by Beth Nolan Conners (B.S., psychology, '88), offers a collection of Conners’ book reviews. Read it here: drbethnolan.wordpress.com.



Every Class Is A Collaboration For Teaching Award Winner

FRANCES DOLAN is a Shakespeare scholar, but her intellectual curiosity and desire for connection with her students and community have also made her well versed in Harry Potter, Lemony Snicket and Northern California farming.

The distinguished professor of English is this year's winner of the UC Davis Prize for Undergraduate Teaching and Scholarly Achievement.

"I believe in books and reading, in reading aloud and sharing a story as well as being able to disappear into the pages of a book," Dolan said. "I always love sharing that with others."

The teaching prize, established in 1986, honors faculty who are both exceptional teachers and scholars. The \$45,000 prize is believed to be the largest of its kind in the country and is funded through philanthropic gifts from the UC Davis Foundation. Dolan is the first English professor to win the award.

"I am committed to teaching at a public university, and trying to give students the experience of a liberal arts college as well as the resources of a big public university," said Dolan, who came to UC Davis in 2003. "Every class is a collaboration with the students. What can happen in the classroom is so dependent on students' preparation and engagement."

Dolan has taught a variety of courses from pre-1800 British drama to contemporary children's literature. She has edited

Shakespeare's plays, been president of the Shakespeare Association of America, and published six books. Previous awards at UC Davis include Outstanding Graduate Mentor, Herbert A. Young Society Deans' Fellow, and the Academic Senate Distinguished Undergraduate Teaching Award.

She is currently working on a book tentatively titled *Time and Terroir: A Northern California Renaissance*. It will examine England, circa 1550–1759, and Northern California today as places of agricultural innovations and how the two times and places are connected.

"UC Davis is very fortunate to have a professor who shares her love of literary analysis of multiple genres to motivate you, her students, and your intellectual inquiries and help you develop your own passions in reading regardless of where your careers might take you," said Chancellor Linda P.B. Katehi at a March award presentation that took place during one of Professor Dolan's classes.

— Jeffrey Day

